National Park Service
Cultural Landscapes Inventory

2016

Revised: 8/2026



Johnstown Flood NMem Landscape

Johnstown Flood National Memorial

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Introduction

The Cultural Landscape Inventory (CLI)

The Cultural Landscape Inventory (CLI) is a comprehensive inventory of all cultural landscapes in the National Park System. Landscapes that are listed, or eligible for listing, on the National Register of Historic Places, or are otherwise managed as cultural resources and in which the National Park Service has, or plans to acquire, legal interest are included in the inventory. The CLI identifies and documents each landscape's location, size, physical development, landscape characteristics, character-defining features, and condition. Cultural landscapes have approved CLIs when concurrence with the findings is obtained from the park superintendent and all required data fields are entered into the Cultural Resources Information System (CRIS-CL) database. In addition, for landscapes not currently listed on the National Register and/or without adequate documentation, concurrence is required from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or the Keeper of the National Register.

Scope of the CLI

The information contained within the CLI is compiled from primary and secondary sources and through on-site surveys of the landscape. The level of investigation is dependent upon scoping the need for information. The baseline information collected provides a comprehensive look at the historical development and significance of the landscape. Documentation and analysis of the existing landscape identifies character-defining characteristics and features and allows for an evaluation of the landscape's integrity and an assessment of the landscape's condition. The CLI also includes historic maps, drawings, and images; photographs of existing conditions; and a site plan that indicates major features. The CLI documents the existing condition of park landscape resources and identifies impacts, threats, and measures to stabilize condition. This information can be used to develop strategies for improved stewardship. Unlike a Cultural Landscape Report (CLR), the CLI does not provide management recommendations or treatment guidelines for the cultural landscape, but it may identify stabilization measures.

The Cultural Resources Information System (CRIS)

CRIS is the National Park Service's database of cultural resources on its lands, consisting of archeological sites, historic structures, ethnographic resources, and cultural landscapes. Cultural Resources Inventory System (CRIS) replaces three legacy inventory systems: ASMIS (archeology), CLI (cultural landscapes), and LCS (historic structures); and it reinstates the former ERI (ethnographic resources). This Cultural Landscape Inventory document reflects the information in a corresponding CRIS Cultural Landscape record.

Statutory and Regulatory Foundation

The legislative, regulatory, and policy directives for conducting and maintaining the CLI within CRIS are:

- National Historic Preservation Act (NHPA) of 1966 (16 USC 470h-2(a)(1)) Sec. 110
- Executive Order 13287: Preserve America, 2003. Sec. 3 (a and c)
- Secretary of the Interior's Standards and Guidelines for Federal Agency Historic Preservation Programs
- Pursuant to the National Historic Preservation Act, 1998. Std. 2
- Cultural Resource Management Guideline, 1997, Release No. 5, page 22; issued pursuant to Director's Order #28 (DO-28)

The NHPA requires the identification, evaluation, and nomination of historic properties to the National Register of Historic Places and the maintenance and expansion of an inventory of cultural resources. DO-28 requires a cyclic assessment of the current condition of cultural landscapes based on an assessment interval, with a default of six years.

Use

Beyond fulfilling legal and policy requirements, park staff can use the Cultural Landscape Inventory in the following ways:

- To learn about park cultural landscapes (all staff)
- To inform management decisions (park managers)
- To inform project planning and development (park managers, facility managers, project managers, compliance specialists)
- To monitor the condition of the cultural landscape and take measures to protect its significance and integrity (cultural resource managers, facility managers)
- To recognize the stabilization and treatment needs of landscape features and plan work within cultural landscapes to address the needs (facility managers, cultural resource managers)
- To understand the cultural value of natural systems in a cultural landscape (natural resource managers)
- To create programming and educational materials based on site history (interpretation and education specialists)
- To recognize impacts within cultural landscapes and enforce protection measures (visitor and resources protection staff)

General Information

Property Level and CLI Numbers

Inventory Unit Name: Johnstown Flood NMem Landscape

Resource Level: Cultural Landscape

CRIS-CL Resource ID: 300144

Inventory Status: Complete

Park Information

Park Name: Johnstown Flood National Memorial

Alpha Code: JOFL

Park Organization Code: 4150

Region: Northeast

Restricted: Yes

Landscape Description:

The Johnstown Flood National Memorial (NMem) is located in southwestern Cambria County, which is situated in south-central Pennsylvania approximately 82 miles east of Pittsburgh and 131 miles west of Harrisburg. The park was authorized as a unit of the National Park Service (NPS) in 1964 to commemorate the tragic Johnstown Flood of May 31, 1889.

The park straddles the South Fork of the Little Conemaugh River, which was dammed in 1853 to supply water to a canal in Johnstown, 12 miles downstream. The dam created what was, at the time it was built, one of the largest artificial lakes in the nation, more than two miles long and nearly a mile wide in some places. The dam failed in 1862 and lay broken and abandoned until it was repaired in 1879-1881 by the South Fork Fishing and Hunting Club, a group of wealthy and prominent businessmen from Pittsburgh. The dam's impoundment, named Lake Conemaugh, served as the club's exclusive resort until the dam broke in May 1889 and the resulting flood killed 2,209 people in Johnstown and other villages along the river.

The 178-acre park preserves the remains of the South Fork Dam, which consists of two trapezoidal-shaped earthen and rock abutments cloaked in grasses and trees separated by an opening over 400 feet in length. Traces of the club's carriage road extend across the top of the abutments to overlooks where visitors can view the dam's breach, the river, and the former empty lakebed that stretches upstream from the dam and filled with a patchwork of grasses and wetlands. Trails also cross the dam's spillway on the north abutment side, a rock cut now filled with tall grasses, and pass through the bottom of the breach on the south abutment side, where the river flows past the stone and timber ruins of the dam's original sluice culvert and valve control tower. On a hillside meadow overlooking the dam and lakebed is the Lake View Farm and the Lake View House, the former farmstead and rehabilitated home of Elias Unger, the club's president at the time of the disaster, as well as a reconstructed spring house. Other historic resources are located in two discontinuous parcels about one mile south of the dam in the village of St. Michael. They include the clubhouse, double cottage, and two cottages associated with the South Fork Fishing and Hunting Club.

The park's visitor center, built in 1988-1989, is located at the Lake View Farm and resembles the appearance of the old Unger barn. Here, visitors can view exhibits, watch a film about the flood, and contemplate the panoramic views of the dam and lakebed. The park also includes a picnic area, several parking lots, and a maintenance facility, but they

do not significantly detract from the park's historic setting. However, the active railroad line through the lakebed and breach, traffic on Lake Road between the dam and the Lake View Farm, and noise and views associated with the adjacent US Highway 219 bridge are distracting.

From 1969 to 2012, the park welcomed 4,282,029 recreational visitors. Yearly visitation was lowest in 1969 with 19,700 visitors and highest during the centennial anniversary year of the flood (1989) when 333,283 visitors came to the park. Since that time yearly visitation has ranged between 100,000 and 160,000 people per year. Visitation occurs primarily during warmer months (April through October) and drops off in winter.

SIGNIFICANCE SUMMARY

The Johnstown Flood NMem Landscape is significant at the national level under Criterion A in the area of Social History for its associations with the Johnstown Flood of May 31, 1889, and its aftermath. The property is also significant at the state level under Criterion C in the area of Architecture for the unique designs of the four South Fork Fishing and Hunting Club buildings that reflect the rustic recreational pursuits of prominent wealthy Pittsburgh families.

The period of significance for the property begins with the organization of the South Fork Fishing and Hunting Club in 1879 and ends with the Johnstown Flood of May 31, 1889, and the immediate recovery activities conducted during the summer of that year. This time period encompasses the construction of all the resources associated with the club, including the repair of the South Fork Dam by the club for recreational purposes.

ANALYSIS AND EVALUATION SUMMARY AND CONDITION

The historic integrity of the Johnstown Flood National Memorial Landscape is evaluated by comparing landscape characteristics and features present during the period of significance, 1879-1889, with the existing conditions as assessed in 2026. Many landscape characteristics and features from the period of significance remain today. The landforms, hydrology, and topography that made this site ideal for the construction of the South Fork Dam and Western Reservoir in 1840-1853 are still evident in the landscape. The remnant abutments and spillway reveal the dam's original design and construction while the breach in the dam and the ruins of the sluice culvert and valve control tower are reminders of poor decisions made during the dam's reconstruction in 1879-1881. Upstream from the dam, the park-owned portions of the old lakebed are now a mix of meadows and wetlands. The hill near the south abutment remains forested and includes the trace of the club's carriage road, while the hill overlooking the north abutment is mostly open fields associated with Elias Unger's farm. The park has rehabilitated Unger's Lake View House and spring house and designed the nearby visitor center to evoke the appearance of the old Unger barn. Views from the visitor center and Lake View House look down at the dam and spillway, and across the lakebed to the clubhouse and cottages that once bordered the lake's southwestern shoreline. Today, the park owns four former club buildings that still retain some of their Victorian-era designs, including the long covered front porches that overlooked the lake. Trails provide access to the top of the dam abutments and passage through the breach on the south side of the river, and a footbridge crosses the upper end of the spillway on the north abutment near where a historic carriage road bridge once stood.

Landscape changes have inevitably occurred in the 137 years that have passed since the May 1889 Johnstown Flood. Within the park's boundaries, an active railroad line dating to the early 1890s still passes through the gap in the dam and travels along the bottom of the old lake. Its raised bed has long impacted the hydrology of the river and incoming tributaries, and now helps sustain several wetlands. By 2018, trees that were cleared by the park from 1977 through 2007 had returned and obscured the earthen contours of the lakebed and the dam abutments, but recently they have been removed, restoring a key feature of the park's interpretive program. Picnic, parking, and maintenance facilities are sited to minimize their impact on the park's historic characteristics and features, especially its viewsheds. More significant changes have occurred just beyond park boundaries, including the establishment of St. Michael in the lakebed next to the club buildings and the construction of the four-lane state highway, US Route 219, just downstream from the dam.

Condition:
The condition of the park landscape is evaluated as "good" due to recent and ongoing efforts to remove non-historic woody vegetation from the lakebed. The property shows no clear evidence of major negative disturbance and deterioration by natural and/or human forces. The property's cultural and natural values are as well preserved as can be expected under the given environmental conditions. No immediate corrective action is required to maintain its current condition.

Landscape Hierarchy Description:

Johnstown Flood National Memorial consists of one landscape, which is coterminous with the park boundaries.

Landscape Type:

Historic Site

Other Names:

Other Name:	South Fork Dam	**Other Name Type:**	Both Current And Historic
Other Name:	Western Reservoir	**Other Name Type:**	Historic
Other Name:	Lake Conemaugh	**Other Name Type:**	Historic
Other Name:	South Fork Dam Abutments	**Other Name Type:**	Current
Other Name:	South Fork Fishing and Hunting Club	**Other Name Type:**	Both Current And Historic
Other Name:	Johnstown Flood National Memorial	**Other Name Type:**	Current

Site Plan



Site map, 2026, 1 of 2.



Site map, 2026, 2 of 2.

Concurrence Information

Superintendent Acknowledgment:

Park Superintendent Acknowledgment: Yes

Park Superintendent Acknowledgment Date: 06/29/2016

Completion Status Explanatory Narrative:

The original CLI for the Johnstown Flood NMem Landscape was approved by the Superintendent on June 29, 2016. Field research for the CLI was undertaken in November 2014 by Jeff Killion, Historical Landscape Architect at the Olmsted Center for Landscape Preservation, and Dorothy Friday, Student Conservation Associate at the Olmsted Center. Text and site plans were finalized by Jeff Killion in May 2016. A condition reassessment for the site was approved by the Superintendent on June 26, 2025. Field work for this update was completed by Jeff Killion in June 2026. The park contact for this update is Colleen Curry, Cultural Resource Manager/Chief of Resource Management, at: Colleen_Curry@nps.gov.

SUMMARY OF CLI REVISIONS, 2026
• The management category remains, “Must be Preserved and Maintained.”
• The National Register chapter has been revised to reflect updated National Register documentation approved in 2024. The area of significance is Social History. The period of significance remains 1879 -1889, beginning with the organization of the South Fork Fishing and Hunting Club and ending with the Johnstown Flood and its immediate aftermath.
• The Chronology and Physical History and Analysis and Evaluation chapters document changes in the landscape since the original CLI was completed in 2016.
• The completion of the CLR in 2021 and National Register documentation in 2024 has prompted several revisions to the Analysis and Evaluation chapter:
o The Lake View Spring House, originally identified as contributing in the original CLI and in the 2021 CLR, is now non-contributing, per the 2024 National Register.
o New features have been added, as presented in the CLR:
-- South Fork Little Conemaugh River and Unnamed Tributaries (contributing)
-- Designated Wetlands (non-contributing)
-- Lake View Farm Cluster (contributing)
-- South Fork Fishing and Hunting Club Cottage Cluster (contributing)
-- Agricultural Use (non-contributing)
-- Picnic Grounds (non-contributing)
-- Path of Flood Trail (non-contributing)
-- Meadow Vegetation on Hillside south of Visitor Center (contributing)
-- Old Field Vegetation within Historic Lakebed (contributing)
-- Mature Hardwood Forest Growing south of Visitor Center and south of Lake Road (non-contributing)
-- Mature Red Maple, Black Locust, and Hemlock that Line Lakebed Side of South Abutment Road (non-contributing)
-- Trees and Shrubs near Clubhouse and Cottages (non-contributing)
-- Maple Tree Growing on Crest of North Dam Abutment near end of Pedestrian Bridge (undetermined)
-- Comfort Stations (non-contributing)
-- Culverts at South Abutment Road and Parking Lot (non-contributing)
-- Maintenance Sheds and Portable Office (non-contributing)
-- Retaining Wall at Visitor Center Parking Lot (non-contributing)
-- Retaining Wall on South Abutment Road (non-contributing)
-- Views from South Abutment Road (contributing)

-- Views from the Lake Road Parking Lot (contributing)
-- Views from the North Abutment Overlook (contributing)
-- Views from the South Abutment Overlook (contributing)
o The following features have been deleted because they have been combined with other features or split into separate features:
-- Grass and Trees at Picnic Grounds Road and Parking Lot [176734] (non-contributing)
-- Grass and Trees at South Abutment Road and Parking Lot [176732] (non-contributing)
-- Lawns and Trees at Picnic Area [176736] (non-contributing)
-- Open Fields at Lake View Farm [176724] (non-contributing)
-- Native Plant Garden [176730] (non-contributing)
-- Trees between Clubhouse and Double Cottage [176740] (non-contributing)
-- Woodland behind Cottages [176738] (non-contributing)
-- Culverts and Retaining Wall at Visitor Center Road and Parking Lot [176796] (non-contributing)
o The following features have been removed because they are no longer extant:
-- Lakebed Vegetation (Upstream from Dam) [176716] (non-contributing)
-- Portable Restrooms [176790] (non-contributing)
-- Trees on Upstream Face of Dam Abutments [176720] (non-contributing)
• The overall landscape condition was evaluated as “Good” in 2016 and 2025. The proposed landscape condition evaluation for 2026 is “Good.”
• Site plans and existing condition photographs are updated.

Concurrence Graphic Information:

CULTURAL LANDSCAPES INVENTORY
CONCURRENCE FORM

Johnstown Flood NM Landscape
Johnstown Flood National Memorial

Johnstown Flood National Memorial concurs with the findings of the Cultural Landscape Inventory (CLI) for the Johnstown Flood NM Landscape, including the following specific components:

MANAGEMENT CATEGORY: Must Be Preserved and Maintained

CONDITION ASSESSMENT: Fair

Good: indicates the inventory unit shows no clear evidence of major negative disturbance and deterioration by natural and/or human forces. The inventory unit's cultural and natural values are as well preserved as can be expected under the given environmental conditions. No immediate corrective action is required to maintain its current condition.

Fair: indicates the inventory unit shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and some degree of corrective action is needed within 3-5 years to prevent further harm to its cultural and/or natural values. If left to continue without the appropriate corrective action, the cumulative effect of the deterioration of many of the character defining elements will cause the inventory unit to degrade to a poor condition.

Poor: indicates the inventory unit shows clear evidence of major disturbance and rapid deterioration by natural and/or human forces. Immediate corrective action is required to protect and preserve the remaining historical and natural values.

The Cultural Landscape Inventory for the Johnstown Flood NM Landscape is hereby approved and accepted.

Superintendent, Johnstown Flood National Memorial — Date 6/29/16

Park concurrence was received on June 29, 2016.

Cultural Landscapes Inventory
CLI Update Certification Form
2025

Johnstown Flood National Memorial
Johnstown Flood NMem Landscape

Johnstown Flood National Memorial concurs with the updates for the following CLIs, including:

CONDITION ASSESSMENT: Good – Johnstown Flood NMem Landscape

Good: indicates the inventory unit shows no clear evidence of major negative disturbance and deterioration by natural and/or human forces. The inventory unit's cultural and natural values are as well preserved as can be expected under the given environmental conditions. No immediate corrective action is required to maintain its current condition.

Fair: indicates the inventory unit shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and some degree of corrective action is needed within 3-5 years to prevent further harm to its cultural and/or natural values. If left to continue without the appropriate corrective action, the cumulative effect of the deterioration of many of the character defining elements, will cause the inventory unit to degrade to a poor condition.

Poor: indicates the inventory unit shows clear evidence of major disturbance and rapid deterioration by natural and/or human forces. Immediate corrective action is required to protect and preserve the remaining historical and natural values.

The CLI Update at Johnstown Flood National Memorial is hereby approved and accepted.

STEPHEN CLARK Digitally signed by STEPHEN CLARK
Date: 2025.06.23 14:57:32 -04'00'

Superintendent, Johnstown Flood National Memorial Date

Park concurrence form, June 23, 2025.

Cultural Landscapes Inventory
CLI Update Certification Form
2026

Johnstown Flood NMem Landscape

Johnstown Flood National Memorial

Johnstown Flood National Memorial certifies the CLI update for the Johnstown Flood NMem Landscape, including:

CONDITION ASSESSMENT: Good – Johnstown Flood NMem Landscape

Good: indicates the inventory unit shows no clear evidence of major negative disturbance and deterioration by natural and/or human forces. The inventory unit's cultural and natural values are as well preserved as can be expected under the given environmental conditions. No immediate corrective action is required to maintain its current condition.

Fair: indicates the inventory unit shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and some degree of corrective action is needed within 3-5 years to prevent further harm to its cultural and/or natural values. If left to continue without the appropriate corrective action, the cumulative effect of the deterioration of many of the character defining elements, will cause the inventory unit to degrade to a poor condition.

Poor: indicates the inventory unit shows clear evidence of major disturbance and rapid deterioration by natural and/or human forces. Immediate corrective action is required to protect and preserve the remaining historical and natural values.

The CLI update for the Johnstown Flood NMem Landscape at Johnstown Flood National Memorial is hereby approved and accepted.

STEPHEN CLARK Digitally signed by STEPHEN CLARK
Date: 2026.08.24 09:41:03 -04'00'

Superintendent, Johnstown Flood National Memorial Date

Park concurrence form, August 24, 2026.

Seq. No.	File Name	Caption

Revision:

Revised By	Type of Revision	Revision Date	Revision Explanatory Narrative
Jeff Killion	CLI Update	06/23/2025	Three levels of effort have been developed for CLI Updates: A, B, and C. Level C is limited to a condition reassessment of the landscape; Level B includes C and is a targeted update of select data fields; Level A includes C and is a comprehensive update of all data fields. This 2025 update to the Johnstown Flood NMem Landscape CLI has been conducted at a Level C effort. See Landscape Documents in CRIS-CL for correspondences with park.
Jeff Killion	CLI Update	08/24/2026	Three levels of effort have been developed for CLI Updates: A, B, and C. Level C is limited to a condition reassessment of the landscape; Level B includes C and is a targeted update of select data fields; Level A includes B and C and is a comprehensive update of all data fields. This 2026 update to the Johnstown Flood NMem Landscape CLI has been conducted at a Level A effort.

Geographic Information

State and County:

State/Territory	County
Pennsylvania	Cambria County

Area (Acres): 177.6

Land Tract Number(s)

Original Acreage 1964: 54.18 acres (55.0 authorized)
01-101, 1.54 purchase from Furlong
01-103, 14.72 donation of dam from Cambria County, former lands of Wilmer Coal Co.
01-107, 0.20 purchase from KranyC
01-108, 37.72 purchase from Berwind

Boundary Increase 1972: 52.76 (53.6 authorized)
01-109, 2.30 donation from Adams Township Authority (road)
01-112, 0.17 purchase from Berwind
01-113, 1.24 scenic easement with C&MA Gospel Tabernacle Church
01-114, 10.28 purchase from Berwind
01-115, 16.37 donation from Adams-Croyle Township Authority
01-116, 8.47 donation from Adams-Croyle Township Authority
01-117, 9.17 donation from Adams-Croyle Township Authority
01-118, 1.34 donation from Adams-Croyle Township Authority
01-119, 1.22 Adams Township Authority (river)
01-120, 2.2 Croyle Township Authority (river)

Boundary Increase 1978: 56.98 acres (67.00 authorized)
01-127, 21.25 donation from Adams-Croyle Township Authority
01-124, 30.4 purchase from Robert E. Furlong et al.
01-126, 2.13 Commonwealth of PA (public land, right-of-way)
01-129, 3.20 Norfolk-Southern (right-of-way)

Boundary Increase 2004: 13.68 acres (14.00 authorized)
01-130, 11.38 purchase from Thomas P. Furlong
02-100, 1.65 purchase from 1889 South Fork FHC
02-101, 0.65 purchase from 1889 South Fork FHC

Boundary Description:

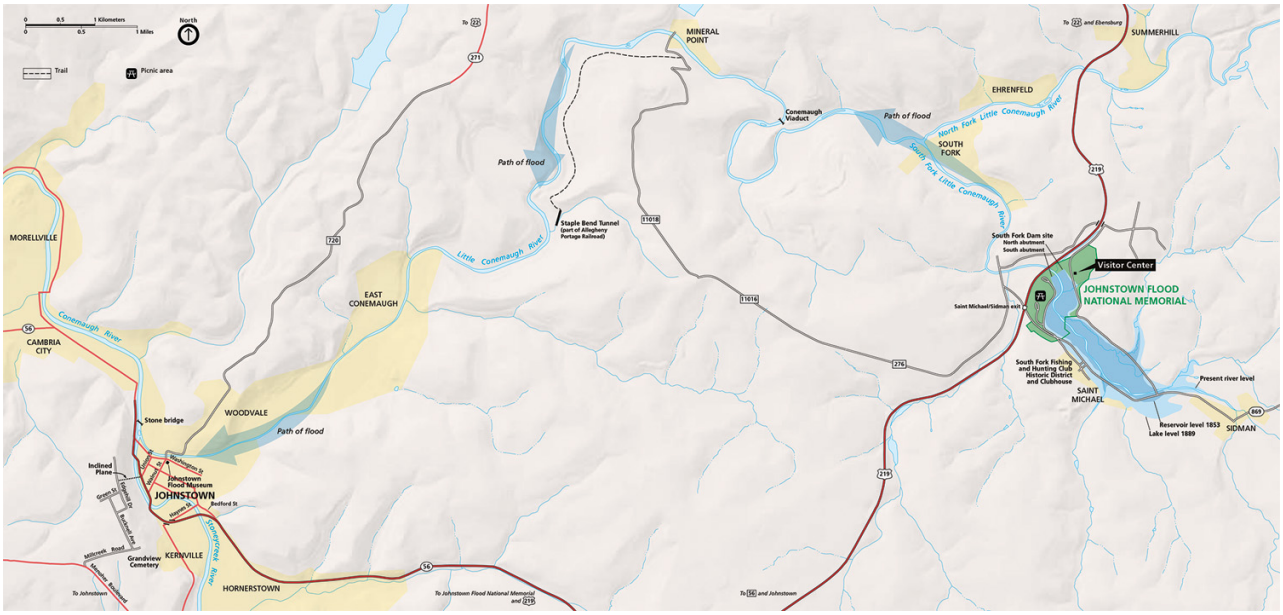
The boundary for the CLI corresponds to the land within the authorized boundary of Johnstown Flood National Memorial and the National Register district boundary. The boundary encompasses 178 acres on five discontiguous parcels of land.

