

INTERPRETING THE BYWAY

The Delaware River extends from the vicinity of Mount Jefferson in New York's Catskill Mountains south 460 miles to the mouth of the Delaware Bay. Lower Mount Bethel Township is located along the middle portion of the Delaware River as it passes through the Lehigh Valley, north of Easton and south of the Delaware Water Gap. The Delaware River Valley Scenic Byway is envisioned to traverse this Lehigh Valley portion of the river's course with Route 611 as its primary spine. Approximately a third of the envisioned byway through the Lehigh Valley passes through Lower Mount Bethel Township and is the subject of this corridor management plan.

This chapter addresses interpretation of the proposed scenic byway within Lower Mount Bethel Township. In doing so, consideration should be given to establishing the byway and river's connections within the Delaware River watershed as a whole as well as highlighting locally significant stories and themes. In early phases of the byway's implementation, interpretation should support local stewardship goals by raising public awareness of the natural and cultural significance of the township's Delaware River landscape.

1.1 Regional Connections

The Delaware River watershed is divided into three broad landscape areas, the Uplands, the Piedmont, and the Estuary. The Delaware River Valley Scenic Byway and the portion of the byway within Lower Mount Bethel Township should recognize and convey the dynamics and significance of Delaware River watershed as a whole and the byway's place within the watershed in particular.

The Delaware River's Uplands extend from the river's headwaters in the Catskill Mountains south through the Pocono Mountains to the Delaware Water Gap. Much of this mountainous region is forested and preserved in pastoral condition, with farmland and villages along the narrow valley floor surrounded by forested hills. A 73-mile section of this portion of the river above the Delaware Water Gap has been designated as part of the National Wild and Scenic River System. New York City has constructed three reservoirs along the East and West Branches of the river in the Uplands from which it draws a third of the river's natural flow to supply drinking water for urban areas. The Delaware River's Uplands is a diverse ecosystem with numerous species of animals, birds, amphibians, and fish within its upland forest plant communities. The Delaware is one of only two free-flowing rivers between Maine and West Virginia that allow shad to reach their upstream spawning grounds. Conservation of the Delaware River Uplands is a primary interest of the region.

The Piedmont portion of the Delaware River watershed extends from the Delaware Water Gap through Blue Mountain south to the falls at Trenton. A fault line extending northeast from Philadelphia through Trenton creates the falls within the riverbed and marks the northern reach of tidal influence along the river. The Piedmont is characterized by low, rolling hills such as those within Lower Mount Bethel Township, and its landscape has been extensively altered by the last four centuries of human occupation. Largely agrarian, this landscape has also seen extensive industrial development. It includes the major industrial cities of Allentown, Bethlehem, Easton, and Trenton as well as numerous smaller river towns and villages. Water quality along the river and its tributaries has been a major issue over the decades with degradation caused by changes in

stream characteristics and flow, coal mining, point and non-point source pollution, and urban and suburban development.

River commerce has been critical part of the region's development. Early nineteenth century canals were constructed to facilitate industrial and agricultural commerce, including the Morris Canal, Delaware and Raritan Canal, Lehigh Canal, and the Delaware Division of the Pennsylvania Canal. These canals were superseded by railroads in the mid-nineteenth century. Despite extensive human use, today's Piedmont landscape is about half wooded with differences in maturity and species composition. Balancing urban and suburban growth with landscape stewardship and river, stream, and ecosystem restoration are interests within the Piedmont.

The Delaware River's Estuary is the region where the river meets the ocean and extends from the falls at Trenton south to the mouth of the Delaware Bay. The Delaware River's Estuary includes extensive natural areas and diverse plant and animal species. As part of the Atlantic Flyway, the Delaware Bay is a critical habitat for migrating shore birds in North America. The Bay is also home to a variety of water species including oysters, crabs, terrapins, and whales that thrive on its highly productive ecosystem.

Extensive industrial development has impacted the Estuary. Approximately 8 million people live within the region, including the cities of Philadelphia and Wilmington. Philadelphia is the world's largest freshwater port, and the region is the second largest petrochemical refining center in the nation. Other industries have also heavily affected the bay's and river's waters.