Boundary Coordinates

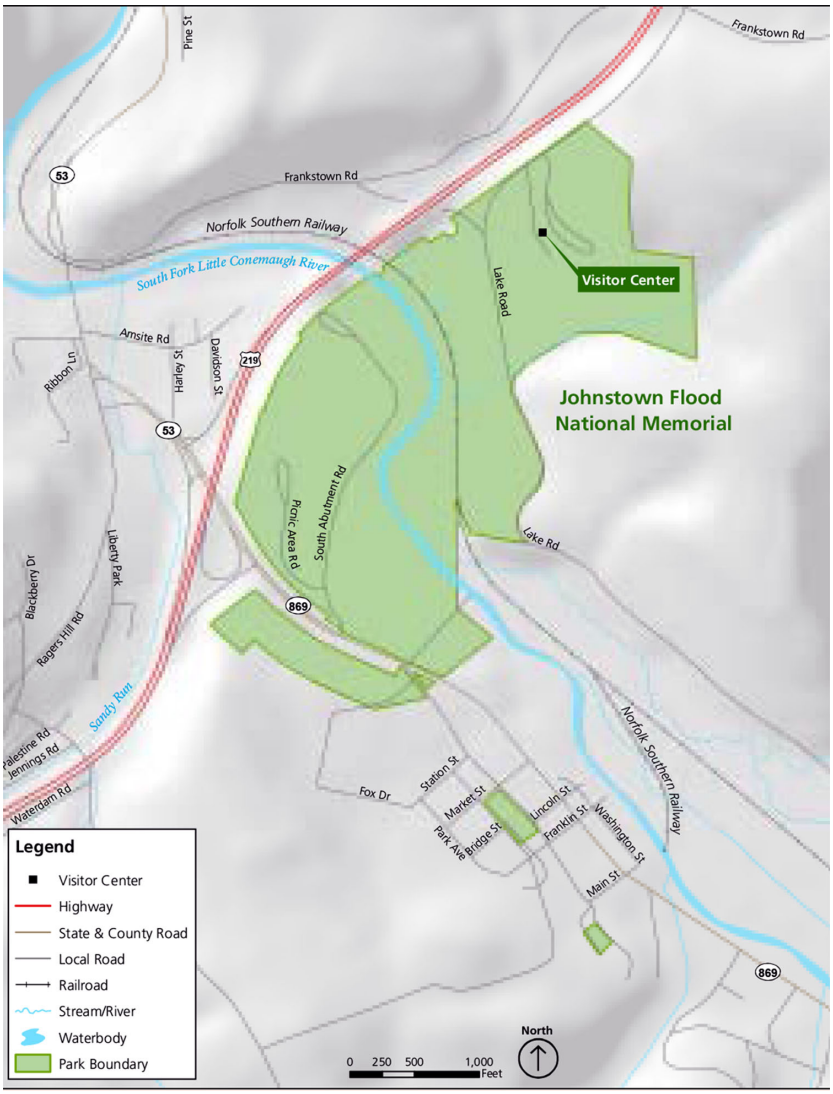
Source	Type of Point	Latitude	Longitude	Narrative
Aerial Photograph	Polygon	40.352058	-78.769828	
Aerial Photograph	Polygon	40.351308	-78.768722	
Aerial Photograph	Polygon	40.349175	-78.767079	
Aerial Photograph	Polygon	40.347016	-78.767073	
Aerial Photograph	Polygon	40.344807	-78.771404	
Aerial Photograph	Polygon	40.343164	-78.771874	
Aerial Photograph	Polygon	40.343398	-78.773459	
Aerial Photograph	Polygon	40.341798	-78.773858	
Aerial Photograph	Polygon	40.341162	-78.772915	
Aerial Photograph	Polygon	40.340336	-78.774325	
Aerial Photograph	Polygon	40.340081	-78.77476	
Aerial Photograph	Polygon	40.337918	-78.772851	
Aerial Photograph	Polygon	40.337005	-78.771784	
Aerial Photograph	Polygon	40.33501	-78.770279	
Aerial Photograph	Polygon	40.334604	-78.769797	
Aerial Photograph	Polygon	40.33433	-78.770172	
Aerial Photograph	Polygon	40.334807	-78.770602	
Aerial Photograph	Polygon	40.336742	-78.772296	
Aerial Photograph	Polygon	40.33763	-78.773235	
Aerial Photograph	Polygon	40.339691	-78.776232	
Aerial Photograph	Polygon	40.341237	-78.779479	
Aerial Photograph	Polygon	40.340967	-78.779809	

Aerial Photograph	Polygon	40.341626	-78.780634	
Aerial Photograph	Polygon	40.342266	-78.77951	
Aerial Photograph	Polygon	40.344173	-78.779959	
Aerial Photograph	Polygon	40.347756	-78.77808	

Location Map:



Map of Johnstown Flood National Memorial and its environs. Extents of the former lake are shown in blue. Dark blue arrows show the path of the flood. (National Park Service, Harper's Ferry Center, Johnstown Flood NMem Maps, website accessed 23 May 2016)



Enlargement of Johnstown Flood National Memorial. (From "Foundation Document Overview, Johnstown Flood National Memorial, Pennsylvania," 2014: 4)

Regional Landscape Contexts:

Type of Context: Political

Description:

Political context is the overlay imposed on the landscape through general land use, zoning, legal restrictions, transportation, utilities, population, and political jurisdiction (e.g., state, county, city, borough, or village). The park is located in southwestern Cambria County, which is situated in south-central Pennsylvania approximately 90 minutes east of Greater Pittsburgh and 2.5 hours west of Harrisburg. The county covers 688.35 square miles and has a population of 133,472 (2020 census). The county seat is Ebensburg, which is located in Cambria Township, but the county's largest metropolitan city is Johnstown located 10 miles to the southwest (population 18,368 in 2020). The core of the park straddles the Adams and Croyle townships and is bordered by US Route 219 and State Route 869. Two non-contiguous park parcels are located a mile south in the village of St. Michael (population 351 in 2020), which lies within Adams Township and was partially built in the former Lake Conemaugh bed. The village is situated along State Route 869, the main north-south arterial through the county that also leads to the nearby villages of Creslo and Sidman, which were also partly built in the old lakebed. The park shares administrative and management resources with Allegheny Portage Railroad National Historic Site, which is headquartered in Gallitzin about 22 miles northeast from the site. (Review comments, C.Curry, 15 July 2026)

Type of Context: Physiographic

Description:

Physiographic context is the large-scale physical forms and patterns of the landscape such as hill, plateau, ravine, drumlin, etc. The park is located in the Allegheny Mountains section of southwestern Pennsylvania. The region's topography is characterized by rolling hills and ridges comprised of resistant Paleozoic sandstone and valleys underlain by less resistant carbonates and shales. Geologic units are typically repetitious sequences of shale, coal, limestone, and sandstone with deep ravines characterizing much of the rugged topography. The large watersheds and narrow valleys make the area prone to flooding. The South Fork Little Conemaugh River flows through the park and into the Little Conemaugh River near the town of South Fork, then joins with the Stonycreek River to form the Conemaugh River at Johnstown, then to the Kiskiminetas, Allegheny, and Ohio Rivers. The South Fork Dam was built primarily because of the topography of the area (i.e. a steep gorge along the South Fork Little Conemaugh River) and geographic location (i.e. near the Johnstown canal basin) (see Regional Landscape Context map). The historical use of the lake for recreation was also due in part to the surrounding landscape, which offered its residents beautiful scenery and quiet solitude away from industrial centers such as Pittsburgh.

Type of Context: Cultural

Description:

Cultural context is the general human overlay on the physical form of the landscape. This region was historically forested, but portions of Cambria County are now in agriculture or have been developed. Urban and suburban expansion is occurring around the park, especially near the western and southern borders, while agriculture surrounds its northern and eastern borders. Mining activities began in the nineteenth century but declined in the mid twentieth century, although active mining and remining are in process. The county's forests have been harvested multiple times in the last two centuries, but the landscape has regrown in areas that have not been developed or farmed. The forests are typically dominated by northern hardwood species and may contain diverse wildflowers, herbaceous plants, and ferns in the understory.

Management Information

General Management Information

Management Category: Category A (High NPS Priority for Preservation and Maintenance)

Management Category Date: 06/29/2016

Management Category Narrative:

As approved on June 29, 2016, the Johnstown Flood NMem Landscape meets the Category A (High NPS Priority for Preservation and Maintenance, formerly Must Be Preserved and Maintained) management category because of its designation as a national memorial in its enabling legislation on August 31, 1964.

Management Agreements:

Type of Agreement: None

Management Agreement Expiration Date:

Management Agreement Narrative:

Legal Interests:

Type of Interest: Fee Simple

Legal Interest Narrative: Fee acres total 166.12 acres.

Type of Interest: Less Than Fee Simple

Legal Interest Narrative: Less than Fee acres total 1.24 acres

Located in managed wilderness?: No

Adjacent Lands Information

Do Adjacent Lands Contribute? Yes

Adjacent Lands Narrative:

Adjacent lands are lands outside the cultural landscape boundary, including lands inside or outside the park, which contribute the significance of the park. To possess significance, a feature needs to have integrity, which is the ability to convey significance. There are large portions of the former lakebed beyond the park's boundaries, but most of this land has been developed for residential, commercial, transportation, and industrial uses and is unlikely to be reversed. These lands do not have integrity because they no longer convey their significance as a former lakebed. However, there are several extant cottages built for the South Fork Fishing and Hunting Club beyond park boundaries, which are part of the South Fork Fishing and Hunting Club Historic District.

National Register Information

National Register of Historic Places

Eligibility: Listed

Eligibility Date: 7/26/2024 12:00:00 AM

Significance Level: National

Contributing: Contributing

Classification: District

Documentation Narrative Description:

Johnstown Flood National Memorial (NMem) was authorized on August 31, 1964, and established on June 30, 1969, to commemorate the tragic Johnstown Flood of May 31, 1889. As a national memorial within the National Park System, the park was administratively listed on the National Register of Historic Places on October 15, 1966, with passage of the National Historic Preservation Act. Documentation of the park's historic resources for the National Register began in 1986.

On July 31, 1986, National Register documentation for the South Fork Fishing and Hunting Club Historic District in the town of St. Michael was accepted by the Keeper of the National Register. State-level significance for the 5.6-acre district was identified at the state level under Criteria A and C in the areas of Social History and Architecture. The period of significance was identified as 1800-1900, with specific dates of 1879-1889, corresponding to the establishment of the club and ending with the collapse of the South Fork dam. Contributing resources within park boundaries included the clubhouse (#112) and clubhouse annex (#113, now Double Cottage). The district included six residences, two of which – Moorhead Cottage (#105, now Lippincott) and Knox Cottage (#106, now Brown) – were acquired by the park in 2004. Noncontributing resources included two modern houses, a significantly altered house from the historic period, and a church dating to the 1930s.

In February 1986, draft National Register documentation for the Johnstown Flood National Memorial was sent to the Pennsylvania State Historic Preservation Office (SHPO). Significance for buildings and structures was identified in the areas of Engineering, Transportation, and Other (Recreation). The form identified significance for the period 1800-1899 and 1900-x. Specific dates were listed as 1838-c.1915, beginning when the Canal Commissioners identified the need to build the Western Reservoir (later Lake Conemaugh). The rationale for the end date was not explained. However, in a letter dated July 18, 1986, the SHPO did not concur with the findings, recommending substantial revisions and identifying Engineering, Transportation, and Other (Disaster) as appropriate areas of significance.

On August 4, 1986, National Register documentation was accepted for the Johnstown Flood National Memorial by the Keeper. Significance for the 163.47-acre historic district was identified under Criteria A and C in the areas of Engineering, Social/Humanitarian, Transportation, and Other (Recreation). The form identified the period of significance as 1800-1899 and 1900-x. Specific dates were listed as 1838-1889, beginning when the Canal Commissioners identified the need to build the Western Reservoir (later Lake Conemaugh) and ending when the dam failed. Specific contributing resources described in the form included the South Fork Dam, Unger house, spring house, main barn and carriage shed (later removed), and fences. Noncontributing resources included the well house, silo, garage, visitor contact station, seven

waysides, entrance road, picnic area road, two parking lots, picnic area development, maintenance building and paved/fenced enclosure, park office, well and pump house, restroom building, and split rail fences.

The National Park Service has engaged in several consultations with the Pennsylvania SHPO regarding park resources. On December 30, 1996, the SHPO concurred with the National Park Service that several buildings and structures at the park were noncontributing resources, including the visitor center, old State Route 869 culverts and retaining walls, and a pedestrian footbridge over the former spillway. On March 27, 2008, the SHPO concurred that a previously undocumented feature, the Carriage Road Trace, was a contributing resource for its association with the dam, the dam breach, and the resort. The SHPO also reconfirmed that the South Fork Dam, overflow sluice ruins, spillway, Unger house, and spring house foundation were contributing resources.

On October 5, 2004, a major boundary revision incorporated several resources of the South Fork Fishing and Hunting Club Historic District into the park, including the clubhouse and clubhouse annex (now double cottage) (Tract 02-100, 1.65 acres), and the Brown Cottage and Moorhead (now Lippincott) Cottage (Tract 02-101, 0.65 acres).

On June 29, 2016, the CLI for Johnstown Flood National Memorial Landscape was completed. Significance for the 178-acre property was identified at the national level under Criteria A and C in the areas of Social History and Entertainment/Recreation and at the local level in the area of Architecture. The period of significance was identified as 1879-1889, beginning with the organization of the South Fork Fishing and Hunting Club and ending with the Johnstown Flood and the immediate recovery activities that followed. The CLI identified numerous contributing and noncontributing resources (see Analysis and Evaluation chapter). The CLI was consistent with the findings of the park's draft National Register update.

In 2015, an update to the park's National Register listing was initiated to document historic resources associated with the South Fork Dam (abutments, spillway, sluice culvert, valve control tower, a portion of the bed of the former Lake Conemaugh), incorporate resources in the boundary increase, and address extensive development since the park's 1986 National Register documentation. The update proposed significance in the areas of Social History and Entertainment/Recreation for the period 1879-1889, beginning with the organization of the South Fork Fishing and Hunting Club and ending with the Johnstown Flood and the immediate recovery activities that followed. Specific contributing resources described in the form included the South Fork Dam, South Fork Dam Abutments, South Fork Dam Spillway, South Fork Dam Overflow Sluice Ruins, Carriage Road Trace, Lakebed, South Fork Fishing and Hunting Clubhouse, Double Cottage, Brown Cottage, Lippincott Cottage, Lake View House, and Lake View Spring House. The Visitor Center, Maintenance Office, Maintenance Shop, and Picnic Pavillion were identified as noncontributing resources. In a letter dated September 28, 2016, the Pennsylvania SHPO recommended revising the beginning date of period of significance to 1853, the date the dam was completed.

On July 26, 2024, the updated National Register documentation for the Johnstown Flood National Memorial was accepted by the Keeper. National-level significance for the 164-acre historic district was identified under Criterion A in the area of Social History. The form identified the period of significance as 1879-1889, beginning when the South Fork Fishing and Hunting Club was established and ending with the Johnstown Flood of May 31, 1889, and the immediate recovery activities conducted during the summer of that year. Specific contributing resources described in the form included the South Fork Dam, South Fork Dam Abutments, South Fork Dam Spillway, South Fork Dam Overflow Sluice Ruins, Carriage Road Trace, Lakebed, Lake View House, South Fork Fishing and Hunting Clubhouse, Double Cottage, Brown Cottage, and Lippincott Cottage. The Visitor Center, Maintenance Office, Maintenance Shop, Picnic Pavillion, and Lakeview Spring House were identified as noncontributing resources.

According to research conducted for this CLI and the categories of National Register documentation outlined in the "CLI Professional Procedures Guide," the areas of significance for Johnstown Flood National Memorial are adequately documented in the 1986 and 2021 National Register documentation forms. The existing documentation adequately describes the site's historic resources that contribute to its significance. Therefore, for purposes of the CLI, the Johnstown Flood National Memorial is considered "Listed-Documented."

Pre-CLI Documentation Status: Listed - Documented

CLI SHPO/THPO Concurrence Date: 7/26/2024 12:00:00 AM

CLI Concurrence Narrative:

Statement of Significance for National Register of Historic Places:

The Johnstown Flood National Memorial Landscape possesses national-level significance under Criterion A in the area of Social History and state-level significance under Criterion C in the area of Architecture. The period of significance begins with the organization of the SFFHC in 1879 and ends with the Johnstown Flood of May 31, 1889, and the immediate recovery activities conducted during the summer of that year. This time period encompasses the construction of all the resources associated with the SFFHC, including the repair of the South Fork Dam by the club for recreational purposes.

CRITERION A

Social History:
The Johnstown Flood National Memorial Landscape is significant at the national level under Criterion A in the area of Social History for its associations with the Johnstown Flood of May 31, 1889, and its aftermath. The flood occurred when the South Fork Dam, owned by the South Fork Fishing and Hunting Club (SFFHC) failed and unleashed a torrent of impounded water into the Little Conemaugh River valley that carried away buildings and structures in its path. The worst damage and loss of life occurred in the city of Johnstown 14 miles downstream, where many victims drowned or perished when they were swept into a massive pile of burning debris that accumulated at a stone railroad bridge. The final documented death toll was 2,209, more recorded deaths than any other disaster in the country until the Galveston hurricane of 1900 and the greatest
loss of life ever caused by a dam break in the United States. (NR 2024, Sec.8: 17-18)

Sensational accounts of the tragedy carried in newspapers throughout the country prompted the first truly national disaster relief effort, which included the greatest test to date of the effectiveness of the American Red Cross headed by Clara Barton and helped to secure that organization's reputation as the nation's preeminent disaster-relief organization. The media coverage also fueled class tensions that pitted the South Fork Fishing and Hunting Club, which counted among its members some of the wealthiest people in America, against flood victims who sought compensation for their losses. Engineering investigations into the causes of the dam's failure revealed that the club had made critical mistakes when it rebuilt the South Fork Dam, which had been constructed in the early 1850s to supply water to the Western Division of Pennsylvania's Main Line Canal, to create Lake Conemaugh as the centerpiece of its recreational resort. The South Fork Fishing and Hunting Club never accepted any legal responsibility for the disaster and none of the many civil suits brought against its members were successful, but the event ultimately contributed to a major shift in American tort law toward holding property owners liable for damages incurred as a result of their negligence. (NR 2024, Sec.8: 17-18)

This area of significance is represented in the integrity of the two remaining earthen abutments of the South Fork Dam, the stone ruins of the overflow sluice and spillway, and the drained earthen lakebed. Other remaining historic resources include the home of the club's president, which was built as part of Lake View Farm. In addition, historic resources include the trace of a carriage road that once led over the South Fork Dam and connected Lake View Farm with the clubhouse and cottages of the South Fork Fishing and Hunting Club on the opposite shore of the former Lake Conemaugh. Several wooded areas and open meadows also contribute to the historic setting of Lake View Farm. The park's successful efforts to remove the mix of forest and shrubs that pervaded the lakebed now allows visitors to understand the devastating impact that the destruction of Lake Conemaugh and the South Fork Dam had on the

communities downriver. (CLR 2021: 161)

CRITERION C

Architecture:
The Johnstown Flood National Memorial Landscape is significant at the state level under Criterion C in the area of Architecture for the unique designs of four South Fork Fishing and Hunting Club buildings that reflect the rustic recreational pursuits of prominent wealthy Pittsburgh families. Established in 1879 to pursue leisure activities outside the city, these business leaders erected homes and created an artificial lake so they could go hunting, fishing, boating and horseback riding in the Allegheny Mountains. Next to the lake, the club constructed boathouses, stables, and a clubhouse that after an expansion featured forty-seven rooms and a dining hall that seated 150 people. Some member families also built "cottages," some of which contained as many as seventeen rooms. Sixteen cottages were erected near the lake shore and had porches commanding scenic views. (NR 1986, Sec.8: 3; NR 2024, Sec.8: 24)

The four buildings owned by the National Park Service were built along the shoreline to maximize views of the lake. The 1986 and 2024 National Register documents assign varies architectural styles to the four structures: Clubhouse (1881-1886, three-story, eclectic), Double Cottage (c.1887, two-story, Shingle), Brown Cottage (1888, two-story, Stick, Queen Anne, Tudor Revival), and Lippincott Cottage (1887, three-story, Queen Anne). The National Park Service has rehabilitated the first story of the clubhouse and uses it for meetings, theater performances, social gatherings, and museum exhibits. The park leases the apartments in the rehabilitated Double Cottage, while the Brown Cottage is used for seasonal park housing. The Lippincott Cottage is vacant but stabilized.

National Register Significance Criteria:

Significance Criterion A - Associated with events significant to broad patterns of our history

Significance Criterion C - Embodies distinctive construction, work of master, or high artistic values

National Register Area of Significance:

Area of Significance Category: Architecture

Area of Significance Subcategory:

Narrative:

Area of Significance Category: Social History

Area of Significance Subcategory:

Narrative:

National Register Criteria Consideration:

National Register Periods of Significance (with Historic Context Themes):

Time Period: CE 1879 - CE 1889

Historic Context Theme	Subtheme	Facet	Other Facet
Creating Social Institutions and Movements	Recreation	General Recreation	
Creating Social Institutions and Movements	Social and Humanitarian Movements	Emergency Aid And Health Care	
Creating Social Institutions and Movements	Ways of Life	Industrial Towns	
Developing the American Economy	Shipping and Transportation by Water	Canals	
Developing the American Economy	The Mining Frontier	Mining (Coal, Salt Peter, Oil, etc)	
Expressing Cultural Values	Architecture	Queen Anne	
Expressing Cultural Values	Architecture	Gothic Revival	

NRIS Information:

NRIS Name:	Johnstown Flood National Memorial
NRIS ID:	66000656
Primary Certification Date:	08/04/1986
NRIS Name:	South Fork Fishing and Hunting Club
NRIS ID:	86002091
Primary Certification Date:	07/31/1986
NRIS Name:	Johnstown Flood National Memorial
NRIS ID:	66000656
Primary Certification Date:	07/26/2024

State Register Documentation:

Identification Number:	1966RE00049
Name:	Johnstown Flood National Memorial
Listed Date:	06/20/2024

National Historic Landmarks:

National Historic Landmark? No

Theme:

Contributing:

NHL ID:

NHL URL:

Date:

Statement of Significance for National Historic Landmark:

World Heritage Site:

World Heritage Site? No

Category:

WHS ID:

WHS URL:

Date:

Is Resource within a designated National Natural Landscape: No

Chronology and Physical History

Chronology:

Year	Event	Major Event Narrative
CE 1768	Settled	The region immediately south and east of the Allegheny River, including what is now Cambria County, is negotiated for English settlement as part of the 1768 Boundary Line Treaty concluded at Fort Stanwix, New York.
CE 1769	Settled	Charles Campbell takes out a warrant for 249 acres on the Little Conemaugh and Stoneycreek (Stony Creek) rivers in what is now the City of Johnstown.
CE 1800	Platted	Joseph Johns (the city's namesake) begins laying out lots and streets on the Campbell tract.
CE 1826 - 1834	Built	The Commonwealth of Pennsylvania constructs the Main Line of Public Works, a portage railroad and canal system stretching across southern Pennsylvania between Philadelphia and Pittsburgh.
CE 1834	Platted	The Canal Commissioners direct engineer Sylvester Welch to survey potential sites for a reservoir that can supply Supplemental water to the Main Line's canal in Johnstown. He selects a site on the South Fork of the Little Conemaugh River, east and upstream from Johnstown.
CE 1839	Designed	The Canal Commissioners name William E. Morris as the principal engineer of the project. Morris concurs with Welch's findings and develops design details for the dam and reservoir.
CE 1840 - 1853	Built	After years of delays in funding, the state legislature appropriates money for land purchases and construction of the dam. After work begins, subsequent years of funding issues and other problems delay completion of the dam for thirteen years.
CE 1846	Altered	Morris changes the materials of the dam's valve control tower from masonry to timber.
CE 1847	Destroyed	The partially completed South Fork Dam breaks for the first time and causes a minor flood in Johnstown.
CE 1853	Built	The South Fork Dam and Western Reservoir are completed and ready for use.
CE 1857	Purchased/Sold	The Commonwealth of Pennsylvania sells the Main Line system to the Pennsylvania Railroad Company, including the dam and reservoir.
CE 1862	Destroyed	Compounded by years of neglect, the South Fork dam fails for the second time. The sluice culvert collapses and nearly 200 feet of the dam embankment washes out to a depth of 50 feet. Floodwater rises to 2-3 feet in Johnstown.
CE 1863 - 1879	Abandoned	The railroad does not repair the 1862 break and the dam and reservoir are abandoned after the railroad closes the canal in Johnstown in 1863. Vegetation gradually fills the empty reservoir during this period.
CE 1875	Purchased/Sold	The Pennsylvania Railroad Company sells the property, amounting to around 500 acres, to John Reilly.

Year	Event	Major Event Narrative
CE 1878	Destroyed	Around 1878 the dam's abandoned valve control tower for controlling the sluice pipes is destroyed by fire. The five sluice pipes are sold for scrap.
CE 1879	Established	South Fork Fishing and Hunting Club is established by some of Pittsburgh's wealthiest citizens.
CE 1879	Purchased/Sold	Reilly sells the property to the South Fork Fishing and Hunting Club of Pittsburgh for $2,000 for development of a private resort and lake.
CE 1879 - 1881	Reconstructed	The club reconstructs the South Fork Dam and Western Reservoir, which it renames Lake Conemaugh.
CE 1880 - 1881	Altered	The club decides not to replace the missing sluice pipes and instead fills in the sluice culvert, which causes concern amongst many people downstream and those familiar with the construction of dams. The club also lowers the center of the dam by two feet to create a wider space for two carriages to pass.
CE 1881	Built	The club builds two timber trestle bridges over the spillway as part of the carriage road between South Fork and the club grounds. The bridge at the upper end is fitted with wire screens to prevent the loss of fish during periods of high water.
CE 1881	Built	The club constructs a 2.5-story clubhouse on the lake's southwestern shore, about one mile upstream from the dam. It has 17 guest rooms and dining hall for 90.
CE 1882	Purchased/Sold	Elias Unger purchases a hillside farm on the lake's northeastern shoreline next to the dam from Joseph Leckey (Leahey). It comes to be known as the Lake View Farm.
CE 1883 - 1888	Built	Unger constructs a two-story house, called Lake View House. He also builds a spring house, barn, and other outbuildings on the hillside. The house includes a two-story covered porch on its southwest façade, overlooking the dam and lake.
CE 1886	Altered	The club enlarges the clubhouse with a 3-story addition. Capacity increased to 47 guest rooms and dining for 150.
CE 1887	Built	The club builds a two-story clubhouse annex, known as the double cottage, just northwest of the clubhouse.
CE 1888	Built	By 1888, there are 16 cottages (sources vary on the number) situated northwest and southeast of the clubhouse and double cottage, set out in a row facing the lake. The houses vary in architectural styles but are typically 3-stories and include covered front porches overlooking the lake.
CE 1889	Built	A wooden boardwalk extends along the length of the club buildings, paralleling the shoreline, and connects to the clubhouse, cottages, boathouses, and docks.

Year	Event	Major Event Narrative
CE 1889	Destroyed	Heavy rains and inadequate reconstruction of the dam cause the South Fork Dam to fail for the third time on May 31, killing 2,209 people and destroying much of Johnstown and other towns along the Little Conemaugh River. The flood waters create a gap in the center of the dam measuring around 420 feet at the top and 50-200 feet wide at bottom.
CE 1891	Built	The South Fork Fishing and Hunting Club disbands and lands are eventually sold off, beginning in July 1891 when the South Fork Branch Railroad builds a rail line in the lakebed and through the dam breach.
CE 1896 - 1912	Purchased/Sold	Upon Elias Unger's death, the Lake View Farm property passes to his wife, and then a series of other owners until 1912.
CE 1903	Purchased/Sold	The remaining club properties, totaling 624 acres and 49 acres, are sold to George M. Harshberger.
CE 1904	Built	By this time, a second track is built through the dam break and lakebed, as well as a railyard. A road tracks along the southwestern shoreline (now South Abutment Road and Locust Street/State Route 869). Another road tracks along the northeastern shoreline (now Township Road 352/Lake Road) and passes through the old spillway.
CE 1907	Purchased/Sold	Harshberger sells both the 624-acre and 49-acre properties to George M. Wertz, who in turn has it surveyed and subdivided. Two of these new parcels include a 40.9-acre purchase by the Maryland Coal Company of Pennsylvania and a 30.9-acre purchase by John L. Sechler that also includes the clubhouse. The Maryland Coal Company purchases the former cottages as housing for company management. Most are altered and remodeled to varying degrees by their occupants, and a few are razed in the 1920s.
CE 1907 - 1908	Built	The Maryland Coal Company constructs Mine Shaft No.1 near Topper Run, a stream in the ravine around 1,500 feet south of the clubhouse and cottages.
CE 1907	Platted	John Sechler lays out a plan of 208 building lots on his property for additional development in the former lakebed. Main Street follows the route of the former boardwalk that once fronted the club buildings. However, in subsequent years many of the small lots are combined.
CE 1907 - 1920	Altered	Sechler converts the former clubhouse into a hotel and tavern, but loses the business in 1920.
CE 1912 - 1949	Farmed/Harvested	The Holsopples operate their family farm at the former Lake View Farm. They grow and sell crops, and plant a vegetable garden and fruit trees.

Year	Event	Major Event Narrative
CE 1912 - 1949	Altered	During their tenure the Holsopples modify the previous inventory of buildings and structures. Stairs on the southwest porch of the house are removed, the original northeast porch is replaced with a raised porch, and the building is painted white with black trim. The spring house is used to slaughter and store cured meat. The cupolas on the original barn and carriage/wagon/machine shed are replaced with dormers, and both structures are painted red with white trim.
CE 1912 - 1949	Built	The Holsopples add a wooden silo in the “heel” of the L-formed by the barn and the carriage shed, a well house south of the spring house, and a smokehouse and chicken coop uphill from the house. A pig pen and another chicken coop, both present when the Holsopples arrived, stand uphill from the barn. A picket fence surrounds the house.
CE 1920 - 1929	Built	The Maryland Coal Company builds duplexes in a new plat behind (west of) the row of cottages.
CE 1921	Altered	The Maryland Coal Company converts the Brown Cottage into a duplex.
CE 1921 - 1950	Altered	The clubhouse is operated as a hotel by the Cruikshank family until 1950. The double cottage is used as guest rooms, and its two-story front porch is removed after 1940.
CE 1930 - 1939	Removed	The Cruikshank family removes the 1881 two-story block of the clubhouse.
CE 1930 - 1939	Altered	In the 1930s the Maryland Coal Company converts the Lippincott (Moorhead) Cottage into a duplex.
CE 1930 - 1939	Built	The road on the lake’s southwestern shore is designated State Route 869 and improved with paving, culverts, and retaining walls.
CE 1933	Purchased/Sold	The holdings of the Maryland Coal Company are transferred to the Berwind-White Coal Mining Company. The company acquires the South Fork Dam, portions of the lakebed, and the hill southwest of the dam.
CE 1939 - 1958	Altered	Between 1939-58, the segment of State Route 869 encircling the hill southwest of the dam is abandoned and replaced with a new shorter segment. The abandoned section is retained and renamed Township Road 308.
CE 1950 - 1958	Altered	Albert and Lucy Clement, owners of the clubhouse, add two additions to the rear of the building.
CE 1950 - 1981	Purchased/Sold	The Holsopples sell the 78.9-acre Lake View Farm property to Robert E. and Lois M. Furlong. The Furlongs continue farm operations through the 1950s and early 1960s, raising field crops and animals.
CE 1950 - 1981	Altered	The Furlongs paint the exterior of the house white with green trim, but remove the northeast porch in c.1957 for structural reasons. They use the spring house for cooling milk and the area above the spring house as a slaughtering site.
CE 1950 - 2026	Altered	The double cottage is used as apartments beginning in 1950.

Year	Event	Major Event Narrative
CE 1955	Purchased/Sold	The Maryland Coal Company sells the cottages, including the Brown and Lippincott (Moorhead) Cottages, to private owners.
CE 1958	Abandoned	Mining at Lake Conemaugh officially ended when Berwind-White closes the mine.
CE 1960 - 1969	Built	Furlongs build a new garage at the Lake View Farm to replace the deteriorated barn and shed.
CE 1962	Built	By 1962 there is a long one-story garage located behind the double cottage.
CE 1964 - 1969	Built	Limited access U.S. Highway 219 is built just downstream from the dam abutments. The highway severs Township Road 308, which is abandoned, while Township Road 352 is relocated from the spillway to a new route on the hillside above the spillway.
CE 1964 - 1969	Established	On August 31, 1964, Congress authorizes Johnstown Flood National Memorial and designates up to 55 acres of land for the park. The park is officially established on June 30, 1969 (Tracts 01-101, 103, 107, 108).
CE 1970 - 1979	Abandoned	In the 1970s, the Furlongs move out of the deteriorating Lake View House. The house's southwest porch is removed during this time, and the barn, carriage shed, and silo also are in ruins. The chicken coop structures and the smokehouse are removed.
CE 1972	Expanded	A boundary increase authorizes an addition of around 53.6 acres of land, which encompass a forested area straddling the river in the former lakebed between the railroad tracks and State Route 869, as well as a mostly open area south of State Route 869 (Tracts 01-109, 112, 113-scenic, 114, 115, 116, 117, 118).
CE 1972 - 1973	Built	The park improves abandoned Township Road 308 for use as its entrance road (now South Abutment Road), which ends as a parking lot at the south abutment. The park builds a new road (now Picnic Grounds Road), parking lot, and picnic area at the top of the hill southwest of the south abutment.
CE 1975 - 1979	Built	In the late 1970s, the park builds a hiking trail (now Arbor Nature Trail) between the picnic grounds and the south abutment, a small temporary visitor center on the south side of the parking lot, and a loop trail from the parking lot to the river and around the south abutment. There is also a temporary park office and toilet adjacent to the parking lot.
CE 1975 - 1979	Removed	The park clears trees within the lakebed to help define the former shoreline.
CE 1978	Expanded	A second boundary increase authorizes an addition of around 67 acres of land, which include the Lake View Farm and a forested lakebed area between the railroad tracks and Township Road 352 (Tracts 01-124, 127, 129).
CE 1980 - 1985	Built	In the early 1980s the park builds a one-story shed and work yard for park maintenance operations, just north of the end of the Picnic Grounds Road.
CE 1981	Purchased/Sold	The park purchases the Lake View Farm from the Furlongs.

Year	Event	Major Event Narrative
CE 1981	Built	A permanent comfort station is built on the west side of the Picnic Grounds Road loop c.1981, replacing a portable toilet.
CE 1986	Established	The clubhouse and seven extant cottages associated with South Fork Fishing and Hunting Club in St. Michael are listed in the National Register of Historic Places.
CE 1988	Established	The 1889 South Fork Fishing and Hunting Club Historical Preservation Society is founded on December 27, 1988. The society acquires the clubhouse, double cottage, Brown Cottage and Lippincott (Moorhead) Cottages in the late 1980s and early 1990s.
CE 1988 - 1989	Built	The visitor center is built at the site of the former Unger barn and carriage shed, in time for the 100th Anniversary of the Johnstown Flood. New plantings are installed in the area. The temporary visitor center and park office at the south abutment are removed.
CE 1988 - 1989	Built	The park builds the Visitor Center Road and parking lot uphill from the visitor center. The farm lane is retained for use as the Service Road.
CE 1988 - 1989	Restored	The park restores the exterior of the Lake View House to its historic 1889 condition, including the covered two-story southwest porch with its center stair and the northeast porch (and an accessible ramp). The house is painted white with red trim.
CE 1988 - 1989	Rehabilitated	The park rehabilitates the collapsing foundation of the spring house and builds a new but smaller structure similar to the style of the original on top of the northwest end of its original foundation.
CE 1988 - 1989	Removed	The park removes the Furlong garage and the well house.
CE 1988 - 1989	Built	A pedestrian bridge is built across the upper end of the spillway. It connects to a new accessible path that leads to a new parking lot along Township Road 352. A boardwalk is installed on top of the north abutment to improve accessibility.
CE 1988 - 1989	Built	A woodchip trail with timber steps traverses the slope between the visitor center parking lot and spring house, and another woodchip trail heads south and west down the hill to Township Road 352. A trail is built along the downstream face of the north abutment. It is abandoned in the late 1990s.
CE 1988 - 1991	Removed	In 1988-1991 the park clear cuts and burns approximately 50 acres of vegetation in the lakebed, and then seeds it to promote grassland development. The park also clears stands of timber in around the dam abutments.
CE 1991 - 1992	Restored	The 1889 South Fork Fishing and Hunting Club Historical Preservation Society reconstructs the clubhouse front Porch.
CE 1992 - 1993	Rehabilitated	Interior spaces in the Lake View House are upgraded and readapted into park offices, a library, workrooms, and storage areas.
CE 1993	Built	By 1993, additional workspaces and temporary structures are present at the maintenance work yard.

Year	Event	Major Event Narrative
CE 1993	Removed	By 1993 the east half of the garage behind the double cottage has been removed.
CE 1993	Built	An open-sided picnic pavilion is constructed at the picnic grounds by 1993.
CE 1996	Built	A two-story maintenance office/two-bay garage is built at the north end of the maintenance yard.
CE 2004	Expanded	A third boundary increase authorizes an addition of around 14 acres of land, which encompass the clubhouse, double cottage, Brown Cottage, and Lippincott (Moorhead) Cottage, as well as a tract southeast of the Lake View Farm. (Tracts 01-130, 02-100, 02-101)
CE 2004	Removed	By 2004 the remaining (west) half of the garage behind the double cottage has been removed. Some of the foundation is retained.
CE 2006	Established	The 1889 South Fork Fishing and Hunting Club Historical Preservation Society change their organizational name to The Friends of the Johnstown Flood National Memorial.
CE 2011	Altered	The maintenance shop is enlarged with a three-bay addition to the north.
CE 2013	Removed	The comfort station at the picnic grounds is removed and replaced with two portable toilets.
CE 2013	Planned	The park's "Foundation Document" identifies fundamental resources and values.
CE 2015 - 2018	Established	The Friends of the Johnstown Flood National Memorial disbands, but reforms in 2018.
CE 2016	Rehabilitated	"Repair and Replace Rotted Decking, Stair Treads and Risers on South Abutment Trail." (PMIS 177418 / PEPC 65738)
CE 2020	Rehabilitated	"Remove Trees and Shrubs and Treat Stumps from Lakebed." (PMIS 171804)
CE 2022	Built	Vault toilet is installed at the south abutment parking area. (PEPC 104031)
CE 2022	Built	Cambria County erects a 260-foot tall 911 communications tower on private land northeast of the visitor center.
CE 2022	Built	A portion of the Path of Flood/Flight 93 NM trail is built in the lakebed. (PEPC 101864)
CE 2023	Altered	"Monitor and Treat Lakebed Grounds." (ongoing, PMIS 308988 / PEPC 112393)
CE 2023	Rehabilitated	"Cyclic Maintenance of Lakebed Grounds." (ongoing) (PMIS 30898 / 9112393)

Physical History:

INTRODUCTION

The following section provides information on the physical development and evolution of the site, organized by time periods. The information is extracted from several secondary sources, including: “Cultural Landscape Report for Johnstown Flood National Memorial National Parks of Western Pennsylvania Cambria County, Pennsylvania: Site History, Existing Conditions, Analysis and Evaluation, Treatment, Record of Treatment, and Lakebed Vegetation Management” (2021); “Historic Structure Report, Elias J. Unger House” by Harlan Unrau (1986); “Historic Structure Report, The South Fork Dam” by Harlan Unrau (1979); “Historic Structures Report, South Fork Fishing & Hunting Club: Clubhouse, Brown Cottage, Moorhead Cottage, and Clubhouse Annex” by LDA et.al. (1993); National Register documentation for Johnstown Flood National Memorial (2016 and 2024) and South Fork Fishing and Hunting Club Historic District (1986); the park’s website; and a review of historic photographs, maps, and plans.

PRE-HISTORY TO 1834

The cultural and natural resources at Johnstown Flood National Memorial are largely a product of the geologic features and processes that formed this landscape. The park is located along the western edge of the Allegheny Mountains section of the vast Appalachian Plateaus physiographic province, which stretches from northern Alabama to southern New York. The topography of the province is characterized by deep valleys and ravines carved into nearly horizontal sedimentary layers of rock. Over time the layers of rocks, comprised of repetitious sequences of shale, coal, limestone, and sandstone, have eroded to create a rugged and jumbled topographic surface, although the northern parts of the province in Pennsylvania and New York display more rounded hills with gentler slopes. In time the prominent valleys and streams were named, including the Little Conemaugh River. The South Fork Little Conemaugh River flows through the park and was the namesake of the dam and lake that became infamous in May 1889. (Yetter et.al. 2014: 16; Thornberry-Ehrlich 2008: 4,6)

Settlement in the Valley:
European settlement of southwestern Pennsylvania occurred fairly late when compared to eastern portions of the state. Rugged terrain and contentious relations with the resident Native American groups were major deterrents to permanent settlement of the area until the second half of the eighteenth century. The region immediately south and east of the Allegheny River, including what is now Cambria County, was negotiated for English settlement as part of the 1768 Boundary Line Treaty concluded at Fort Stanwix, New York. The treaty was made between the British government, represented by members of the illustrious Penn family, and the Six Nations Confederacy consisting of representatives from the Mohawk, Oneida, Cayuga, Seneca, Onandaga, and Tuscarora nations. Less than five months later, in April 1769, Charles Campbell took out a warrant for 249 acres on the Little Conemaugh and Stoneycreek (Stony Creek) rivers in what is now the City of Johnstown. In 1794 Joseph Johns (the city's namesake) purchased the Campbell warrant (although it had changed hands several times since he owned it) and in 1800 began laying out lots and streets. Cambria County was created as a separate entity in 1804. (National Register JFNMem, draft 2016, Sec.8: 75)

The area's natural resources were abundant. Steep headwater streams were large enough to support gristmills, hillsides contained quality timber, and low-lying areas were suitable for cultivation. Slowly, small clearings emerged along the stream valleys and more settlers began to arrive. However, it was the discovery of underground mineral wealth that accelerated settlement in the area. As early as the 1760s, the region's soft, free-burning bituminous coal was readily available for use in village forges and blacksmith shops. At this time small coal mines served as local suppliers for home heating and cooking, but as coal replaced charcoal in the iron making process, coal mining in Cambria County began to increase. Johnstown and other small villages along the Little Conemaugh grew quickly, especially after 1834 when the rail lines and canals of the Main Line of Public Works, a system of railroads and canals, began transporting coal over the Allegheny Mountains. (Yetter et.al. 2014: 6-7, citing McLaurin 1890: np)

CONSTRUCTION OF DAM AND RESERVOIR ON THE SOUTH FORK, 1834-1853

In the nineteenth century, the City of Philadelphia became a major east coast industrial center and railroad hub that grew from an influx of European immigrants. In 1826, at the urging of Philadelphia businessmen, the Commonwealth of Pennsylvania constructed the Main Line of Public Works, a railroad and canal system stretching across southern Pennsylvania between Philadelphia and Pittsburgh, to access the rich timber, mining, agricultural, and manufacturing resources of the central and western portions of the state. The five principal sections of the system, from east to west, included the Columbia and Philadelphia Railroad (Philadelphia to the Susquehanna River at Columbia, 81.6 miles), Eastern Division (canal from Columbia to Clarks Ferry along the Susquehanna River, 44.5 miles), Juniata Division (canal from Clarks Ferry to Hollidaysburg along the Juniata River, 127.5 miles), Allegheny Portage Railroad (Hollidaysburg to Johnstown, 36.69 miles), and the Western Division (canal from Johnstown to Pittsburgh, 104.25 miles) (Figure 1). The 394-mile long Main Line was completed in 1834. (Unrau 1979: 2)