1.2 Regional Interpretive Initiatives

A number of regional interpretive initiatives have been undertaken in recent decades along the Delaware River and especially along the river's Piedmont and Upland sections. These initiatives have contributed to a sense of regionalism along the river in that they transcend political boundaries. However, the initiatives remain somewhat piecemeal and unrelated to each other. They have not worked together to convey the interconnectedness of the river and the watershed as a dynamic system. Consequently, stewardship issues, which they all have been created in part to support and enhance, lack regional context.

Implementation of the Delaware River Valley Scenic Byway is an opportunity to forge a connection between these individual initiatives and help raise public awareness about the watershed as a whole. In implementing interpretation along the Lower Mount Bethel Township portion of the byway, recognition of the township's landscape within the watershed should be made.

Existing regional initiatives which can work together within the Upland, Piedmont, and Upper Estuary portions of the Delaware River watershed include:

Upper Delaware Scenic and Recreational River

The Upper Delaware Scenic and Recreational River is a designated National Wild and Scenic River along the upper length of the Delaware River along the border between Pennsylvania and New York. The Scenic and Recreational River begins near Hancock, New York, just south of the junction of the East and West Branches of the Delaware River emanating from the Catskill Mountains. It extends south along the river to a point just north of Port Jervis, Milford, and the Delaware Water Gap National Recreation Area. Managed by the National Park Service, the

Upper Delaware Scenic and Recreational River interprets the natural and cultural resources of the river and provides recreational opportunities.

Delaware Water Gap National Recreation Area

The Delaware Water Gap National Recreation Area includes the width of the immediate Delaware River Valley from the vicinity of Milford south to the Delaware Water Gap. Also managed by the National Park Service, the Recreation Area preserves the natural and significant cultural resources of the river valley, interprets aspects of the river's history, and provides recreational opportunities through river access, hiking trails, and other amenities. It includes the most complete approach to interpretation of the Delaware River. This portion of the Delaware River has also been designated part of the National Wild and Scenic River System.

Delaware River Scenic Byway (New Jersey)

The Delaware River Scenic Byway is the portion of Route 29 that borders the Delaware River along the New Jersey side from Frenchtown south to Trenton. The byway is approximately 32 miles in length and is marketed as a tourist destination interpreting a series of historic villages and sites along its route, including the portion of the Delaware and Raritan Canal bordering the Delaware River.

Delaware & Lehigh National Heritage Corridor

The Delaware & Lehigh National Heritage Corridor is a designated national heritage area incorporating the Delaware Canal along the Delaware River in Bucks County and the Lehigh Canal and Lehigh River in Northampton, Lehigh, and Carbon Counties. The heritage area also extends further north to the Wilkes Barre region of the Wyoming Valley (Susquehanna River). The spine of the D & L National Heritage Corridor is a corridor-long trail that extends along the Delaware and Lehigh Rivers linking communities and resources and providing interpretive and recreational opportunities. The nineteenth century industry of the region that spawned the communities, canals, and later railroads along the two rivers are its primary interpretive subjects. The heritage area is managed by a non-profit organization designated by Congress which also undertakes a variety of stewardship and community enhancement initiatives in partnership with local communities and organizations.

Delaware and Raritan Canal State Park

The Delaware and Raritan Canal State Park is comprised of two segments, the Feeder Canal and the Main Canal. The Feeder Canal is 31 miles long and follows the eastern banks of the Delaware River from the vicinity of Frenchtown on the north to Trenton on the south. The Main Canal connects Trenton inland with the Raritan River at New Brunswick. The park is managed by the New Jersey Department of Environmental Protection and the Delaware and Raritan Canal Commission, which was established in 1974. It provides interpretation of the region's natural and cultural heritage and is an important recreational resource.

Lower Delaware River Wild and Scenic River

The Delaware River Greenway Partnership is a non-profit organization that was founded in 1998 with the goal of designating a portion of the Lower Delaware River as a National Wild and Scenic River. This goal was achieved in 2000, and the 67-mile portion of the river designated extends from a point south of Easton and Phillipsburg to the vicinity of Washington Crossing. The Delaware River Greenway Partnership undertakes a variety of activities promoting stewardship of the river, including river cleanups, public education, advocacy, and incentive grants. It encourages use of the Delaware River as a water trail from Hancock in the north to

Trenton in the south, and it is leading planning for the Delaware River Heritage Trail, noted below.