As soon as the Main Line's Western Division was put into operation, it became clear that the local streams would be unable to provide a sufficient water supply to the canal during the area's typically dry summer months. The canal section between Johnstown to Blairsville was particularly susceptible to low water, and prompted the Commissioners of the Canal to build a water storage reservoir east of Johnstown. During the summer and fall of 1834, the Canal Commissioners tasked Sylvester Welch, the engineer of the Juniata and Western Divisions, to conduct preliminary surveys for a reservoir. In November Welch reported that the most favorable site for a dam and reservoir would be around 14 miles upstream from Johnstown on the south fork of the Little Conemaugh River, commencing about two miles upstream from its confluence with the north fork, and extending "up the stream about two and a fourth miles." (Unrau 1979: 3-4, citing Welch 1834: 5458)

At this time the proposed site was, with the exception of a small field, covered with timber. According to Welch, "the adjacent country for some miles in extent, is principally a forest, and the land is of comparatively little value." Welch located the dam where the distance across the river valley was less than any other point above or below it, and calculated that a dam here would be 840 feet long and would create an impoundment of 485 million cubic feet of water covering a surface area of 417 acres. He also prepared a section drawing of the dam, which included a sluice at the bottom to release water into the river and a spillway at one end to discharge surplus water created by storm events and snow melts. Welch estimated the total cost for clearing the site and building the dam at $125,705, and calculated that even after evaporation during the dry season, the reservoir would supply the canal with 458 million cubic feet of water, "for a period of nearly 130 days without any augmentation from rain." (Unrau 1979: 3-4, citing Welch 1834: 5458)

In April 1835 the state legislature appropriated $100,000 for various public works, including "the commencement of a reservoir near Johnstown." Welch refined his site surveys, increasing the reservoir's capacity to 524 million cubic feet of water over an area of 465 acres. He also developed additional design details for the dam, constructing it with an embankment and wall of masonry, securing five cast iron sluice pipes in a masonry culvert, and directing spillway water into an existing creek that emptied into the river just downstream from the dam. The dam and reservoir were reestimated to cost $113,330, but the state shifted the entirety of the appropriation to other public works, thus stalling the project. The summer seasons of 1835-1837 were not abnormally dry enough to severely hinder canal operations, but low water conditions in the summer of 1838 prompted the Canal Commissioners to restate the need for the Western Reservoir. In July 1839, the state legislature appropriated $79,000 for construction of the dam and the purchase of land for the reservoir. (Unrau 1979: 6-9, citing Welch 1834: 5458)

In July 1839 the Canal Commissioners named William E. Morris as the principal engineer of the project. Morris conducted additional surveys and calculations that confirmed Welch's earlier recommendations to build the dam and reservoir on the South Fork Little Conemaugh River, stating that the site, "…is the only one that drains a sufficient extent of country, to render certain a supply of water for the reservoir." He also concurred with Welch's stone and earth embankment design for the dam, but revised the reservoir's capacity to 448 million cubic feet of water over an area of 400 acres,

and increased the project's cost estimate to $188,000. His plan – along with detailed specifications for tree clearing, dam foundation work, and dam and sluice construction – was accepted by the Canal Commissioners. The plan included a drawing of a masonry valve control tower located in the water on the dam's upstream side, which housed the mechanisms that opened and closed the five pipes in the sluice culvert (Figure 2). (Unrau 1979: 10-25, citing Morris 1839: 158-164)

With state money in hand, the South Fork Dam and Western Reservoir project was hurriedly put out to bid, and in January 1840 a contract was formally awarded to General James K. Moorhead of Pittsburgh and Judge Hezekiah B. Packer of Williamsport. Moorhead was known as a reputable builder of dams throughout Pennsylvania and Packer was the brother of a future governor of the Commonwealth. Work began in April 1840, and by November enough progress had been made that engineer Morris predicted the reservoir would be ready the following summer if another appropriation of money could be secured. In May 1840 another contract was let for the construction of a brick and stone house and a stable at the reservoir site. The house and stable were intended for the construction supervisor and later for the person charged with the maintenance and operation of the dam and reservoir. A later historic photograph suggests the building may have been located near the dam's south abutment. (Unrau 1979: 28-33)

Deteriorating finances of the Commonwealth of Pennsylvania and the resulting suspension of numerous public works projects hindered work on the dam and reservoir during 1841. In early April 1841 the state legislature passed an act appropriating $50,000 for all completed work at the site through the end of the month, but thereafter contractors had to continue their work using their own funds. Despite the sporadic work schedule that followed, a considerable portion of the embankment was completed by the end of 1841, along with installation of some of the sluice pipes. In January 1842 the Canal Commissioners requested a special appropriation from the state to complete the project, citing a loss of state revenue caused by the temporary closure of the canal during the previous dry season. (Unrau 1979: 33-36)

Despite annual pleas from the Canal Commissioners, it was not until the state's economy began to improve in the mid-1840s that funding was restored. In January 1846 the state appropriated $20,000 for the project, at which time Morris changed the materials for the dam's valve control tower from masonry to wood (Figure 3). The Canal Commissioners received new bids in March to complete the dam and finish clearing the reservoir, including bids from Moorhead and Packer, who argued their January 1840 contract had not been abandoned or rescinded because the work had merely ceased when the appropriation was depleted. However, before the Canal Commissioners could render a decision, a flood in the spring of 1846 caused extensive damage to portions of the Main Line and the state appropriation was redirected toward emergency repairs. In 1847 the partially completed South Fork Dam, which was described as "annually wasting away," broke and caused a minor flood in Johnstown. Work at the dam and reservoir was also halted in 1848 and 1849 by a cholera epidemic that swept through southwestern Pennsylvania. During this period of inactivity, the Canal Commissioners continued to urge the state legislature for money to resume the work. (Unrau 1979: 37-40, citing Storey 1907: 314)

Completion of the South Fork Dam and Western Reservoir finally occurred in the early 1850s. In 1850 the state legislature, at the urging of Governor William F. Johnston, passed a new appropriation of $45,000 for the completion of the project. Moorhead and Packer again demanded that they be allowed to finish the work under their January 1840 contract. When they threatened to take their case to the state Supreme Court, the Canal Commissioners permitted them to proceed under their original contract, but the delay caused by the controversy resulted in the appropriation reverting to the state's general fund. A new appropriation was passed in April 1851 and construction on the dam and reservoir resumed around May 1. (Unrau 1979: 42-43)

The sum of $55,000 was still needed to complete the work, and at the urging of the Canal Commissioners the state legislature provided the additional money in May 1852, allowing the work to continue under Moorhead and Packer. Work on the valve control tower had advanced to a point that on June 10 the sluice pipes were closed to prepare for the dry summer season. By the end of August water in the reservoir had accumulated to a depth of 40 feet above the sluice culvert, enough to provide an ample supply for fully-loaded boats to pass the Western Division of the canal throughout

the summer. In the spring of 1853, the contractors completed the work on the dam and reservoir at a cost of $166,647.50. Since the embankment of the dam was new, it was considered unsafe to fill the reservoir to a height greater than 50 feet above the sluice culvert for the 1853 season. That summer was unusually dry and the reservoir was exhausted before fall. (Unrau 1979: 45-46)

When completed in 1853, the South Fork Dam and Western Reservoir project was hailed as an engineering masterpiece. According to some sources, the dam was considered to be the largest earthen work of its kind in the world and the reservoir was said to be the largest artificial reservoir in the United States. The dam's final "as-built" footprint measured 931 feet in length, 500 feet in width at the bottom and 10 feet at the top, and 72 feet in height. The top of the dam rose ten feet higher than the maximum water level in the reservoir (62 feet). Although limited to a 50-foot depth at the dam, the reservoir still covered an area of 424.85 acres in 1853. (Unrau 1979: 46-48)



Figure 1. Map showing the Main Line of Public Works, Pittsburg to Philadelphia, and Johnstown. (Map by Ruhrfisch Finetooth, U.S. Census, 2009. From Wikipedia, "Main Line of Public Works," website accessed 7 April 2016)

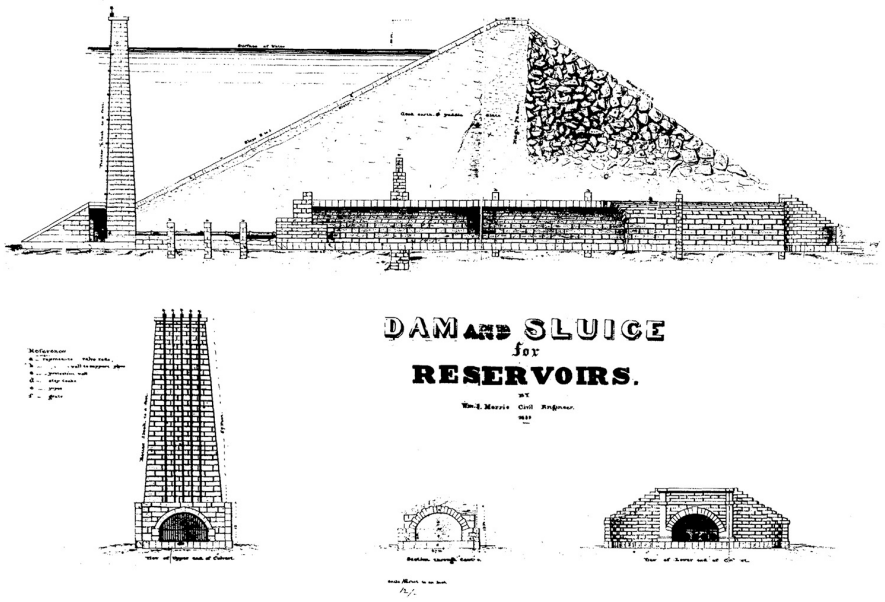


Figure 2. Plan for the dam, sluice culvert, and masonry valve control tower, 1839. ("Dam and Sluice for Reservoirs by Wm. E. Morris, C.E., 1839, (Original Plan No. 1) for Western Reservoir." From Unrau 1979: 26)

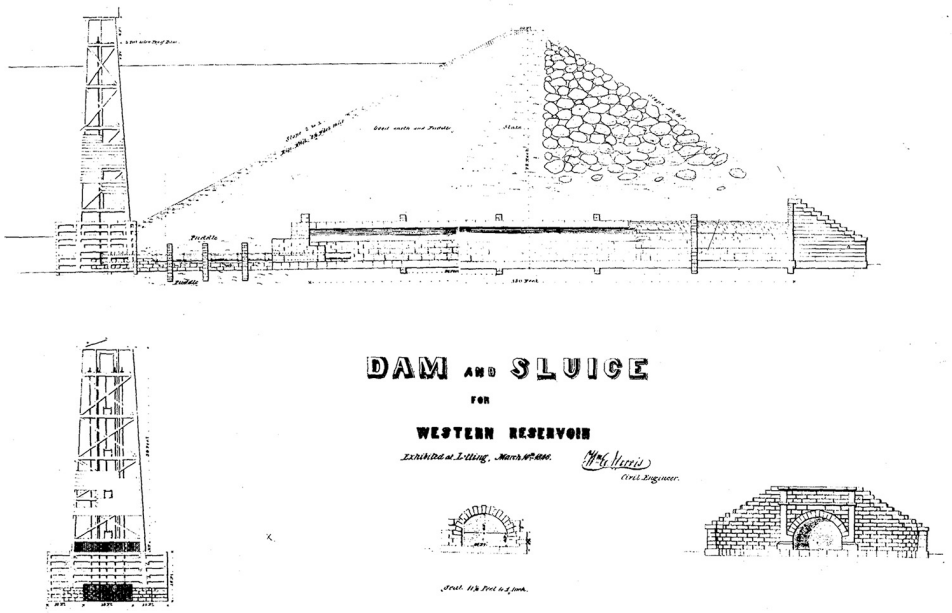


Figure 3. Plan for the dam, sluice culvert, and wooden valve control tower, 1846. ("Dam and Sluice for Western Reservoir, Exhibited at Letting March 10th, 1846, Wm. E. Morris, Civil Engineer." From Unrau 1979: 39)

USE AND ABANDONMENT OF THE DAM AND RESERVOIR, 1853-1879

The South Fork Dam and Western Reservoir was an immediate success in supplying water for the Western Division canal. The Canal Commissioners regularly performed general maintenance operations on the dam, and an inspection in 1856 found it to be in excellent condition. There were, however, periodic scares concerning dam breaks, such as the spring of 1856 when the winter's heavy snowfall melted quickly. The reservoir overflowed through the spillway and a leak in the dam added to the general alarm, but the water soon receded and the leak was repaired. However, the incident led to arrangement whereby the East Conemaugh telegraph office agreed to forward immediate word to Johnstown if the dam broke. (Unrau 1979: 50-51)

At the same time, events were in motion that would soon render the original purpose of the dam and reservoir obsolete. In 1852, the Pennsylvania Railroad Company completed a line from Pittsburgh to Philadelphia, which included the use of two sections of the Main Line: the Columbia-Philadelphia Railroad and the Allegheny Portage Railroad. By February 1854 the railroad built their now-famous horseshoe curve near Altoona, which eliminated the cumbersome use of the portage over the Allegheny Mountains. Seeing no way to compete with the speed and efficiency of the railroad, the Commonwealth of Pennsylvania attempted to sell the entirety of Main Line in April 1854. No buyers were found until July 1857 when the Pennsylvania Railroad Company purchased the system, including the South Fork Dam and Western Reservoir, for $7,500,000. (Unrau 1979: 50-51)

Under the railroad ownership, the old canal sections of the Main Line gradually fell into disuse and its infrastructure, including the South Fork Dam and Western Reservoir, were generally neglected. However, as the reservoir was still supplying water to the canal, the railroad employed a watchman to protect the dam's machinery. In mid-July 1862 the dam and reservoir were observed to be in dangerous condition, including a leak in the sluice culvert outlet and a fallen portion its headwall arch. After a heavy rain on July 26, the culvert collapsed and nearly 200 feet of the dam embankment washed out to a depth of 50 feet. Fortunately, the reservoir was only partially filled because of the dry summer season, and Little Conemaugh River rose by only three feet. Greater catastrophe was also avoided because the watchman had opened the sluice pipes to help relieve pressure on the dam. (Unrau 1979: 53-54)

The railroad did not repair the break in the dam since there were plans to close the Western Division canal between Johnstown and Blairsville, which occurred in May 1863. After this point, the reservoir and dam were left in a state of abandonment. Local residents fished in the pools, some around eight feet deep, that remained against the remains of the dam. Neighboring farmers cultivated fields and grazed livestock in the grasses that quickly filled the dried-up southeastern end of the reservoir. According to one writer, the site "simply moldered away up in the hills, visited only by hunters, fishers, and nature-lovers." (Unrau 1979: 55-58, citing O'Connor 1957: 33)

Having little need for the dam and reservoir, the Pennsylvania Railroad Company sold the property, amounting to approximately 500 acres, to former employee and Congressman John Reilly of Altoona in March 1875 for $2,500. Around 1878 the wooden valve control tower for controlling the sluice pipes caught fire and burned to the ground. Reilly sold the five unused sluice pipes for scrap, but otherwise did nothing with the property and in 1879 sold it to the South Fork Fishing and Hunting Club of Pittsburgh for $2,000. (Unrau 1979: 58-59,63; Unrau 1986: 19-20; Degan 2013: 14)

SOUTH FORK FISHING & HUNTING CLUB AND LAKE CONEMAUGH, 1879-1889

The formation of the South Fork Fishing and Hunting Club was an outgrowth of efforts by Pittsburgh's leading businessmen to find summer recreation outside of the city. Throughout the 1870s, working class tastes dominated the city's art, music, theater, sports, and other leisure activities, which the wealthy were disinclined to participate. Instead, many left the city for their recreational pursuits, heading to summer resorts at mineral springs in the Allegheny Mountains. However, these resorts were public facilities visited by the wealthy from around the country, and some of Pittsburgh's elite sought out a more exclusive and private setting, as well as a place that offered other types of recreation that the mineral springs did not offer, like boating and fishing. (NR SFFHC 1986, Sec.8: 1)

In 1879 some of Pittsburgh's most famous men established an exclusive mountain resort near Johnstown, where they aimed to rebuild the South Fork Dam and create a secluded lake in the former Western Reservoir. The South Fork Fishing and Hunting Club was organized on March 19 and chartered on November 17, with membership limited to 100 members and their families. Members bought shares in the nonprofit corporation at $100 apiece, and each family had to pay an $800 membership fee. The principal shareholders were Benjamin F. Ruff, a former railroad tunnel contractor and now a coke salesman and real estate broker, and Henry Clay Frick, a millionaire coke industrialist. Ruff served as the club's first president and its main promoter. (Unrau 1979: 63-64; NR SFFHC 1986, Sec.8: 2)

Upon taking ownership of the 500-acre property in March 1880, the club began reconstruction of the South Fork Dam and Western Reservoir, which it renamed Lake Conemaugh. Ruff, who had no experience in waterworks or dam construction, originally planned to rebuild the dam to a height of about 40 feet and excavate the spillway down another 20 feet to handle the overflow. However, when he found that this would cost considerably more than repairing the old break of July 1862 and restoring the dam to somewhere near its original height, he chose the latter course. Ruff hired Edward Pearson of Pittsburgh as foreman and superintendent of the work, who like Ruff had no engineering training or experience. (Unrau 1979: 65; Unrau 1986: 20)

As the reconstruction project progressed, numerous aspects of the work were criticized. P.F. Brendlinger, a member of the American Society of Civil Engineers, visited the dam in 1880 and was critical of the quality of the repairs and methods of placing rock and earth in the 1862 breach. Daniel J. Morrell, general manager of the Cambria Iron Company in Johnstown, was concerned enough with the quality of the repairs to send John Fulton, a trained geologist and engineer, to inspect the work. Experienced in mining, canal, and railroad works, Fulton echoed Brendlinger's concerns and raised his own, namely the club's decision not to replace the sluice pipes and instead fill in what was left of the sluice culvert. Fulton protested that lowering the lake level to fix leaks would be impossible without the reinstallation of the sluice pipes, but Ruff responded that the leaks were caused by the failure of the arched culvert and that making the dam solid throughout would eliminate the problem. Now even more concerned about the repairs and the "perpetual menace to the lives and the property of those residing in the upper valley of the Conemaugh," Morrell offered to assist Ruff in funding a major overhaul of the dam and installation of a discharge system. The club rejected the offer, despite continued leaks in the dam. (Unrau 1979: 65-71, citing Letter, Morrell to Ruff, 22 December 1880)

Other work at the dam included widening the wagon road along the top of the dam so that two carriages could pass each other. To achieve the necessary width, the crest at the center portion of the dam was lowered by two feet, thus increasing the width of the road in this area from around 10 feet to 20 feet. Lowering the center of the dam from 72 feet to 70 feet meant that there was only an eight-foot difference between the top of the dam and the maximum water level in the reservoir (62 feet). As part of the carriage road system, the club also constructed two timber trestle bridges across the spillway (Figure 4). To prevent fish from escaping the lake during high water events, wire screens were attached between the support posts of the bridge at the upper end of the spillway, while a V-shaped log boom was installed in front of the spillway and into the lake to prevent debris from blocking the screens. However, in periods of water flow through the spillway, these additions had the potential to impair the flow capacity of the spillway. (Unrau 1979: 74)

Heavy rains and local stream flooding in June 1881 caused “a great deal of uneasiness” among Johnstown residents. Rumors that the dam was breaking on the morning of June 10 prompted the Cambria Iron Company to send two of its engineers to inspect the dam. They reported that the water in the lake was two feet from the top of the dam and the spillway was carrying off excess water, but there were no leaks. Around the same time Robert Pitcairn, the division head of the Pennsylvania Railroad between Altoona and Pittsburgh and a member of the South Fork Fishing and Hunting Club, took several of his engineers to inspect the dam. His primary concern was that the leaks in the bottom of the dam would increase. Ruff accompanied the men and claimed that the rumored leaks were actually springs that came from near the ends of the dam. When Ruff promised to take remedial action, Pitcairn was satisfied although he asked his men to keep a periodic eye on the dam. (Unrau 1979: 78-79)

Ruff and Pearson completed the dam project in 1881 at a cost of around $17,000, at which time they stocked the lake with 1,000 black bass from Lake Erie. The lake covered 500 acres, more than it had when built as a reservoir for the Main Line. The lake was between 60-65 feet deep at the dam, stretching three miles in length and a mile wide in some areas (see Regional Landscape Context graphic). A historic photograph from the 1880s shows young trees scattered on the downstream faces of the 1853 ends of the dam, but no vegetation on the 1881 rebuilt center face of the dam (Figure 5). (Unrau 1979: 76; Degen 2013: 16)

Development of Club Facilities:
While the reconstruction work on the dam was underway, the South Fork Fishing and Hunting Club began development of its resort facilities, comprised of a main clubhouse and private cottages. Each club member was permitted two weeks’ accommodation for his family at the clubhouse, or could build their own residence on leased lots for more privacy and longer or year round stays. To provide ample space for the clubhouse and cottages, the club amended its charter to allow for an increase in membership, which financed the purchase of around 70 additional acres of land over the next seven years. By 1889 the club’s membership numbered 61 and included some of the country’s wealthiest and most prominent financers of the time, such as Andrew Carnegie and Andrew Mellon. (Unrau 1979: 76-77; Degen 2013: 17; Review comments, D.Bosley, 3 August 2026)

Most club members travelled from Pittsburgh on the Pennsylvania Railroad Company line to the station at South Fork, and then travelled two miles by carriage on a new road to the dam. The road crossed the spillway on the wooden bridge near the point where the lower end of the spillway met the creek, and then climbed along the west side of the spillway to the top of the dam, where it divided. The left-hand fork of the carriage road crossed the upper end of the spillway on the timber trestle bridge and followed the lake’s northeastern shoreline for an unknown distance. The right-hand fork of the road crossed directly over the dam, turned southwest and tracked along a wooded hillside, and continued south to the main club grounds on the southwestern shore of the lake, about one mile upstream from the dam. (Unrau 1979: 76, citing McCullough 1968: 40-41)

At the core of the South Fork Fishing and Hunting Club complex was the clubhouse. Originally a two and-a-half-story building completed in 1881, the clubhouse was expanded with a larger three-story frame addition to the northwest in 1886. In 1889 the clubhouse featured 47 furnished bedrooms, a dining room with seating for 150, an office, billiard room, parlor, kitchen, bakery, and a long, covered front porch overlooking the lake (Figure 6). In c.1887 the club constructed a two-story double cottage northwest of the clubhouse. This frame building included covered porches and provided additional guestrooms and apartments for four families. There also may have been an outhouse and icehouse between or behind these buildings, but their exact locations have not yet been determined. (NR JFNMem, draft 2016, Sec.8: 77; Review comment, Koozer, 29 June 2016)

By 1888, sixteen cottages (sources vary on the number) were situated northwest and southeast of the clubhouse and double cottage, set out in an orderly line facing the lake and only a short distance from the water (Figures 7 and 8). The frame cottages were constructed in the Queen Anne, Stick/Eastlake, Gothic architectural styles characteristic of the 1880s, and were typically three-stories tall with high ceilings, long windows, and covered porches to maximize views of the lake. The houses did not have kitchens because club members typically dined together in the clubhouse, but most presumably included privies; archeological investigations reveal at least two cottages had privies in

the back yards. It is also likely that barns and stables were present behind these buildings for the horses and carriages that transported club members from the South Fork train station to the club grounds. In April 1889, the club began installation of a cast iron sewer line from the club buildings to the dam, running along the southwestern shore of the lake. (Unrau 1979:86-88; EA 2007: 37-39,44-45; Degen 2013: 17; Balicki and Stevens 1993: 3,8; LDA et.al. 1993: 19; Review comment, Bosley, 29 June 2016)

Historic photographs of the club grounds show a wooden boardwalk along the shoreline, paralleling the lake-side façades of the cottages (Figure 9, see also Figures 7 and 8). Steps and bridges with rustic railings were built along the boardwalk to overcome the hilly topography, while rock walls and rock banks retained some of the steeper slopes. Shorter sections of boardwalk and steps connected the boardwalk to the houses. Some members also installed raised planters, small gardens, and flagpoles between the walkway and the shoreline. The photographs also show that several mature trees were retained in the vicinity of the buildings, boardwalk, and shoreline.