Delaware River Heritage Trail

The Delaware River Heritage Trail is a proposed 60-mile multi-use loop trail highlighting the culture and natural resources along the upper portion of the Delaware River estuary from Trenton south to Palmyra and the Tacony-Palmyra Bridge. Currently in the planning and implementation stages, the trail will link 24 communities along both sides of the river featuring natural and historic sites. The heritage trail initiative is being implemented by local municipalities in partnership with the Delaware River Greenway Partnership. The first phase of implementation will include the Bordentown to Burlington segment in New Jersey.

Crossroads of the American Revolution National Heritage Area

The Crossroads of the American Revolution National Heritage Area was designated by Congress in 2006 and encompasses an area stretching from the Delaware River on the west to Fort Lee on the Hudson River on the east. Along the Delaware River, the heritage area extends from Frenchtown on the north to the vicinity of Gloucester City on the south. The Crossroads heritage area interprets the Revolutionary War Era in New Jersey. Among its interpretive storylines is one titled *Delaware River Towns* that will interpret the river corridor at the time of the Revolution. Implementation will be undertaken by partnering communities and sites.

Schuylkill River National Heritage Area

The Schuylkill River National Heritage Area was designated by Congress in 2000 and includes the Schuylkill River watershed from the Delaware River in Philadelphia northwest 128 miles to the vicinity of Pottsville and Tamaqua. The Schuylkill River National Heritage Area's primary initiative is construction of a riverside trail along the entire route. The heritage area undertakes a variety of stewardship activities as well, and it promotes interpretation of natural, cultural, and industrial history of the region.

Martins Jacoby Watershed Association

Although mostly focused on land preservation, stewardship and enhancement, the MJWA is involved in environmental education efforts through its mission which is to "promote stewardship of, to protect and to enhance the watersheds of the Bangor Area which include: Slateford Creek, Jacoby Creek, Allegheny Creek, Oughoughton Creek, Little Martins Creek, Martins Creek, Waltz Creek, Greenwalk Creek, Mud Run, and the unnamed tributaries draining directly to the Delaware River between the Delaware Water Gap and Easton, PA."

Pennsylvania Association for Sustainable Agriculture

According to their web site, "the Pennsylvania Association for Sustainable Agriculture continues working to bring farmers together to learn from each other, and to build relationships between those farmers and consumers looking for fresh, wholesome, locally and sustainably produced food. As the largest statewide, member-based sustainable farming organization in the United States, we seek to improve the economic viability, environmental soundness and social responsibility of food and farming systems in Pennsylvania and across the country. We place great value on efforts to build bridges between broadly diverse participants in the agricultural industry, from "farm to fork."

1.3 Regional Interpretive Subjects

As outlined above, a variety of organizations and sites interpret various portions of the Delaware River extending from the river's Upland regions to the river's Upper Estuary in the vicinity of Palmyra and Trenton. The types and quality of interpretive programming, however, vary depending upon the missions and capabilities of the organizations responsible for the initiatives. Interpretation is not coordinated, and there is no single set of interpretive themes that unify the various initiatives under a common concept or approach.

With the planned implementation of the Delaware River Valley Scenic Byway, it is recommended that the organizations noted above be brought together to coordinate their initiatives, including stewardship, interpretation, and marketing. Interpretation of the Lower Mount Bethel Township portion of the Delaware River Valley Scenic Byway should keep the larger context of the river in mind as it presents interpretation of local themes and subjects.