Other facilities at the resort included boathouses, docks, and stables, as well as two large steam yachts, four sailing boats, and about 50 canoes and rowboats. Occasionally the club hosted special sporting events, such as a two-day shooting match and gala in June 1885. For the most part, however, the summering that occurred at Lake Conemaugh was generally less pretentious than the wealthy resorts at Newport, Tuxedo Park, and Saratoga (Figure 10). One local historian has written: "There was no display at South Fork. The young men wore flannel shirts and crush hats, and the girls plain costumes that would not be injured in scrambling over rugged rocks or fishing in turbulent streams. There were a few modest cottages along the borders of the lake and a clubhouse. It was a comfortable home-like place and was as different from the ordinary fashionable summer resort as could well be conceived. The beautiful sheet of water bore upon its bosom in the soft evenings gay parties of young folks, some of whom would strum the mandolin or guitar…The club was a happy family party, and nothing more. There was an atmosphere of repose over South Fork Lake that it seemed nothing could disturb…" (Unrau 1987: 81,88, citing O'Connor 1957: 34)

Lake View Farm:
Several club members owned farms adjoining the club's property, among them Elias J. Unger, who became president of the club in 1887 after Benjamin Ruff died. One of Unger's purchases was a 103-acre hillside farm from Joseph Leckey (Leahey) in 1882, situated on the lake's northeastern shore adjacent to the dam and spillway. Between 1883-1888 Unger constructed a two-story house (now Lake View House) on the hill, around 200 yards east of the dam (Figure 11). Designed in the Gothic Revival style, the house featured a covered two-story porch on its southwest elevation, which overlooked the lake. The complex also included a 2.5-story barn and 1.5-story carriage shed, a two-story spring house, privy, and other outbuildings, all of which were sited uphill from the house. A sloping meadow between the buildings and the lake allowed a clear view of the dam and a distant view of the clubhouse and cottages on the other side of the lake. The Lake View Farm was likely accessed from the carriage road that began at the timber trestle bridge over the upper end of the spillway. A fence was erected on the hillside above the spillway, marking the property line between the club lands and the Unger property, while another fence encircled the house (see Figure 10). (Unrau 1979: 83-84; Unrau 1986: 9,30,35,38-39,50-51,152-154)

Dam Worries Persist:
Periodic heavy rains caused concern among the people living downstream from the South Fork Dam, but the dam nonetheless withstood several flood events in February 1883, June 1887, and May 1888. Opinions on the stability of the dam varied even among those who lived near it, with some judging it "perfectly safe" and others reporting its "unsafe condition." Speculating what might happen if the dam did break, George Swank, editor of the Johnstown Daily Tribune, implied there was no cause for alarm because the dam would fail in pieces gradually. On June 30, 1887 Swank wrote that a break would not affect Johnstown to any considerable degree unless it "occurred in conjunction with a great flood in the Conemaugh Valley, which is one of the possibilities not worth worrying about." (Unrau 1979: 79,84, citing Johnstown Daily Tribune, 30 June 1887; Degen 2013: 19)

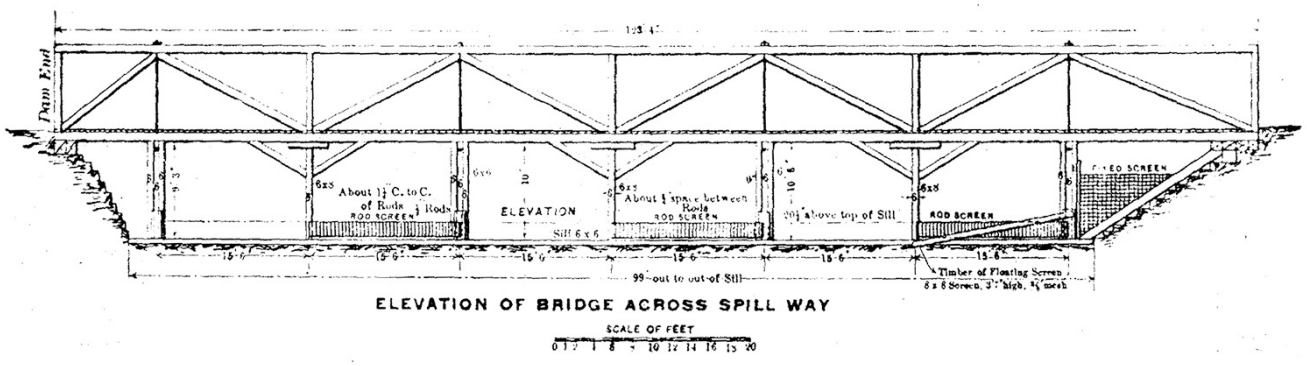


Figure 4. Section view of the timber trestle bridge with wire screens at the upper end of the spillway, c.1881. (Alfred R. Pagan, "The Johnstown Flood Revisited," Civil Engineering, XLIV, August 1974: 61-62. From Unrau 1979: 75)



Figure 5. View looking south at downstream dam face, 1881-1889. The blocked outlet of the sluice culvert is at the base and the carriage road is at the top. The foreground road led to the spillway at the northeast end. (Johnstown Flood NMem Archives)



Figure 6. View looking south at the clubhouse, 1886-1889. The original 2.5 story building was constructed in 1881 and the larger 3-story addition was added c.1886. (Johnstown Area Heritage Association. From National Register draft 2016, Sec.9: 92)



Figure 7. View looking northwest at some of the cottages on the lakefront, 1881-1889. The clubhouse is visible in the distance. (Johnstown Area Heritage Association. From National Register draft 2016, Sec.9: 93)



Figure 8. View looking south at five cottages and boathouse, 1888-1889. The third house from image right is the Lippincott Cottage and fourth from right is the Brown Cottage. (Johnstown Area Heritage Association. From National Register draft 2016, Sec.9: 94)

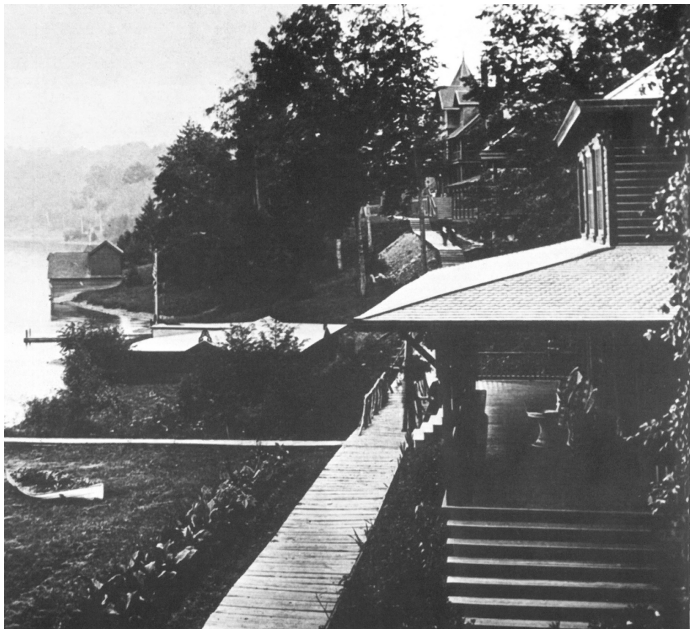


Figure 9. View looking southeast at the cottages, boathouses, and boardwalk, 1888-1889. The roof lines of the Lippincott (Moorhead) Cottage are visible in the distance. (Cambria County Library. From Degen 2013: 18)

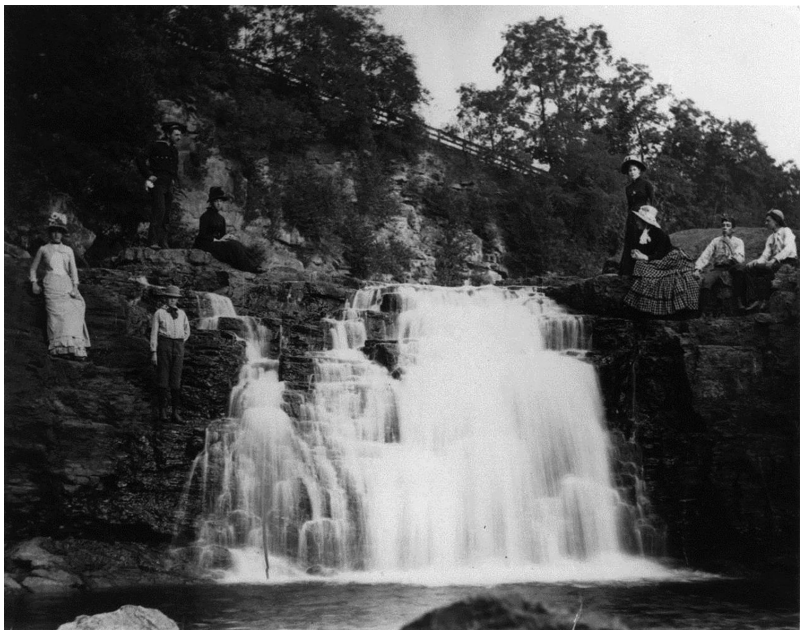


Figure 10. View looking east at the spillway, 1881-1889. The fence at the top of the hill marked the boundary of the Unger property. (Johnstown Area Heritage Association. From National Register draft 2016, Sec.9: 96)



Figure 11. View looking east at the barn, house, and spring house at the Lake View Farm, 1889, shortly after the flood. From left is the barn, house, and spring house. (Louis Semple Clarke Collection, Johnstown Area Heritage Association)

THE JOHNSTOWN FLOOD, MAY 31, 1889

Settled between two rivers and surrounded by forested hillsides and underground wealth, the City of Johnstown owed much of its growth to its location. The city prospered with the building of the Main Line works in the 1830s and the arrival of the Pennsylvania Railroad Company and the Cambria Iron

Company in the 1850s. By 1889 Johnstown was a flourishing city of 30,000 people, the majority of whom labored in the Cambria mines and mills. The town had grown on the floodplain at the confluence of the Little Conemaugh River and Stony Creek, and had cut trees from the hillsides and narrowed the river channels to gain building space. Each spring the rivers flooded, but never enough to cause real alarm. Every rainy season brought the lingering fear that the South Fork Dam might break, but for some ten summers fears were put aside, and steel production continued in the thriving company town. (GMP 1980: 14)

Beginning on May 30, 1889, and continuing through June 1, a slow-moving rainstorm overspread the entire Commonwealth of Pennsylvania and extended into Maryland, Virginia, West Virginia, New York, and as far west as Cleveland, Ohio. The average rainfall during this three-day period in the South Fork Dam watershed was 6-8 inches, which could not be absorbed in such a short period because the ground was already saturated from above normal rainfalls that had fallen throughout most of the month. As three inches of rain in this mountainous part of Pennsylvania ordinarily produced a flood, many towns such as Johnstown began to prepare. (Unrau 1979: 90-91)

The rains began to fall around 4:00 pm on May 30, just as Memorial Day festivities were concluding in Johnstown. The rain became a steady downpour overnight and the next morning an empty pail left out near the South Fork Dam contained eight inches of water. W.Y. Boyer, the caretaker at the club grounds, John G. Parke, the resident engineer installing the new sewer system, and Elias Unger, the club president, stood at the dam that morning to observe the level of the lake, which had risen around two feet overnight. Parke rode to the other end of the lake to report on how much water was coming in from the tributary streams, and found the upper quarter of the lake covered by debris. At the head of the lake he observed the Muddy Run pouring a large volume of water into the lake, and then rowed over a four-strand barbed-wire fence and a 300-foot-wide submerged meadow on his way to examine South Fork Creek. The creek, ordinarily 75 feet wide and two feet deep, had overflowed its banks and was stripping branches from nearby trees at a height of up to six feet from the ground. Returning to the clubhouse, Parke learned that the level of the lake had nearly reached the crest of the dam. (Unrau 1979: 92-93; Degen 2013: 19)

With the severity of the situation understood and water levels rising nearly one-foot per hour, Unger directed the workmen who had been excavating the sewer line to dig a ditch across the south end of the dam, which he hoped would function as a second spillway and relieve the burden of water flowing through the spillway at the north end. However, the workmen had little success in digging into the tough shale and could only create a ditch two feet wide and fourteen inches deep. When the impounded water rushed into the ditch it soon scooped out a trough 25 feet wide and 20 inches deep. Unger then directed the men to plow a dike along the crest of the dam in hopes of raising a temporary barrier to prevent the rising water from overtopping the dam. (Unrau 1979: 92-94; Unrau 1986: 15; Degen 2013: 20)

At this time, Parke observed that the spillway at the north end of the dam was carrying its full capacity of seven feet. The spillway was unclogged, and even the timber trestle bridge was offering little resistance to the flow of the water. Unger asked Parke to ride to South Fork to telegraph Johnstown about the potential danger of the dam collapsing, but by the time he returned the efforts of building the ditch and dike had proved futile; between 11:00am and noon water began flowing over the dam, first in the center that was slightly lower than the rest of the dam, and then in other places over a 300-foot distance around the center (i.e. the portion that was reconstructed in 1880-1881). At this point Unger ordered the laborers to remove the flooring of the timber trestle bridge in an attempt to remove the fish screens, which by this time had become clogged with debris. They also attempted to remove the V-shaped log boom that projected into the lake. (Unrau 1979: 94)

Meanwhile, water flowing over the crest of the dam began cutting its own channel. Parke was convinced that little else could be done to save the dam unless a spillway was cut “through the dam proper at one end and allowed to cut away…towards the center of the dam.” As this course of action would mean “the positive destruction of the dam,” he refused to consider such action, despite his measurements that indicated that the lake level was 7.4 feet above normal and still rising. By early afternoon, the water:
“had washed away several large stones on the outer face, and had cut a hole about ten feet wide on

the outer face and about four feet deep. The water running into this hole cut away the breast in the form of a step both horizontally and vertically, and this action went on widening and deepening this hole until it was so near to the body of the water in the lake that the pressure of the water broke through, and then the water rushed through this trough, and cut its way rapidly into the dam at each side and the bottom." (Unrau 1986: 15; Unrau 1979: 95, citing Letter, Parke to M.J. Becker, 22 August 1889)

The final failure of the dam occurred at 3:15 pm. According to Parke, "The dam did not break. It simply moved away." Another observer said, "The whole dam seemed to push out all at once. No, not a break, just one big push." Those on hand estimated the lake was reduced to a stream in around 45 minutes. (Unrau 1979: 97; Degen 2013: 22, no citation)

The resulting wave of floodwater, some 30- to 40-foot high, moved as fast as 40 miles per hour down the narrow mountain valley, inhabited by nearly 38,000 people. It picked up speed and debris as it swept through the unsuspecting towns of South Fork, Mineral Point, East Conemaugh, Woodvale, and Conemaugh Borough on its way to Johnstown, portions of which were already underwater from the heavy rains. The wave struck Johnstown about 4pm, and the devastation of the city itself was over in about ten minutes. (Unrau 1979: 99)

The volume of water pouring out of Lake Conemaugh and into the already-flooded Conemaugh Valley was later computed by various engineering authorities. According to the calculations, the estimated 20 million tons (5 billion gallons) of water in the lake would have made a stream 500 feet wide, 20 feet deep, and 12 miles long. The vast body of water plunging through the valley of the Little Conemaugh River lost some of its energy due to friction and obstructions in its course. But the 404-foot drop in elevation over the 12 to 14 mile distance between South Fork and Johnstown gave it enough momentum to roll train locomotives for almost a mile and enough strength to break and bend a locomotive tender around a tree. (Unrau 1979: 98, citing McMaster 1993: 231-33, and Engineering News and American Railway Journal, XXI, 22 June 1889: 569-73,578)

Post-Flood Recovery:
The flood killed 2,209 people, injured hundreds, and left thousands homeless. In Johnstown, survivors faced immediate and critical problems; there was no medicine, water, food, or dry clothes. Nearly all stores in town were leveled, and there was no gas or electricity. Fires burned out of control, and telephone and telegraph lines were down. The railroad was destroyed, roads were impassable, and bridges were gone. Corpses of the flood's victims –human beings and animals – posed a threat of disease. In this chaos, those who had managed to find higher ground formed rescue parties and work committees to begin the recovery effort. (Degen 2013: 39-41)

Among the first to spread the news of the disaster was Robert Pitcairn of the South Fork Fishing and Hunting Club, who was a few miles downstream from Johnstown when the flood hit and sent a telegraph to the Pittsburgh Commercial Gazette saying that the city had been annihilated and help was needed. In the days that followed hundreds of reporters and photographers arrived to document the scene. Their accounts were published around the nation and the world and resulted in an enormous outpouring of aid in the form of money, food, clothing, supplies, and services. (Degen 2013: 53-54)

The charity that came in was certainly needed; not only were there more than 28,000 survivors, there were also more than 6,000 relief workers to be fed. The massive efforts that were needed to find and dispose bodies, clear the wreckage, restore water and utilities, and distribute provisions and money were coordinated by local relief committees, the Pittsburgh Relief Corps, state militia, and the recently organized American Red Cross. Led by Clara Barton, the Red Cross stayed in Johnstown for five months, building several "Red Cross Hotels" for temporary housing, constructing a warehouse and infirmary, distributing supplies, and directing volunteers. By mid-summer 1889, some of club cottages on the shore of the empty Lake Conemaugh were also used to house flood survivors. (Degen 2013: 54; LDA et.al. 1993: 29)

On June 14, 1889, in the first issue of the Johnstown Daily Tribune to be printed after the devastation, editor George Swank wrote:

"It came like a thief, and was upon us before we were aware. Already when it reached us it had numbered the victims by the hundreds. Mineral Point and East Conemaugh were gone, a passenger train was engulfed. Woodvale was swept away. Conemaugh Borough was shaved off as if by the sharp surface of an avalanche; in a moment Johnstown was tumbling all over itself; houses at one end nodded to houses at the other end and went like a swift, deceitful friend to meet, embrace, and crush them. Then on sped the wreck in a whirl, the angry water baffled for a moment, running up the hill with the town and the helpless multitude on its back, the flood shaking with rage, and dropping here and there a portion of its burden crushing, grinding, pulverizing all. Then back with great frame buildings, floating along like ocean steamers, upper decks crowded, hands clinging to every support that could be reached, and so on down to the great stone bridge, where the houses, piled mountain high, took fire, and burned with all the fury of the hell you read about--cremation alive in your own home, perhaps a mile from its foundation; dear ones slowly consumed before your eyes, and the same fate your own a moment later." (Unrau 1979: 100, citing Johnstown Daily Tribune, 14 June 1889)

The aftermath at Lake Conemaugh was also one of ruin and waste, and the site quickly attracted a variety of reporters and journalists who filed avid descriptions of what they saw (Figures 12, 13, and 14). The gap in the center of the dam measured around 420 feet at the top and 50-200 feet wide at bottom, going "clear down to bedrock in the old bed of the stream and sloping raggedly upon each side to the top." A vast gravel bar lay below the dam, measuring 1,500 feet long, 5-12 feet high, and 160 feet wide, and contained approximately 100,000 cubic yards of material. From the former shoreline, "the cottages looked upon a slimy, oozing gully, no longer the silver expanse that had pleased the eye…days before." (Unrau 1979: 102-103, 136, citing Dieck 1889: 61 and McLaurin 1890: 57-58)

A writer for the New York Times described the scene as follows:
"At the present time the lake looks like a cross between the crater of a volcano and a huge mud puddle, with stumps of trees and rocks scattered over it. There is a small stream of muddy water running through the centre of the lake site...there is but a small portion of the dam left on either side. No damage was done to any of the buildings belonging to the club...There are but one or two small streams showing here and there in the lake. A great many of the workmen carried off basketsful of fish which they caught in the mud." (Unrau 1979: 102-103, citing New York Times, 4 June 1889)

Post-Flood Analysis:
Blame for the disaster was swift and directed to the members of the South Fork Fishing and Hunting Club. Valley residents, public officials, and reporters widely censured the club, including George Swank of the Johnstown Daily Tribune who wrote, "We think we know what struck us, and it was not the hand of Providence. Our misery is the work of man..." (Degen 2013: 61, no citation)

Several club members rendered personal services and gave more than money to the relief cause, but most members tried to disassociate themselves from the club and generally avoided reporters. The fear of lawsuits was a major reason for their collective reticence, and although several lawsuits were filed against the club, none were successful. Historian Harlan Unrau writes that personal negligence would have been almost impossible to prove against individual members for they had no reason to doubt the dam was not structurally sound. As interpreted by the courts, the unprecedented rainfall in the Conemaugh Valley watershed in May 1889 was as an act of Providence. (Unrau 1979: 55,57,61,64-65)

In the 1979 "Historic Structures Report for South Fork Dam," Unrau provides extensive details on the investigations of the dam's failure by engineers and engineering journals. The studies determined that several actions of the South Fork Fishing and Hunting Club had weakened the dam: the lowering of the crest of the dam, the central sag in the crest, the sealing of the bottom culvert after which no means of removing water level existed, and the obstruction of the spillway. The American Society of Civil Engineers concluded that the "failure was due to flow of water over the top of the earthen embankment, caused by the insufficiency of the [spillway] to discharge the flood water." (Unrau 1979: 106-147; Degen 2013: 62)



Figure 12. Post-flood view looking southwest at the downstream face of the dam, 1889. Compare this view with Figure 5. The club grounds are faintly visible along the shoreline in the distance, at image left. (Johnstown Flood NMem Archives)



Figure 13. View looking southwest from north abutment, 1889. Remains of the original sluice culvert and valve control tower are at far image right. Club buildings are faintly visible in distance. (Ernest Walter Histed, Library of Congress #92509962_17540v)

DEVELOPMENTS AT THE FORMER LAKE CONEMAUGH, 1889-1964

The South Fork Fishing and Hunting Club disbanded soon after the flood. A few members occasionally returned for short vacations, but the resort never again functioned as it had throughout the 1880s. Club lands were eventually sold off, beginning in July 1891 when the South Fork Branch Railroad, a subsidiary for the main line of the Pennsylvania Railroad, purchased a 14.46-acre tract in the drained Lake Conemaugh. A single track was laid along the river in the old lakebed and through the gap in the dam as part of an eight-mile rail line stretching from the main line in South Fork to Windber to the southwest. The rail line enabled exploitation of the region's bituminous coal lands by the Berwind-White Coal Mining Company in Windber. (Unrau 1979: 150-151)

In June 1901 E.B. Alsop, an attorney and apparent friend of some club members, acquired as trustee nine parcels of club property, by this time totaling around 624 acres. Several members and their heirs deeded their interests in additional land to Alsop over the next eighteen months, who then sold the 624-acre property to George M. Hershberger in February 1903. At the same time, Alsop transferred 49 acres plus "a number of cottages, houses, etc." through a separate deed to Hershberger (possibly the club buildings). The following year the remaining furnishings associated with club members were sold, with some of the potential buyers arriving at the sale on the South Fork Branch train. (NR JFNMem, draft 2016, Sec.8: 70; LDA et.al. 1993: 34-35,437-438, citing Cambria County Deed Book, 147: 624-631)

A USGS topographic map from 1904 illustrates other physical changes had taken place at the former lake, including the construction of a second railroad track alongside the original track through the valley, as well as a multi-track railyard in a 34.7-acre tract purchased from Hershberger. There were also public roads encircling the lakebed by this time. On the southwestern shoreline, a new but unimproved road (later called State Route 869/Township Road 305/South Abutment Road) encircled the hill west of the dam. Part of the road was built just down the hill from the club's old carriage road. The new road continued southeasterly along the shoreline where it joined the club's carriage road. At the club complex, several maps show the road passed directly in front of the some of the club buildings and ended around the Brown Cottage (where a hill begins). The road reappeared at a river crossing southeast of the club grounds, where a more substantial road (later called Township Road 352/Lake Road) crossed the railroad tracks (at grade) and traversed along the eastern shoreline to the old spillway, passing directly through it and continuing north. (Cambria County Atlas, 1890; NETR topo, 1907)

Maryland Coal Company and the Village of St. Michael:
By 1907 George Hershberger sold both the 624-acre and 49-acre properties described above to George M. Wertz, who in turn had it surveyed and subdivided (Figure 15). The disposition of Wertz's lands is complex, but two sales in 1907 are relevant to the future Johnstown Flood National Memorial: a 40.9-acre purchase by the Maryland Coal Company of Pennsylvania and a 30.9-acre purchase by John L. Sechler that also included the clubhouse. (LDA et.al. 1993: 42,438-440)

Bituminous coal mining and coke manufacturing for the iron and steel industry dominated much of western Pennsylvania's economy during the late nineteenth and early twentieth centuries with hundreds of mines scattered across the region. The Maryland Coal Company was formed in 1906 when coal was discovered in the former lakebed, and in 1907-1908 the company constructed Mine Shaft No.1 near Topper Run, a stream in the ravine around 1,500 feet south of the clubhouse and cottages. The mine shaft extended 670 feet below the surface, and at the time was the deepest of all the bituminous coal mines in Pennsylvania. In addition to the mine shaft and colliery, the company established the town of St. Michael in this area, building a company store, bank, and a number of wood-frame houses. The company also constructed a railroad spur from the South Fork Branch Railroad to the mine. At the same time, John Sechler laid out a plan of 208 building lots on his property for additional development in the former lakebed. The new lots were laid out in a rectangular-shaped grid between the river and the club's row of buildings (see Figure 15). Main Street, which connected to the unimproved road along the lake's southwestern shoreline, ran along the front of the clubhouse and cottages, but made slight turns due to orientation of the buildings with the former shoreline. The double cottage lot northwest of the clubhouse was identified as "business block," and one of the cottages to the northwest was intended as a school. A street (now Lake Avenue) running behind the clubhouse and cottages provided access to additional lots. This street may have been the location of the club's carriage road that entered the club grounds from the dam.

(Yetter et.al. 2014: 26; Maryland Coal Company of Pennsylvania website, accessed 14 April 2016; Unrau 1979: 152; LDA et.al. 1993: 581-582)

The Maryland Coal Company purchased the former club cottages as housing for company management. Most of the houses were altered and remodeled to varying degrees by their occupants, and a few were razed in the 1920s. Several cottages were eventually reconfigured into duplexes, including the Brown Cottage in 1921 and the Lippincott (Moorhead) Cottage in the 1930s. By 1955 the cottages were transferred to private ownership. The company also erected inexpensive duplexes in the 1920s to house coal miners and their families, primarily in a compactly designed plat behind (west of) the row of cottages (Figure 16). Aerial photographs from 1939 and 1958 show that development in the Sechler lots was considerably less dense than in the company's newer plat. (LDA et.al. 1993: 35,38-39,48-53,121-122,175; EA 2007: 40-43,45-46)

Sechler converted the former clubhouse into a hotel and tavern but lost the business in a sheriff's sale in 1920. From 1921-1950 the hotel business was operated by the Cruikshank family. Two additions were added at the rear of the building by 1939. An aerial photograph indicates the building's original two-story block was removed by 1951, either by the Cruikshanks or by the next owners, Albert and Lucy Clement. Subsequent owners operated the building as a rooming house, restaurant, and lounge. Less is known about ownership of the double cottage to the northwest. The building was used as guest rooms by the Cruikshanks, who removed the two-story front porch after 1940. After 1950 the building was apparently used as apartments, and by 1962 a long one-story garage was located behind the building fronting Lake Avenue. (EA 2007: 37-40,44-45; Balicki and Stevens 1993: 2,5; LDA et.al. 1993: 42, 231; NR SFFHC 1986, Sec.7: 1; Review comments, D.Bosley, 3 August 2026)

With the use of cars increasing, the improvements to local roads proceeded concurrently with the growth of St. Michael and surrounding towns. In the 1930s the formerly unimproved road on the southwestern shore of the lake was designated State Route 869. The road was paved, and stone retaining walls and culvert headwalls were constructed along the segment encircling the wooded hill southwest of the dam. The road's route through St. Michael was shifted one block to the east, from Main Street to Locust Street. The road continued southeast through coal company property to the junction with Township Road 352, where another plat of houses was developed (now Sidman). Between 1939-1958, the segment of State Route 869 around the hill southwest of the dam was abandoned and replaced with a new shorter segment to the southwest of the hill. The abandoned highway segment was retained for local use and renamed Township Road 308. (Pennsylvania State Highways website, accessed 19 April 2016)

The holdings of the Maryland Coal Company were transferred to the Berwind-White Coal Mining Company in 1933, but the mine continued to operate under the old name. The company had also acquired the South Fork Dam, portions of the lakebed, and the hill southwest of the dam. However, during the late 1950s and early 1960s the declining national demand for coal and the availability of cheaper fuels like natural gas and petroleum brought an end to the region's coal mining. In c.1958 mining in the lakebed ended when Berwind-White closed the mine. (Coal Mines of Cambria County website, accessed 22 April 2016; LDA et.al. 1993: 40; IP/SD 1994: 10)

Lake View Farm:
Compared to the dramatic physical changes on the southwestern side of the former lake, the landscape remained essentially intact on the northeastern side, and in particular the Lake View Farm. Upon Elias J. Unger's death in 1896, the 103-acre farm property passed to his wife Annie C. Unger, and then was sold to David E. Unger in 1901. Few improvements were made to the farm during this period. Between 1909-1912, the property transferred three times, to Herman Haupt and the heirs of George Stineman, to George E. Flenner et.ux., and finally to Jacob W. and Elizabeth Holsopple. The farm also reduced in size to 78.9 acres. (Unrau 1986: 89)

From 1912-1949, the Holsopples operated a working family farm, raising corn, oats, wheat, barley, and timothy hay, the latter being sold to the local mines for mule feed. A large area toward the spring house was cleared and enriched with manure for a vegetable garden, and apple and pear orchards were located uphill from the barn. The family also sold milk, butter, eggs, apple cider, and apple

butter, and raised thoroughbred horses. (Unrau 1986: 50-51,154)

The Holsopples modified the previous inventory of farm buildings and structures during their ownership. At the house, the stairs on the southwest porch were removed, the original northeast porch was replaced with a raised porch, and the building was painted white with black trim. A walkway from the northeast porch lead to the privy north of the house, while the spring house was used to slaughter and store cured meat. The family replaced the cupolas on the original barn and carriage/wagon/machine shed with dormers, and painted both structures red with white trim. They also added new structures: a wooden silo in the “heel” of the L-formed by the barn and the carriage shed, which stood slightly taller than the barn; a cinder-block well house just to the south of the spring house; and a smokehouse and chicken coop uphill from the house. A pig pen and another chicken coop, both present when the Holsopples arrived, stood uphill from the barn. Photographs from the late 1910s and early 1920s suggest a picket fence surrounded the house, with a gate in the center of the southwest side. Presumably, there was also a gate in the center of the north side at the bottom of the northeast porch steps. The picket fencing was eventually replaced with barbed wire. (Unrau 1986: 49-51,94-95,102,107-108,143,145-149,152,154)

The Holsopples sold their 78.9-acre farm property to Robert E. and Lois M. Furlong in October 1950. The Furlongs continued farm operations through the 1950s and early 1960s, raising such field crops as corn, oats, hay, and other grains for feed. They also owned cows, horses, and pigs, and at one point had nearly 200 chickens. The Furlongs used the spring house for cooling milk and the area above the spring house as a slaughtering site. (Unrau 1986: 51)

However, the old Lake View House and its dependencies were apparently in declining condition when the Furlongs moved to the property. Although they redecorated the house and painted the exterior white with green trim, the northeast porch had to be removed in c.1957 for structural reasons. Because of the deteriorating condition of the carriage shed, the Furlongs built a new garage in the 1960s for their vehicles near the site of the original privy. The three-bay wide structure was built on fill excavated from the hillside. (Unrau 1986: 51)

Preservation Interests:
State and local interest in preserving the events of May 1889 began in January 1953 when US Representative John P. Saylor of the 22nd Congressional District of Pennsylvania wrote a letter to the Secretary of the Interior Conrad Wirth requesting that the National Park Service assess whether the South Fork Dam and the Conemaugh Gap would be suitable for acquisition as a National Monument. By April, the National Park Service prepared a report that recommended the South Fork Dam property should not be preserved through national monument status as its historic significance did not rise to the level of national importance. The Conemaugh Gap landscape was considered unsuitable for national park status as well. Yet the property associated with the South Fork Dam and the former South Fork Fishing and Hunting Club Cottages remained important to the local community. (CLR 2021: 87)

In September 1960, the Wilmore Coal Company, a subsidiary of Berwind-White who had previously acquired the Maryland Coal Company, sold the former lands of the South Fork Fishing and Hunting Club to the Cambria County Historical Society for one dollar. The coal company specified that the transfer of ownership referred only to the above-ground rights and the buildings, not to the mineral and mining rights. (CLR 2021: 87,117)

Despite its earlier recommendation, the National Park Service in 1963 prepared an existing conditions survey and map illustrating the proposed boundaries of a future Johnstown Flood National Memorial. The existing conditions map documented surrounding roads and the railroad right-of-way through the former lakebed. It also identified the former carriage drive on the dam abutments, the road through the former spillway, and a cinder storage area near the South Dam Abutment. The proposed boundary took into account the future right-of-way for US Route 219 (Figure 17).

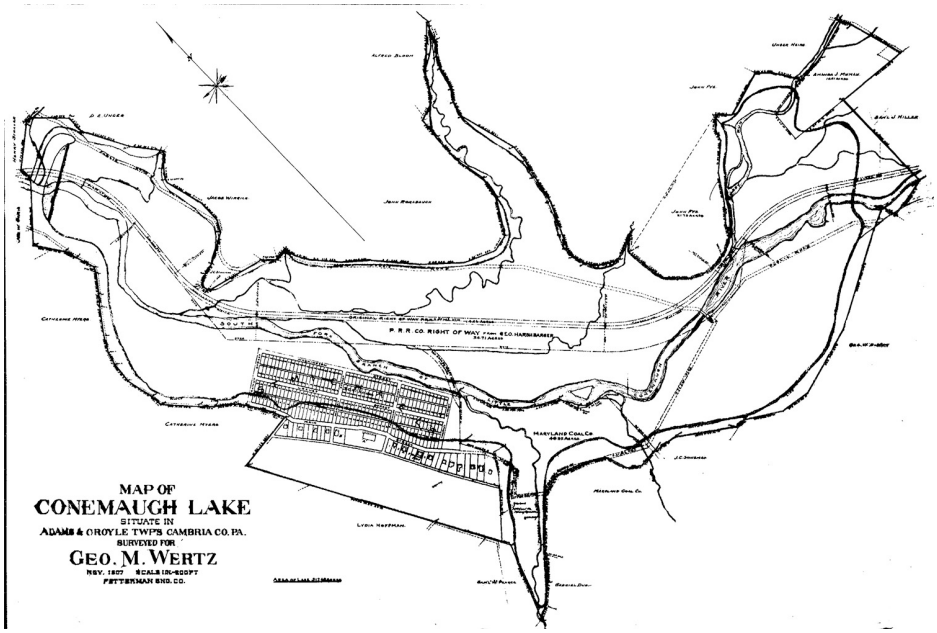


Figure 15. Map of the former Lake Conemaugh, 1907. The thick line represents the former lake shoreline. The clubhouse and cottages are at the southwest edge of the subdivision. (LDA et.al. 1993: 580)

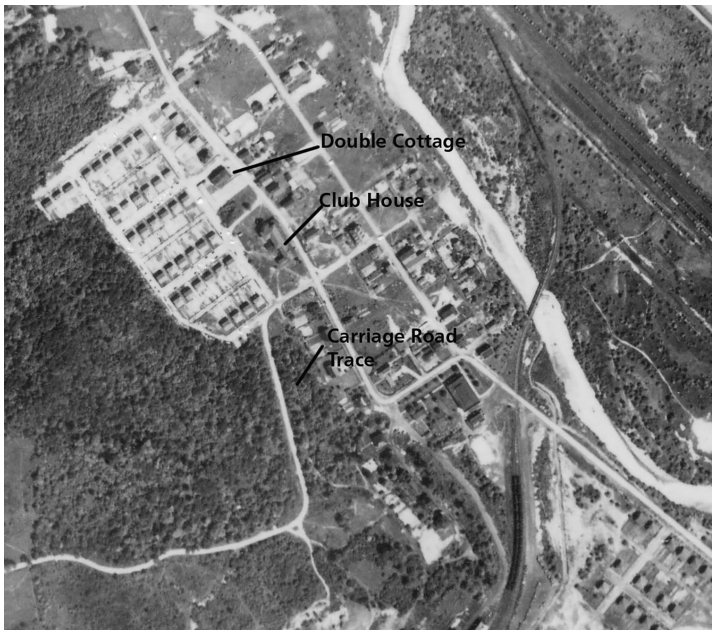


Figure 16. Detail of a 1939 aerial photograph of St. Michael showing development around the former South Fork Fishing and Hunting Club, cottages and clubhouse. (PennPilot Aerial Imagery, annotated by OCLP)

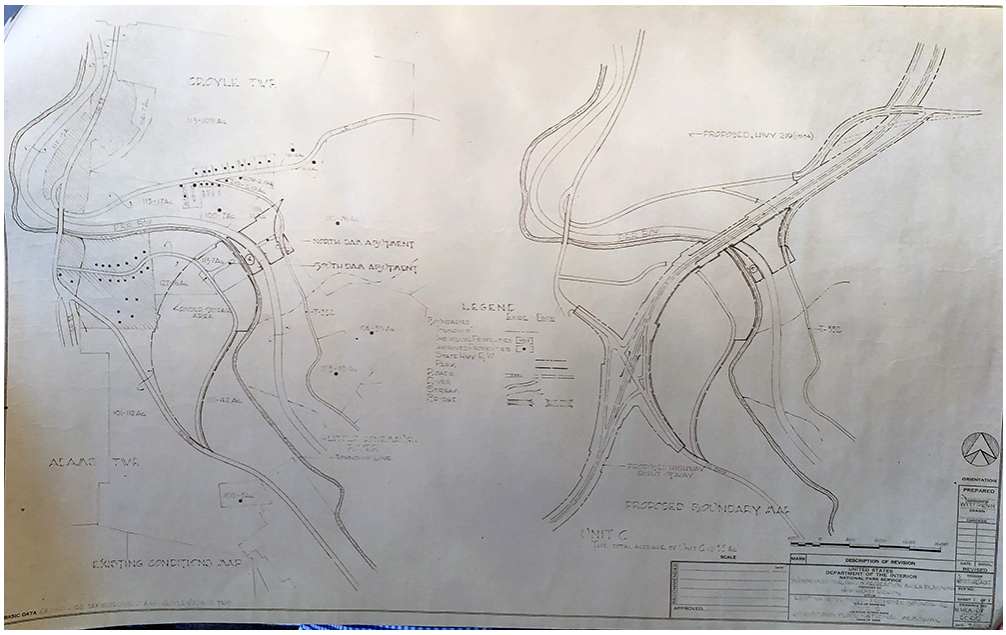


Figure 17. Map illustrating the existing conditions and proposed design of the Johnstown Flood National Memorial, 1963. (Denver Service Center, eTIC, #427-2000)

NATIONAL PARK SERVICE MANAGEMENT, 1964-2026

On August 31, 1964, Congress authorized Johnstown Flood National Memorial (NMem) and Allegheny Portage Railroad National Historic Site (P.L.88-546, 78 Stat.752). The act authorized the Secretary of the Interior to designate up to 55 acres of land for the Johnstown Flood NMem for use in commemorating the tragic Johnstown flood of May 31, 1889. It also made possible the development of cooperative agreements to erect and maintain tablets or markers. (GMP 1980: 118-119)

In the time between the park's authorization in 1964 and its official establishment on June 30, 1969, the landscape around the South Fork Dam was dramatically changed by the construction of US Route 219 just northwest of the dam. The new four-lane highway crossed the river valley on a 70-foot high bridge located around 450 feet downstream from the dam abutments. The highway's embankments severed Township Road 308 and Township Road 352 and created an interchange with the 1939-1958 realignment of State Route 869 (Locust Street). As a result, Township Road 308 was abandoned and Township Road 352 was realigned and reconstructed on the hill above the spillway. (NETR aerials, 1962 and 1972)

The road construction and realignment projects consequently shaped the boundaries of Johnstown Flood NMem. At this time, park lands included both abutments of the South Fork Dam and adjacent lakebed (excluding the railroad right-of-way), the spillway (abandoned Township Road 352), and a wooded hillside area to the southwest bordered by abandoned Township Road 308, State Route 869, and U.S. Route 219. The lands were acquired through purchases and donations, and totaled 54.18 acres (Tracts 01-101, 103, 107, 108). (Dwg.427-92000, 1969)

Initial Park Development:
As the majority of park land was west of the dam, the park entrance was located off of State Route 869 (Figure 18). Park development plans proposed using abandoned Township Road 308 as the entrance road into the park, which would provide access to a hillside picnic area with a parking lot and comfort station, and to another parking lot near the south abutment. The plan indicated a contact station and small comfort station/maintenance building near the south abutment, and a visitor contact shelter at the spillway at the north abutment. Trails with waysides connected both contact stations via an elevated pedestrian bridge attached to the side of the Highway 219 bridge (not on park property). (Dwg.427-40000A, 1968; Dwg.427-41000, 1968)

Portions of the 1968 plan were constructed in 1972-1973. The park entrance road (now South Abutment Road) was improved with steel guardrails, paved gutters, and additional culverts with masonry stone headwalls to match the existing stone headwalls. At the hillside picnic area, trees were removed to construct a curving access road (now Picnic Grounds Road) that terminated as an elongated loop. A 20-space parking lot was built on the east side of the loop next to the picnic sites, but the comfort station was not installed at this time. Barbeque grills and picnic tables were spread out under the shade trees east of the parking lot. At the south abutment, the entrance road terminated as a broad loop at an open area that was formerly a cinder pit and possibly the location of the Main Line's 1840 house. Two parking bays were built here to accommodate 30-spaces. (Dwg.427-41002C, 1970; Dwg.427-80000, 1973; NETR aerial, 1972)

The pedestrian bridge on the Highway 219 bridge was never constructed, but by the late 1970s the park had built several other features shown on the 1968 plan, although some of their locations changed. At the picnic grounds, a small maintenance storage shed was erected north of the parking lot. A hiking trail (now Arbor Nature Trail) was cut through the woods between the picnic grounds and the south abutment. At the south abutment, a small temporary visitor center was located on the south side of the parking lot, an interpretive overlook sign was installed on the abutment, and a loop trail extended from the parking lot to the river and around the abutment. There was also a temporary park office and toilet adjacent to the parking lot. The park also cleared trees within the lakebed to help visually define the former shoreline (Figure 19). A major flood in 1977 reportedly damaged several trails, footbridges, and walks in the park, which were repaired by park staff and the Youth Conservation Corps. Access to the north abutment at this time was likely along the abandoned portion of Township Road 352. However, the park only owned the section through the spillway and could not develop visitor parking facilities off of the new alignment of Township Road 352 until years later. (GMP 1980: 30-31; National Park Service Newsletter Vol. 12, No. 10 October 1977; IP/DCP 1984: 33-34; NETR aerial, 1972)

Boundary Increases, 1972 and 1978:
Concurrent with these developments, the park was actively pursuing the acquisition of additional lands to protect the historic integrity of the memorial and improve visitor access and interpretative programs. A boundary increase on April 11, 1972 (P.L.92-272, 86 Stat.120) authorized an addition of approximately 53.6 acres of land to the park through donations and purchases. The new lands encompassed a forested area straddling the river in the former lakebed between the railroad tracks and State Route 869, as well as a mostly open area on the other side (south) of Route 869 (Tracts 01 -109, 112, 113-scenic, 114, 115, 116, 117, 118). Much of this land was donated by the Adams-Croyle Recreation Authority, which announced plans to develop a recreation area for picnicking, baseball, and fishing southeast of park lands, in the southeastern end of the lakebed. A second boundary increase on November 10, 1978 (P.L. 95-625, 92 Stat.3477) authorized an addition of approximately 67 acres of land through donations and purchases. The new lands included the mostly open Lake View Farm and a forested lakebed area between the railroad tracks and Township Road 352 (Tracts 01-124, 127, 129). The addition also included the 2,300-foot section of the railroad right-of-way, which would allow for future acquisition if the rail line was abandoned and thus provide a contiguous land area of the original dam and lakebed. (GMP 1980: 30-31; Dwg.427-40001, 1971; Dwg.427-80002A, 1986; NETR aerials, 1972 and 1991)

Management Plans:
With the acquisition of additional lands, the park updated and developed several planning documents in the early 1980s to guide future actions. Chief among the reports were the "Statement for Management," a "General Management Plan," and an "Interpretive Prospectus and Development Concept Plan." The documents collectively shaped management of existing resources and the development of additional park facilities beginning in the mid-1980s and onward.