An outline of possible river-wide interpretive subjects includes:

1. Natural History
 - Geology and landforms
 - Plant communities and ecology
 - Wildlife and wildlife habitats
 - Fish and fish habitats
 - River systems and water quality
2. Native Americans and Early Settlement
 - Paleo-Indian period (10,000-12,000 years ago)
 - Archaic period (4,000-10,000 years ago)
 - Woodland period (450-4,000 years ago)
 - Historic period (1500 – 1780's AD)
3. Settlement and Founding of a Nation
 - Contact and exploration
 - Settling the landscape
 - Community and agriculture in the Colonial era
 - Revolution and independence
4. River Commerce and Communities
 - Provider of natural resources (food, lumber, stone, coal, water supply)
 - Ferries, roads, rafting, and river boats
 - River ports
 - The canal era (D&L, D&H, D&R, Morris, Schuylkill)
 - Coming of the railroad
 - River communities
5. An Agricultural Landscape
 - Changing agriculture in the nineteenth century
 - Mills and water power
 - Crossroads villages and farm communities
6. Industrial Growth
 - Coal and industrial transformation
 - Quarries and related industries (slate, lime, cement)
 - Railroads – a national system
 - An industrial powerhouse – the late nineteenth and early twentieth centuries
 - Power generation
 - Urbanization and immigration

- Industrial decline
7. Stewardship
- The use of natural resources
 - Unforeseen consequences – pollution and landscape degradation
 - Water quality
 - Changing ecosystems
 - The concept of the “food-shed” – from the farm to the table
 - The concept of sustainability - finding a balance

1.4 Interpreting the Delaware River Valley Scenic Byway

The proposed Delaware River Valley Scenic Byway traverses a portion of the Delaware River watershed landscape with distinct characteristics that have influenced its historic development. Located within the Piedmont portion of the watershed, the proposed byway parallels the river from the Delaware Water Gap on the north to Easton on the south with Route 611 as its primary spine. This is the eastern edge of Pennsylvania’s Lehigh Valley. The Lehigh Valley is part of the larger Great Valley Section of the Ridge and Valley Geological Province, a geological feature that extends from southern Virginia north into New York and New England.

The Great Valley is characterized by relatively soft dolomite and limestone bedrock that has weathered into a broad valley of low rolling hills. As the Delaware River flows south into the valley through the Delaware Water Gap, it slows and broadens and follows a somewhat meandering course. Below the falls at Trenton, the river turns dramatically to the southwest and parallels the line of the fault past Philadelphia and Wilmington. Below the falls begins the Upper Estuary segment of the river, with Pennsylvania’s Piedmont landscape immediately to the northwest and the Inner Coastal Plain of New Jersey to the southeast. The flow of the Delaware River increases significantly south of the Great Valley as it is joined by its large Lehigh and Schuylkill River tributaries.

Lower Mount Bethel Township is located in the south-central portion of the Lehigh or Great Valley through which the river flows. Its landforms are typical of the low rolling hills of the valley with fertile limestone soils conducive to eighteenth and early nineteenth century agricultural practices and with ample free-flowing tributaries that were easily dammed to provide water power for early mills. Ferries were prominent landscape features and destinations for early wagon roads linking the eastern and western banks of the river. Rafting was an early form of river transport north of the Trenton falls, providing a means of conveying lumber and other natural resources from the river’s upper reaches. Small villages developed at early crossroads, mill locations, and ferries.

The geology of the Great Valley and Lower Mount Bethel Township is comprised of three primary geological formations; the Martinsburg Formation (dark-grey slaty shale), Jacksonburg Formation (dark-gray, shaly limestone), and Epler Formation (medium dark-gray, finely crystalline limestone). These formations have been instrumental in local industrial development through quarrying of their various types of rock. The Jacksonburg and Epler Formations south of Martins Creek in particular became sources of local industrial growth, first providing lime processed through early small-scale lime kilns and later providing large-scale production of cement.

Goals for Interpretation

As the proposed Delaware River Valley Scenic Byway takes shape and is implemented over time, a comprehensive interpretive plan should be prepared that addresses the natural and cultural significance and development of the Lehigh Valley/Great Valley portion of the Delaware River. This interpretive plan should be coordinated with other regional interpretive initiatives as outlined above in order to (A) promote a regional consciousness and approach to stewardship of the Delaware River and its watershed and (B) to create a coordinated regional visitor experience that extends from the river's Uplands, through the Piedmont, to the Estuary below. In particular, the byway should closely coordinate with adjacent interpretation in the Delaware Water Gap portion of the river to the north and the Delaware, Delaware and Raritan, and Morris Canal portions of the river between Easton/Phillipsburg and the falls at Trenton to the south.

In the meantime, it is recommended that early implementation projects be undertaken within the Lower Mount Bethel Township portion of the byway to directly support the conservation and preservation goals outlined in this corridor management plan. This recommendation will support local township goals as well as laying the groundwork for further development of the byway as a whole.

The landscape character and natural and historic resources within Lower Mount Bethel Township have been largely preserved because of limited development pressure within the township and adjacent municipalities over the past hundred years. The township should take advantage of this blessing to take steps to further preserve and enhance this landscape and its resources for the benefit of future generation as development pressures increase. The development of this corridor management plan is just such a step. Interpretation can support this effort.

The **goals for initial byway interpretive projects** are to:

1. Raise public awareness of the township's location and significance within the context of the Lehigh Valley and larger Delaware River watershed;
2. Identify character-defining features within the local landscape that have shaped local historical development within the larger regional context;
3. Support stewardship goals for conservation of the natural landscape through education related to plant communities, wildlife, and river ecology;
4. Support stewardship goals for farmland conservation through interpretation of the township's changing agricultural landscape and communities and connections between the farm and the table;
5. Build awareness and support for historic preservation and the appropriate treatment of historic resources (especially buildings and archeological sites) through local stories told using existing historic resources.

Audiences for Interpretation

The audiences for early interpretive projects include local residents and visitors. In many areas, **local residents** tend to take the places they live in for granted. Because they are so close to them, they sometimes have difficulty in appreciating their character and significance. With perspective and in a larger context, this character and significance often becomes more evident. Evidence of this generalization is present in Lower Mount Bethel Township in the manner in which many

local historic buildings are treated. Residents tend to modernize their buildings in ways that diminish their historic character and integrity rather than enhancing them. This actually reduces the buildings' value and negatively impacts the overall character of historic community and landscape. Interpretation can help raise awareness and increase appreciation for natural and historic resources within the township by conveying their significance through local stories set in context.

Visitors to the byway include travelers along the road, recreational users such as fishermen and boaters, and the families and friends of local residents. Interpretive exhibits can help increase the appreciation of these visitors for the natural and historic resources within the township. Exhibits can enhance specific places open to the general public as locations where visitors can be taken for activities, whether it is a local hiking trail, boating, or scenic picnic site.

Recommendations for Early Interpretive Projects

The following recommendations are made for possible interpretive exhibits at eight locations along the byway within Lower Mount Bethel Township. Recommendations for these exhibits will be discussed at the Advisory Committee meeting and the descriptions outlined below will be further developed in accordance with those discussions for inclusion in the corridor management plan.

1. Sandts Eddy

Sandts Eddy is a publicly accessible boat ramp and parking area located along Route 611 about two miles south of Martins Creek. The parking area overlooks the river, facing south, and also is adjacent to the large former cement plant, now Conagra Mills, on the west side of the road.

It is recommended that interpretive exhibits be installed in the grass area adjacent to the parking area overlooking the river. Exhibits should be supplemented with landscaping and picnic tables that will be useful for fishermen, boaters, and the general public. Interpretive topics should include:

- An overview of the Delaware River watershed;
- Detailed presentation of river ecology, fish species, and habitats; and
- Overview of the cement industry in Lower Mount Bethel Township.

2. Martins Creek

The village of Martins Creek is a charming crossroads community that remains a vital commercial and residential center within the township. It is recommended that interpretive exhibits be installed in two general areas. Behind St. Rocco's Church is a large grassy area with a gazebo that is used for church and community events. It is recommended that a set of interactive interpretive exhibits be installed in the vicinity of the gazebo to enhance this important semi-public space. The exhibits could include some form of themed playground installation for children as well as fun, working exhibits for adults.

It is also recommended that interpretive exhibits be installed in the vicinity of the crossroads intersection in a safe location for pedestrians. The intersection itself could be enhanced for pedestrians as recommended elsewhere in this plan. The installation of crosswalks and removal of unnecessary paving would help. Exhibits could be located near the entrance to the Martins Creek Inn. Interpretive topics should include:

- Martins Creek's historical development; and
- Stories related to existing historic buildings within the village.