Statement for Management.
The park approved a "Statement for Management" in 1980. It stated that "The purpose of the Johnstown Flood National Memorial is to commemorate the tragic Johnstown Flood of May 31, 1889, by preserving the remnants of the South Fork Dam and interpreting the story of its failure and the results that followed." The report established goals to be completed through future action plans. The

goals covered all aspects of management, and those related to the role of the park's landscape characteristics and features were as follows:
-- To identify, evaluate, protect, maintain, and interpret the park's cultural resources, to preserve their original fabric and workmanship, and where necessary, to stabilize and rehabilitate them in a manner consistent with legislative mandates and National Park Service policies.
-- To preserve and maintain the cultural resources and the setting of the South Fork Dam to approximate conditions in c.1889.
-- To promote environmental conservation and public awareness of the value of land use planning through interpretation of historic land uses, changes, and activities–such as water storage, mining, and logging–that have left their mark on the park's historic resources.
-- To interpret the relationship of the other floods affecting Johnstown to the 1889 flood and to the topography and human occupation of the valley.
-- To provide limited opportunities for recreational activities that are compatible with preservation and interpretation of the park's historic resources.
-- To perpetuate natural ecological communities in the park's natural zone and to enhance the value of these lands as aesthetic buffers around significant resources. (IP/DCP 1984: 2; GMP 1980: 6-7)

General Management Plan.
The new lands identified in the two boundary increases were included in the development of a "General Management Plan (GMP)," completed in 1980. The GMP identified three primary park management zones – natural, historic, and development – but did not elaborate on the management intent. Definitions for the management zones later articulated in an update to the General Management Plan, through an updated "Statement for Management" in 1993:
-- Historic Zone: Lands that will be managed for the preservation protection and interpretation of cultural resources and their settings and to provide for their use and enjoyment by the public. The historic zone consists of the historic lakebed, dam abutments, spillway, culvert stones, and the Lake View House.
-- Natural Zone: Lands and waters that will be managed to conserve natural resources and ecological processes and to provide for their use and enjoyment by the public. The natural zone consists of variety of open fields, brush, and forest bordering the historical and developed areas. In this park the natural zone offers buffer to historic resources from intrusive adjacent land uses or activities.
-- Park Development Zone: Lands that will be managed to provide and maintain facilities serving park visitors and management. The development zone includes the maintenance area, picnic area, the visitor center, the spring house, and associated access roads and parking areas.
-- Special Use Zone Lands and waters that will continue to be used for activities not appropriate in other zones such as non-federal lands within the boundary used for transportation and utility corridors or industry. (GMP 1980: np, citing Dwg.427-20010B, 1977; SM 1993: 4-6, citing Dwg.427-40012, 1992)

The GMP also recommended two actions to ensure effective preservation, management, and public use and understanding of the Johnstown flood and the South Fork Dam:
--Acquire additional lands to preserve the historic scene surrounding the South Fork Dam.
--Relocate the main interpretive facilities to the vicinity of the north abutment to increase visitor appreciation of the size of the former Lake Conemaugh and to enable visitors to see the historic spillway that played a critical role in the breaking of the dam. (GMP 1980: 8; Dwg.423-20010B, 1977)

Describing existing development on the western side of the park as "near maximum," the GMP focused specific development proposals for the recently authorized lands on the eastern side of the park, as follows:
-- Reconstruct the spillway bridge.
-- Build an interpretive facility near the reconstructed bridge so visitors can see the dam abutments, spillway, former lakebed, and club buildings.
-- Encourage the growth of some low-growing native ground cover on the recently cleared lakebed and retain small trees along the railroad tracks to provide screening.
-- Build a parking lot adjacent to interpretive facility.
-- Build trail system connecting interpretive facility, parking lot, spillway bridge, and north abutment.
-- Construct a low-level pedestrian bridge in front of the dam abutments and over the stream, and an at-grade crossing of the railroad tracks to connect the trail system with the north and the south

abutments.
-- Initiate a Historic Structure Report for the Lake View Farm (Lake View Farm) to determine best uses for it. (GMP 1980: 30-31)

The GMP proposed development of a self-guided auto tour: beginning at the contact station at the south abutment, to the southwestern shoreline and the clubhouse and cottages associated with the South Fork Fishing and Hunting Club in St. Michael, across the river and tracks to the northeastern shoreline on Township Road 352, and ending at the planned interpretive facility at the north abutment. According to the GMP, "visitors will gain an impression of the size of the former reservoir by driving around its edges." The GMP also proposed realigning Township Road 352 from the west and north sides of the Lake View Farm to the south and east sides. (GMP 1980: 30-31)

Interpretive Prospectus and Development Concept Plan.
Building on the guidance of the "Statement for Management" and the "General Management Plan," the park completed an "Interpretive Prospectus and Development Concept Plan" in 1984 that updated details for the visitor program, interpretive techniques and media, and facilities to foster an understanding of the Johnstown flood. The report proposed a facility on the hillside above the north abutment, in the general vicinity of the Lake View Farm buildings, from which visitors could view the dam remains, former lakebed, and distant clubhouse and cottages. The report also proposed configuring and orienting this facility to direct the visitor's view to these resources and to screen unwanted views of US Route 219 (Figures 20 and 21). Noting that the Lake View House served as a landmark visible from other areas of the park, the report recommended that the location and exterior form of the visitor facility should complement the house and the hillside location, and that its character should be subdued. (IP/DCP 1984: iii,9,13)

Development at the Picnic Grounds:
In the 1980s and 1990s the park implemented improvements to visitor facilities at the picnic grounds. Up until this time, portable toilets accounted for the only visitor amenity. Although a plan from 1980 proposed a combination comfort station/maintenance shop just north of the Picnic Grounds Road loop, the comfort station part of the structure was not built. Thus, portable toilets were used until c.1981 when the park built a permanent comfort station on the west side of the Picnic Grounds Road loop. By 1993, the park constructed an open-sided picnic pavilion on the east of the loop amongst the picnic tables and grills. By this time there was also a horseshoe pit in the median of the loop. (NETR aerial, 1993; Dwg.427-80003A, 1980; Dwg.427-41004, 1986; Dwg.427-41037, 1993; IP/DCP 1984: 33)

The park's maintenance facility was initially a collection of shacks set in a work yard north of the Picnic Grounds Road loop. In the early 1980s the park constructed the aforementioned one-story frame maintenance shop as well as a work yard, located off a gravel road extending north from the north end of the loop. By 1993, additional workspaces and structures had been added in the work yard, including a modular trailer office, three frame sheds, and storage tanks. In 1996 a two-story maintenance office/two-bay garage was constructed at the north end of the work yard, and in 2011 the earlier maintenance shop was enlarged with a three-bay addition to the north. (Dwg.427-80003A, 1980; Dwg.427-41004, 1986; Dwg.427-41037, 1993)

Development at the Lake View Farm:
In August 1981 the National Park Service purchased the 30.4-acre Lake View Farm property from Robert E. and Lois M. Furlong. By this time the Lake View House had been unoccupied for over ten years. By 1969 the house was in such poor condition that the Furlongs had purchased a mobile home, locating it in the large garden area between the house and spring house. The abandoned house consequently deteriorated at an accelerated pace and the west porch was removed. The Furlongs had begun scaling back farming operations by the late 1960s, and in the 1970s the unused silo collapsed, the original barn and carriage shed were in ruins, and the chicken coop structures and the smokehouse were removed. (Unrau 1986: 51,147)

Access into the farm property at the time of federal acquisition was from a gravel driveway extending south from the realigned portion of Township Road 352. The driveway forked at the ruins of the barn, carriage/wagon/machine shed, and silo. The lower (western) fork continued south to the Furlong

garage, Lake View House, spring house, and well house. Scattered trees and shrubs occupied spaces around the buildings, but the area was mostly open and surrounded by cultivated and abandoned fields. (Dwg.427-25000, 1985; NETR aerials, 1972 and 1993)

The park initially intended to adaptively reuse the interior of the Lake View House for park offices with an addition at the basement level to accommodate a visitor center. However, by 1986 the park proposed plans to construct a new visitor center building at the site of the ruined barn and carriage shed. Completed in 1989 in time for the 100th Anniversary of the Johnstown Flood, the two-story L-shaped structure included exhibit spaces, a film theatre, offices, and restrooms. The new building's form, representing that of the former barn, and its hillside location fulfilled the recommendations set forth in the 1984 "Interpretive Prospectus and Development Concept Plan." With the opening of the new facility, the temporary visitor center and park office at the south abutment were removed. (Unrau 1986: 107-108; Dwg.427-41015, 1990)

The park also addressed the extant buildings at the Lake View Farm, beginning with the restoration of the exterior of the house to its historic 1889 condition for the anniversary. The covered two-story southwest porch with its center stair and the northeast porch (and an accessible ramp) were reconstructed, while the house was painted white with red trim. Interior spaces were upgraded and readapted into park offices, library, workrooms, and storage areas in 1992-1993. In 1988-1989, the park rehabilitated the collapsing foundation of the spring house and built a new but smaller structure similar to the style of the original on top of the northwest end of the original foundation. Based on recommendations in a 1986 Historic Structure Report, the park removed the Furlong garage (but not the fill) and the well house in the late 1980s. (Unrau 1986: 136-137,149,152; LCS 2016)

Uphill and to the southeast of the visitor center, the park constructed a 65-space asphalt parking lot accessed by a new two-lane asphalt road (now Visitor Center Road) uphill from the original driveway. Like the parking lot at the picnic grounds, this parking lot was designed as a one-way loop. Concrete sidewalks in the parking lot connected to a concrete and stone-paver patio with bench seating at the visitor center entrance. The original driveway was paved with concrete for use as a service road, which also provided access to a two-space handicap parking area across from the Lake View House where the Furlongs excavated fill for the garage. The driveway was extended around the edge of the yard on the southwest side of the house and terminated at the steps on the southwest porch, near two new wayside signs. A curving woodchip-surfaced trail with timber steps traversed the slope between the parking lot and spring house, and another woodchip trail headed south and west down the hill to Township Road 352. Park plans proposed an extensive program of new plantings around the visitor center and within the parking lot. Many of the trees were installed but the large number of shrubs was limited to areas along the walks and to screen utilities. (Dwg.427-41004, 1986; Dwg.427-41005A, 1989; NETR aerials, 1993 and 2004)

Management of the Former Lakebed:
The park completed several other proposals recommended in the 1980 GMP, most notably the construction of the pedestrian bridge across the top of the spillway in 1988-1989 (Figure 22). The 8-foot wide wood bridge measured 146 feet in length with posts spaced around 16 feet apart, similar to the timber trestle bridge present in 1889, although the railing design was different and there were no fish screens (see Figure 4). The south end of the bridge was accessed by a new accessible asphalt path that connected to a five-space asphalt parking lot constructed on the west side of Township Road 352, directly across from the trail from the Lake View Farm. The parking lot was built at the approximate point where the trace of the former alignment of Township Road 352 headed north into the lakebed and toward the spillway. The new paved trail was built upslope from the trace, which was scarified and restored with vegetation. Another woodchip trail was planned to pass under the pedestrian bridge and track through the spillway, and then turn and parallel the downstream toe of the north abutment to the railroad tracks. Except for the spillway portion, this trail was built in the late 1980s and began at the north end of the pedestrian bridge. However, it was not actively maintained and eventually became overgrown. The park also constructed an 8-foot wide boardwalk along the length of the north abutment around this time to improve accessibility. Other improvements included new paving, drainage structures, retaining walls, and timber-faced guardrails along Township Road 352, a wood and stone veneer entrance sign at the beginning of Visitor Center Road, and other directional signs within the park and along adjacent roads. (Dwg.427-41004, 1986; Dwg.427-41005A,

1989; Interview with K. Penrod, November 2014)

After acquiring the Recreational Authority lands in 1984, the park was active in vegetation management in the former lakebed. In 1988-1991 the park clear cut and burned approximately 50 acres of vegetation in the lakebed so that visitors could visualize the extent of the former lake, especially from the new visitor center at the Lake View Farm. Much of the lakebed was then seeded to promote grassland development. The park also cleared stands of timber in around the dam abutments to give visitors better appreciation for the size of the impoundment. This work was consistent with the cultural resources management goal of the 1980 GMP: "To preserve and maintain the cultural resources and the setting of the South Fork Dam to approximate conditions in c.1889." It was also the recommendation in the park's 1987 "Resources Management Plan." A comparison of aerial photographs from 1972 and 1993 show the dramatic reduction in woodland cover in the lakebed. (GMP 1980: 7; SM 1993: 11; Dwg.427-41005A, 1989; NETR aerials, 1972 and 1993; Garrett 1987: 47)

Partnership at the Clubhouse and Cottages:
In July 1986, the clubhouse and seven extant cottages associated with South Fork Fishing and Hunting Club in St. Michael were identified in the National Register of Historic Places as contributing resources of the South Fork Fishing and Hunting Club Historic District. The recognition coincided with the preparation of a "Preservation and Interpretation Plan for the South Fork Fishing and Hunting Club Historic District," a joint effort completed in 1988 between the residents of St. Michael and the National Park Service. The plan resulted in a partnership to protect, maintain, and manage the district's buildings. It also established the 1889 South Fork Fishing and Hunting Club Historical Preservation Society as the principal community body working with the National Park Service (the society was renamed Friends of the Johnstown Flood National Memorial in 2006, disbanded in 2015, and reformed in 2018). (IP/SD 1994: 1; Review comment, Smith, 29 June 2016; Review comment, C.Curry, 15 July 2026; Review comment, D.Bosley, 3 August 2026)

The plan provided concepts and specific guidance for basic visitor services, interpretive directions, and cultural resource preservation and maintenance activities, and suggested ways to promote future economic growth in the St. Michael community. A phased list of improvements included:
-- A 10-15 space parking lot near the clubhouse so visitors can park at a central facility and not disturb local property owners.
-- Waysides to interpret the story
-- Restoring and opening to the public the clubhouse and one or two cottages. Restoration would include structures and historic grounds as much as possible based on research.
-- An Interpretive Tour Route Trail to link the story of the flood events between St. Michael and Johnstown.
-- Walking tours of the historic district and adjacent lakebed. (PIP 1988: 13-14,18)

The Preservation Society was founded to preserve the St. Michael Historic District's significant structures and interpret the story of the South Fork Fishing and Hunting Club. The Society obtained ownership of four club buildings in the late 1980s and early 1990s: the clubhouse, double cottage, Brown Cottage, and Lippincott (Moorhead) Cottage. One of the first projects completed was reconstruction of the clubhouse porch in 1991-1992. At this time, the clubhouse was still used as a restaurant/bar, the double cottage was under renovation as four rental apartment units, and the cottages were vacant. In 1993 John Milner and Associates completed archeological investigations at the four sites to locate subsurface resources and identify landscape features possibly linked to the club. Milner reported that the artifacts, discrete yard deposits, and landscape features that were found were deposited or created after the club had been disbanded. The investigations also indicated that evidence for the boardwalk that fronted the buildings had not survived. (Balicki and Stevens 1993: 2,5,12; EA 2007: 37-39,44-45; LDA et.al. 1993: 42)

In 1993 and 1994, the National Park Service and the Preservation Society prepared a Historic Structures Report and an Interpretive Plan/Schematic Design to update and expand on the earlier recommendations:
-- As the former focal point of club life, accurately restore the clubhouse to house most of the public functions, including the visitors/orientation center, exhibit space, a restaurant, and an inn.

-- Restore the exterior of the clubhouse annex (double cottage), including reconstruction of the two-story porch.
-- The Brown Cottage should be restored on the exterior and renovated on the interior, in keeping with its current duplex configuration, to house two rental units.
-- The Moorhead Cottage should be restored on the exterior and the first floor of the interior to house exhibits and a library and to accommodate special events and receptions. Upstairs, it will be renovated into two apartment units, one intended for a caretaker to administer the overall project.
-- Portions of the historic boardwalk and the access road behind the cottages should be replicated to provide some sense of the original context of the buildings. (LDA et.al. 1993: 2; IP/SD 1994: 10)

Boundary Increase, 2004:
The four buildings associated with the South Fork Fishing and Hunting Club were not initially considered for inclusion into Johnstown Flood National Memorial because it was understood that a local entity, such as the 1889 South Fork Fishing and Hunting Club Historical Preservation Society, could adequately provide for their protection and interpretation. However, by the late 1990s the society was struggling to maintain the buildings and simultaneously make mortgage payments. In 2000 the society began working with a non-profit historic property development company to explore private sector interest in purchasing the parcels. The search was unsuccessful, and on October 5, 2004, federal acquisition of the club properties was authorized as part of the park's third boundary increase (P.L. 108-313), which added approximately 14 acres of land through purchases. This area included the three parcels in St. Michael associated with the South Fork Fishing and Hunting Club: clubhouse, double cottage, Lippincott (Moorhead) Cottage, and Brown Cottage. These building were acquired in 2006. The boundary increase also included additional land east of the Lake View Farm (Tracts 01-130, 02-100, 02-101). (Dwg.427-80008, 2003)

Foundation Document:
The most recent planning document at Johnstown Flood National Memorial is the "Foundation Document," completed in 2013. Foundation documents provide basic guidance for all planning and management decisions. The core components of a foundation document include a brief description of the park as well as the park's purpose, significance, fundamental resources and values, other important resources and values, and interpretive themes. Fundamental resources and values are those features, systems, processes, experiences, stories, scenes, sounds, smells, or other attributes determined to warrant primary consideration during planning and management processes because they are essential to achieving the purpose of the park and maintaining its significance. They are closely related to a park's legislative purpose and are more specific than significance statements. Fundamental resources and values help focus planning and management efforts on what is truly significant about the park; if they are allowed to deteriorate, the park purpose and/or significance could be jeopardized.

As stated in the park's "Foundation Document," the fundamental resources and values that relate to the park's landscape are as follows:
-- South Fork Dam ruins: The abutments and spillway that are the remaining ruins of the South Fork Dam, the valve control tower foundation ruins, and the historic carriage road that traversed the abutment and continued upslope.
-- The dry bed of Lake Conemaugh: The land below the 1,600-foot contour of the lake, including the South Fork Little Conemaugh River, wetlands, and vegetated slopes.
-- South Fork Fishing and Hunting Club Historic District: The South Fork Fishing and Hunting Club clubhouse, annex, and cottages.
-- Unger Farm (Lake View Farm): The house, visitor center, spring house, and the fields and the orchard on the hillside above the South Fork Dam. (FD 2013: 6)

Cultural Landscape Report and Lakebed Rehabilitation:
Between the 1970s and 2007 the park cleared woody vegetation in the lakebed, but following this period trees and shrubs again grew to cloak the lakebed until the late 2010s when work resumed to clear the lakebed and establish a meadow of primarily low-growing native plant communities. In the spring of 2019, concurrent planning began on a "Cultural Landscape Report for Johnstown Flood National Memorial" and a cyclical maintenance project entitled, "Restoration of the Lakebed." The goal of the funded project was to clear the lakebed of woody vegetation so that memorial visitors

might understand the magnitude of the former Lake Conemaugh and thus the impact of the South Fork Dam's failure. In June 2019, the Olmsted Center convened a team of park and regional experts in natural resources, cultural resources, fire management, and park administration at a Landscape Treatment Workshop where treatment alternatives were presented and paths to project compliance discussed. (CLR 2021: 5-8)

The first two phases of the cyclical maintenance project were completed in the winters of 2020 and 2021 (Figure 23). Through the use of machinery, and goats, contractors were able to remove woody vegetation and restore views from the Visitors Center to the southwest portion of the lakebed, the spillway, and a portion of the engineered abutments. Management of the lakebed's low growing meadow and wetland vegetation is ongoing. The CLR describes a strategy for completing vegetative clearing in the lakebed and maintaining the cleared areas through mowing, prescribing burning, and selected tree clearing on a cyclical basis. These recommendations are detailed through a multi-year maintenance calendar. (CLR 2021: 5,11-12)

Landscape-Related Projects Since 2016:
--2016: Completed. (PMIS 177418 / PEPC 65738, Repair and Replace Rotted Decking, Stair Treads and Risers on South Abutment Trail)
--2020: Completed/Ongoing. (PMIS 171804 / PEPC 91417), Remove Trees and Shrubs and Treat Stumps from Lakebed)
--2021: Completed. (PEPC 104031, Vault toilet installed at the South Abutment parking area)
--2022: Completed. (PEPC 101864, Install Path of Flood/Flight 93 NM trail in Lakebed)
--2023: Completed/Proposed for 2025,2027: (PMIS 308988 / PEPC 112393, Monitor and Treat Lakebed Grounds)
--2023: Completed/Funded 2024, proposed 2026. (PMIS 308988 / PMIS 9112393, Cyclic Maintenance of Lakebed Grounds)
--2026: Completed. (PMIS 305500 / PEPC 108047, Rehabilitate North Abutment Boardwalk)
--2019: Proposed. (PMIS 172083, Control Exotic Vegetation and Plant Native Species at Johnstown Flood Lakebed) (DRAFT)
--2023-2027: Proposed. (PMIS 317570, Preserve 1889 Club House)
--2026-2028: Proposed. (PMIS 315708 / PEPC 115380, Perform Cyclic Maintenance on the Carriage Trace)
--2027: Proposed. (PMIS 315494, Improve Security around Maintenance Area)
--2027: Proposed. (PMIS 315707, Repairs to Arbor Trail System)
--2027: Proposed. (PMIS 315704, Repair South Abutment Trails)
--2028: Proposed. (PMIS 338757, Update Park Signs)
--2028-2030: Proposed. (PMIS 315706, Repairs to North Abutment Trail)
--2029: Proposed. (PMIS 329827, Rehabilitate Steps into Lakebed)
--2029-2030: Proposed. (PMIS 305492, Rehabilitate Deficiencies to Visitor Accessible Pathways)

The next chapter of this report, "Analysis and Evaluation of Integrity," identifies the historic and non-historic characteristic and features in the park's landscape. It also describes more recent changes in the park landscape and the current condition and use of its landscape features.