3. Ahearn's Country Cafe

North of the village of Martins Creek, just past the concrete bridge that crosses high over the creek, is a historic building that is currently home to the Ahearn's Country Café. An interesting and dramatically scenic location, interpretive exhibits could be installed both around and within the café. The Little Creek Branch of the byway intersects Route 611 opposite the café. It is recommended that exhibits interpret:

- The café and adjacent buildings; and
- Martins Creek and the water powered mills along the creek that were once an important feature in the area's early nineteenth century agricultural and industrial economy.

4. Church Hill

Church Hill is the name given to a prominent location along the byway where Route 611 turns sharply north and local Route 1004 continues northwest toward Riverton and the town of Belvidere, New Jersey. The hill is an elevated location with a spectacular view of agricultural fields and surrounding woodlands. Five significant historic resources are located here; the Bethel Bible Church of Mount Zion, Good Shepard Lutheran Church, Hunter Martin Settlement schoolhouse and museum, Scotch-Irish Presbyterian Cemetery, and Church Hill Cemetery. It is recommended that a series of coordinated exhibits be installed linking these resources and supplementing the excellent interpretive signage currently in the Scotch-Irish cemetery. Exhibits should tell stories of the:

- Early settlement history of the region;
- Early agricultural landscape;
- Communities associated with the churches and cemeteries; and
- Personal stories of selected representative individuals buried in the cemeteries.

5. Martins Creek Environmental Preserve

The Martins Creek Environmental Preserve is a preserved wooded area bordering the Delaware River in the vicinity of Foul Rift. Owned and managed by PPL, the preserve is adjacent to the two PPL power generating plants, Martins Creek (constructed in 1954) and Lower Mount Bethel (constructed in 2004). The preserve has five miles of wooded hiking trail with mature and diversified forest, rock formations, and views of the Delaware River. In collaboration with PPL, it is proposed that additional interpretive exhibits be installed along the trails or at other appropriate locations. Exhibit topics should include:

- Overview of the Delaware River watershed;
- Plant communities and other natural resources within the preserve; and
- Geology that created the Foul Rift rapids in the context of the Great Valley geological formations.

6. Foul Rift Boat Access Area

Just south of the Martins Creek Power Plant off of Foul Rift Road is a publicly accessible boat launch. As was recommended for Sandts Eddy, interpretive exhibits should be installed within an enhanced landscape area to attract the interest of fisherman and recreational boaters. Interpretive topics should include:

- Discussion of the Martins Creek and Lower Mount Bethel Power Plants;
- River ecology, fish, and fish habitats; and
- Early commercial rafting in the eighteenth and nineteenth centuries.

7. Lower Mount Bethel Township Recreational Park and Welcome Center

The Lower Mount Bethel recreational park is located on former PPL lands north of the Martins Creek Preserve and adjacent to Riverton. It is recommended that interactive interpretive exhibits be installed adjacent to the fields and parking area. The purpose of the interactive exhibits is to engage young people playing at the park. Exhibits could include themed playground structures such as a Durham boat or moving exhibits demonstrating ecological and scientific subjects. Exhibits could also be installed in the Welcome Center. Interpretive topics should include:

- Ecology of the river and river valley; and
- Subjects related to township history.
- Sustainability as a theme should continue to be interpreted at the Welcome Center

8. Riverton

Riverton is a small historic community on the Pennsylvania side of the Delaware River Bridge crossing to Belvidere, New Jersey. The community should be interpreted with exhibits on:

- The Riverton Inn and adjacent historic homes;
- The Delaware River Bridge.

Implementation of Interpretive Installations

Interpretive installations can be incorporated into a number of byway, watershed, and trail related projects as proposed throughout this plan including:

- As part of a proposed community trail from Martins Creek to Three Church Hill and from Martins Creek to Sandts Eddy
- As part of potential water quality related projects such as the proposed best management practices recommended for the Martins Creek-Belvidere Highway
- As part of any traffic calming and community design initiatives recommended for Martins Creek