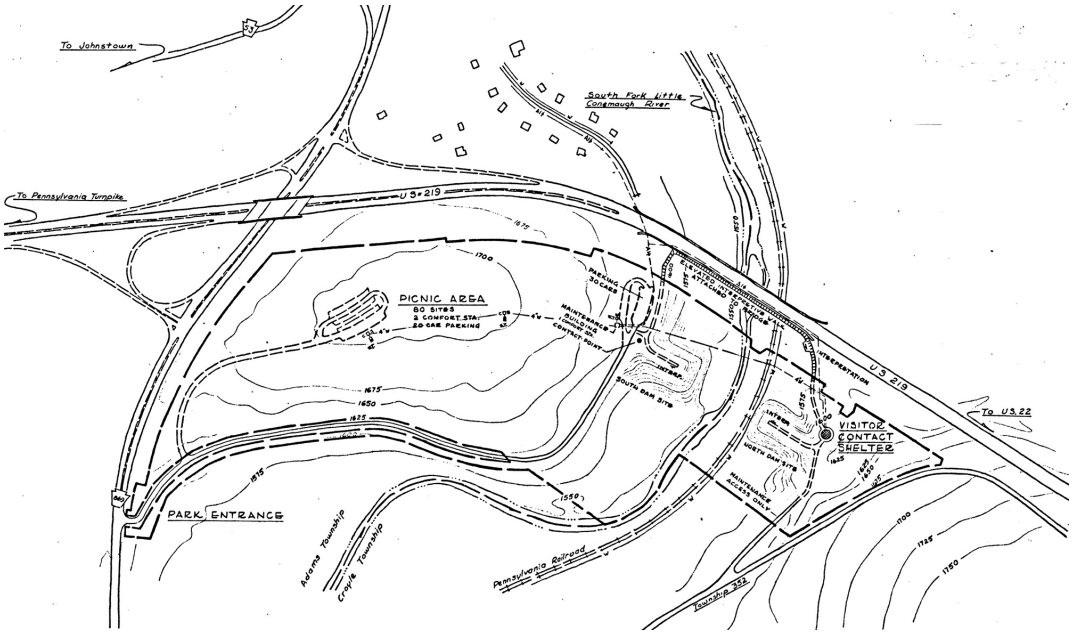


Figure 18. Plan of developed areas at Johnstown Flood NM, 1968. (Denver Service Center, eTIC, #427-40000A)

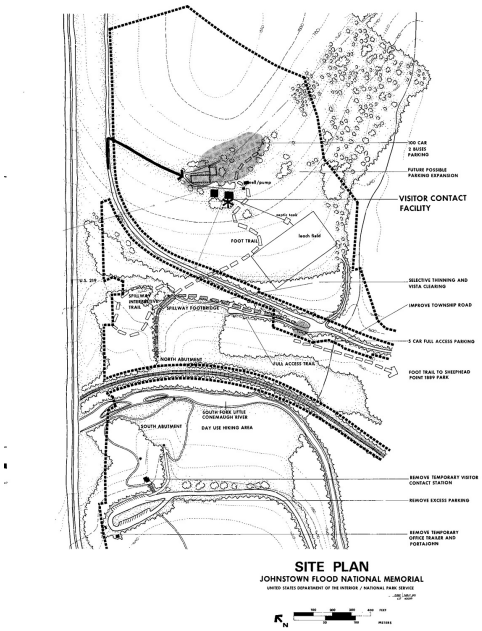


Figure 20. The site plan from the 1984 Interpretative Prospectus and Development Concept Plan. (Denver Service Center, eTIC, #427-40006)

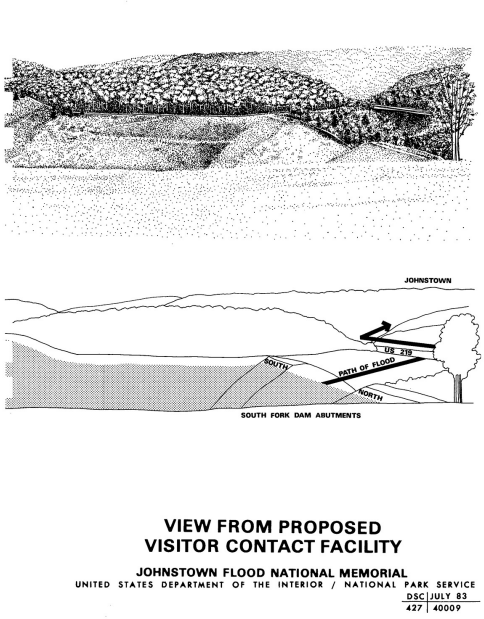


Figure 21. Analysis from 1984 Interpretative Prospectus and Development Concept Plan, illustrating the importance of the view of the cleared lakebed from the proposed visitor contact station. (Johnstown Flood National Memorial)

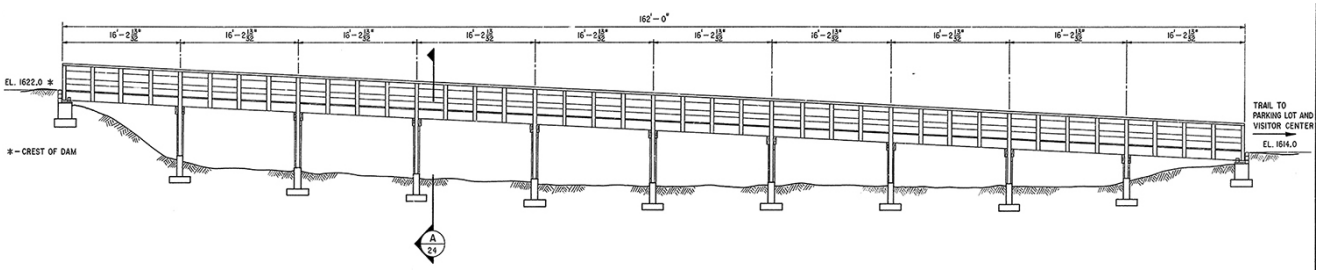


Figure 22. Plan of the pedestrian bridge at the spillway, 1986. Compare this design with Figure 5. (Denver Service Center, eTIC, #427-41004)



Figure 23. Looking south towards southwestern section of the lakebed following the use of the masticator, 2020. (Johnstown Flood NMem files)

Uses

Functions and Uses:

Major Category	Category	Use/Function	Historic	Current	Primary
Industrial/Processing/Extraction	Dam	Dam - Earthen	Yes	No	Yes
Education	Interpretive Landscape	Interpretive Landscape	No	Yes	Yes
Agriculture/Subsistence	Agricultural Field	Agricultural Field	Yes	Yes	No
Recreation/Culture	Auditorium	Auditorium	No	Yes	No
Transportation	Road-Related	Automobile	Yes	Yes	No
Agriculture/Subsistence	Agricultural Outbuilding	Barn	Yes	No	No
Domestic (Residential)	Camp	Camp	Yes	No	No
Recreation/Culture	Outdoor Recreation	Campground/Picnic Area	No	Yes	No
Social	Clubhouse (Social/Garden)	Clubhouse (Social/Garden)	Yes	No	No
Recreation/Culture	Museum (Exhibition Hall)	Exhibit	No	Yes	No
Domestic (Residential)	Multiple Dwelling	Family Duplex	Yes	Yes	No
Landscape	Natural Area	Forest	Yes	Yes	No
Transportation	Pedestrian-Related	Handicapped Trail	No	Yes	No
Transportation	Pedestrian-Related	Interpretive Trail	No	Yes	No
Landscape	Leisure-Passive (Park)	Leisure-Passive (Park)	No	Yes	No
Agriculture/Subsistence	Livestock	Livestock	Yes	No	No
Domestic (Residential)	Hotel (Boarding House)	Lodge (Inn, Cabin)	Yes	No	No
Landscape	Natural Area	Meadow	No	Yes	No
Landscape	Scenic Landscape	Overlook	No	Yes	No
Recreation/Culture	Outdoor Recreation	Picnic Shelter	No	Yes	No
Government	Public Works	Public Works	Yes	No	No
Commerce/Trade	Restaurant (Bar, Lounge)	Restaurant (Bar, Lounge)	Yes	No	No
Transportation	Rail-Related	RR Trackage	Yes	Yes	No
Domestic (Residential)	Single Family Dwelling	Single Family House	Yes	No	No
Transportation	Pedestrian-Related	Trail Bridge	No	Yes	No
Landscape	Scenic Landscape	View	Yes	Yes	No
Industrial/Processing/Extraction	Water Works	Water Storage Facility	Yes	No	No
Landscape	Natural Area	Wetland	No	Yes	No
Agriculture/Subsistence	Woodlot/Forest (Managed)	Woodlot/Forest (Managed)	Yes	No	No

Public Access:

Public Access: Other Restrictions

Public Access Narrative:

US Route 22 (east-west) and US Route 219 (north-south) serve as the primary access routes to the region. Route 219 is the main highway connection between Johnstown and the Pennsylvania Turnpike. Sections of Route 219 and Route 22 have been improved as limited-access expressways. State Route 869 (Locust Street) extends south from Route 219 through the villages of St. Michael and Sidman.

Park grounds are open from sunrise to sunset, seven days a week all year. The Visitor Center is open Fridays through Tuesdays from 9:00 a.m. to 5:00 p.m. and is closed on Wednesdays and Thursdays. The Visitor Center is closed on Thanksgiving Day, Christmas Day, and New Year's Day.

Associated Ethnographic Group

Ethnographic Study Status: No Survey Conducted

Ethnographic Narrative:

Analysis & Evaluation of Integrity

Analysis and Evaluation of Integrity Narrative Summary:

The historic integrity of the Johnstown Flood National Memorial Landscape is evaluated by comparing landscape characteristics and features present during the period of significance, 1879-1889, with the existing conditions as assessed in 2026. Many landscape characteristics and features from the period of significance remain today. The landforms, hydrology, and topography that made this site ideal for the construction of the South Fork Dam and Western Reservoir in 1840-1853 are still evident in the landscape. The remnant abutments and spillway reveal the dam's original design and construction while the breach in the dam and the ruins of the sluice culvert and valve control tower are reminders of poor decisions made during the dam's reconstruction in 1879-1881. Upstream from the dam, the park-owned portions of the old lakebed are now a mix of meadows and wetlands. The hill near the south abutment remains forested and includes the trace of the club's carriage road, while the hill overlooking the north abutment is mostly open fields associated with Elias Unger's farm. The park has rehabilitated Unger's Lake View House and spring house and designed the nearby visitor center to evoke the appearance of the old Unger barn. Views from the visitor center and Lake View House look down at the dam and spillway, and across the lakebed to the clubhouse and cottages that once bordered the lake's southwestern shoreline. Today, the park owns four former club buildings that still retain some of their Victorian-era designs, including the long covered front porches that overlooked the lake. Trails provide access to the top of the dam abutments and passage through the breach on the south side of the river, and a footbridge crosses the upper end of the spillway on the north abutment near where a historic carriage road bridge once stood.

Landscape changes have inevitably occurred in the 137 years that have passed since the May 1889 Johnstown Flood. Within the park's boundaries, an active railroad line dating to the early 1890s still passes through the gap in the dam and travels along the bottom of the old lake. Its raised bed has long impacted the hydrology of the river and incoming tributaries, and now helps sustain several wetlands. By 2018, trees that were cleared by the park from 1977 through 2007 had returned and obscured the earthen contours of the lakebed and the dam abutments, but recently they have been removed, restoring a key feature of the park's interpretive program. Picnic, parking, and maintenance facilities are sited to minimize their impact on the park's historic characteristics and features, especially its viewsheds. More significant changes have occurred just beyond park boundaries, including the establishment of St. Michael in the lakebed next to the club buildings and the construction of the four-lane state highway, US Route 219, just downstream from the dam.

INTEGRITY

The National Register of Historic Places defines integrity as the ability of a property to convey its significance through physical resources. The National Register program identifies seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. Retention of these qualities is necessary for a property to convey its significance; however, not all seven aspects must be present to retain integrity. The following evaluation is based on an 1879-1889 period of significance for the Johnstown Flood NMem Landscape. Overall, the park landscape retains integrity and conveys its historical significance through its location, setting, design, materials, workmanship, feeling, and association.

Location:
Location is the place where the historic property was constructed or the place where the historic event occurred. The park encompasses the abutments of the South Fork Dam, spillway, remnants of the sluice culvert and valve control tower, and a portion of the former lakebed. It also includes Lake View Farm, once owned by club president Elias Unger on the hillside overlooking the dam and lakebed, and four former buildings associated with the South Fork Fishing and Hunting Club in the town of St. Michael. In St. Michael, though the relationship between the buildings and the former shoreline of Lake Conemaugh is difficult to discern due to subsequent development, the buildings remain in their original locations and orientations. (CLR 2021: 162-163)

Design:
Design is the combination of elements that create the form, plan, space, structure, and style of a property. The trapezoidal-shaped earthen and masonry dam's original length and width are apparent in the remnant abutments: the upstream face is covered in groundcover while the downstream face is covered in mid-sized

woody vegetation. The cut for the spillway is also visible due to recent vegetation management that removed small shrubs and trees. The functions of the sluice culvert and valve control tower can be understood in their stone and wooden remnants at the base of the dam. The park has returned the Lake View House and spring house to their approximate 1880s appearances, and the design of the visitor center gestures to the character of the former Unger family barn. Despite the loss of the original block of the clubhouse and alterations by post-club period owners, the former club buildings retain many exterior design characteristics, including their front porches that once overlooked Lake Conemaugh. (CLR 2021: 163)

Setting:
Setting is the physical environment of a historic property. The South Fork dam's failure and subsequent draining of Lake Conemaugh dramatically changed the setting from a quiet and scenic lake resort to a muddy swath of land one mile wide stretched between the untouched farm and cottages of the South Fork Fishing and Hunting Club. Fourteen miles away, the water released by the dam destroyed much of the city of Johnstown. Years later, the dam's remnants and the farm and cottages would be preserved as a national memorial commemorating the tragedy of May 31, 1889. Therefore, the remnants of the dam and its associated structures, as well as the contours of the lake basin of the former Lake Conemaugh, contribute to the authenticity of the setting of the Johnstown Flood and are consistent with the park's purpose. The rural setting of the Lake View Farm overlooking the dam and lakebed is also appropriate. However, there have been significant alterations to the setting outside the memorial boundaries, including the construction of the US Highway 219 overpass bridge to the north and west of the dam abutments and development on adjacent lands. In addition, in St. Michael, the setting of the cottages and clubhouse has undergone dramatic change, with the construction of residential and commercial buildings where the waves of Lake Conemaugh once lapped against the shore. (CLR 2021: 163-164)

Materials:
Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property. Visitors can appreciate the dam's original construction, visible in the stone riprap on the downstream face and the masonry stone and log cribbing in the remnants of the sluice culvert and valve control tower. Original architectural materials are also extant in the farmhouse at Lake View Farm and in the clubhouse and cottages in St. Michael. (CLR 2021: 164)

Workmanship:
Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. Park visitors can still understand the workmanship of the original portions of the dam represented in the extant abutments. For example, the extant boulders on the dam abutments' downstream faces were placed in steep terrain by the original builders of the dam. In contrast, the gap in the dam represents the club's poorly reconstructed section. Workmanship is also visible on the exteriors of the various historic buildings. (CLR 2021: 164)

Feeling:
Feeling is the property's expression of the aesthetic or historic sense of a particular period of time. The feeling of seclusion and rustic character of the former private resort is experienced on the wooded carriage road trace that tracks along the hillside southwest of the south abutment and provides glimpses of the lakebed. The feeling of profound tragedy is evoked by the large gap of the South Fork Dam and by the contours of the drained lakebed. Both experiences have been greatly improved with the removal of non-historic woody vegetation in the lakebed that obscured the former lake's size and thus the magnitude of its destruction. Beyond the boundary of the memorial, the sight and sound of Highway 219, passing northwest of the dam abutments, intrudes on the feeling of solemnity. Traffic on Lake Road and the active Norfolk-Southern railroad tracks through the lakebed also encroach on the property's overall feeling of seclusion. (CLR 2021: 164-165)

Association:
Association is the direct link between an important historic event or person and a historic property. The memorial's contributing features represent its significant history associated with the South Fork Fishing and Hunting Club, including the remnants of the South Fork Dam and sluice, the spillway and lakebed, as well as Lake View Farm and the club's clubhouse and cottages in St. Michael. (CLR 2021: 165)

LANDSCAPE CHARACTERISTICS AND FEATURES

The next section presents an analysis of landscape characteristics and their associated features and corresponding Historic Structures Inventory (HSI, formerly List of Classified Structures) names and numbers, if applicable. It also includes an evaluation of whether the feature contributes to the property's National Register eligibility for the historic period (1879-1889), contributes to the property's historic character, or if it is noncontributing, undetermined, or managed as a cultural resource. If a feature is non-contributing, it is evaluated as "compatible" (visually congruent with the historic character of the landscape) or "incompatible" (visually incongruent with the historic character of the landscape).

Landscape Characteristic:

This section presents an analysis of landscape characteristics and their associated features and corresponding List of Classified Structures (LCS) and Facility Maintenance Software System (FMSS) names and numbers, if applicable. It also includes an evaluation of whether the feature contributes to the property's National Register eligibility for the historic period (1879-1889); is noncontributing "compatible" (visually congruent with the historic character of the landscape) or "incompatible" (visually incongruent with the historic character of the landscape); is undetermined; or is managed as a cultural resource.

Landscape Characteristic: Natural Systems and Features

Natural systems and features are the natural aspects that have influenced the development and physical form of the landscape, and can include geology, geomorphology, hydrology, ecology, climate, and native vegetation. Though natural systems, including the site's geology, soils, and hydrology, helped precipitate the Johnstown Flood of 1889, for this analysis, only one natural feature was present during the period of significance and remains within the Johnstown Flood NMem. The natural feature that contributes to the memorial's historic significance and integrity is the South Fork Little Conemaugh River. Designated wetlands, while compatible with the cultural landscape, do not contribute to its significance and integrity. (CLR 2021: 166)

Feature Evaluations:
--South Fork Little Conemaugh River.
(contributing)
The South Fork Little Conemaugh River's natural course was significantly altered by the construction of the South Fork Dam between 1839 and 1853 and its reconstruction between 1879 and 1881. As initially designed, the South Fork Dam impounded water from the river, which was then released through five sluice pipes when the lake level rose too high. The 1889 breach in the dam left behind the muddy lakebed of the former Lake Conemaugh with the South Fork Little Conemaugh River flowing through the bottom of the basin.

Following the sale of the former lakebed by the South Fork Fishing and Hunting Club, in the 1890s, a railroad line raised on an earthen berm to combat flooding was constructed just to the east of the river. Though the river's course has been slightly altered since the period of significance and the water quality has been severely impacted by subsurface mine drainage, the river retains its defining characteristics, including its location in relation to the dam abutments and the lake basin (Figure 24). Two small unnamed tributaries feed the South Fork Little Conemaugh River flowing through the park. Downstream and near the town of South Fork, the South Fork Little Conemaugh River then flows into the Little Conemaugh River before joining with the Stonycreek River to form the Conemaugh River at Johnstown. The Conemaugh River then flows to the Kiskiminetas, the Allegheny, and the Ohio Rivers before emptying into the Mississippi River. (CLR 2021: 166-167)

--Designated Wetlands.
(non-contributing, compatible)
The existing wetlands were not present during the historic period of significance. Within the lakebed of the former Lake Conemaugh, a total of twenty-three unique wetland features (17.84 acres) have been delineated including 11.10 acres of palustrine wetland habitat, four acres of riverine wetland habitat, and 2.74 acres of scrub-shrub riparian buffer. Of the palustrine wetlands, 7.96 acres were considered emergent wetland where vegetation tends to be low growing and where systems appear to be seasonally saturated or flooded. Palustrine scrub-shrub wetlands comprise another 2.88 acres of the palustrine wetlands. Within these areas, vegetation is dominated by tall shrubs including willow (Salix sericea) and alder (Alnus incada sub. Rugose). (CLR 2021: 167, from Memorandum, Sharpe and Kelley to Johnstown Flood National Memorial, 2017)

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
South Fork Little Conemaugh River and Unnamed Tributaries	211027	Contributing					No
Designated Wetlands	211028	Noncontributing – Compatible					No

Landscape Characteristic: Spatial Organization

Spatial organization is the three-dimensional organization of physical forms and visual associations in a landscape, including the articulation of ground, vertical, and overhead planes that define and create spaces. At Johnstown Flood NMem, the historic spatial organization is relatively intact since the end of the period of significance. The three areas that contribute to the memorial landscape's significance and integrity are the lakebed of the former Lake Conemaugh, the South Fork Fishing and Hunting Club Cottage cluster, and the Lake View Farm cluster. These areas are defined by the landscape's circulation, vegetation, and buildings and structures. (CLR 2021: 167-168)

Feature Evaluations:
--Lakebed.
(contributing)
The South Fork Dam, and its impoundment the Western Reservoir, were constructed in 1838-1853 to supply the canal along the Main Line. Upon completion the reservoir was limited to a fifty-foot depth at the South Fork Dam in 1853 and covered an area of 424.85 acres, stretching upstream for about two miles and nearly a mile wide in some places. The reservoir was abandoned and suffered several breaches until the dam was rebuilt in 1881 and the impounded water was named Lake Conemaugh. In May 1889 the high-water level of lake reached the 1,604 contour elevation just before the dam's failure. After the breach the water quickly drained out of the basin revealing the muddy contours of the lakebed. (CLR 2021: 167)

Following the failure of the dam, areas of the lakebed were used for cultivating crops and grazing. An area in the southern section of the lakebed was planted out in a pine plantation, while successional shrubs and trees grew on fallow land. Beginning in the late 1970s, after the acquisition of the property by the NPS, occasional campaigns of tree clearing in the former lakebed began. This cycle of tree removal and growth continued through 2008, when tree removals from the lakebed ended. Recent rehabilitation work has cleared away woody vegetation in the lakebed to reveal its character-defining basin shape and location. Today the lakebed consists of fifty acres of the original Lake Conemaugh, lying between Lake Road on the north and the South Abutment Road on the south (see Figure 24). (CLR 2021: 167-168)

--Lake View Farm Cluster.
(contributing)
At Lake View Farm, on the hillside overlooking the South Fork Dam and the former Lake Conemaugh, the main house was perched on the slope to allow views south and west toward the lake. Auxiliary farm buildings – the barn carriage house and springhouse – were intentionally located behind the house so the view from the house and its two-story porch would not be obstructed. Fences around the house and outbuildings, and along some of the property lines, further defined spaces, though the exact location of fencing is not known. (CLR 2021: 169)

The Lake View Farm was active and productive for decades after the period of significance.

Although a few new structures were added, the overall spatial organization of the farm remained consistent. The most significant changes began when farm production declined and several old or unneeded outbuildings were removed, or in the case of the barn and carriage and wagon shed, collapsed from neglect of maintenance. In the late 1980s, the park constructed a new visitor center at the site of the old barn, which offered excellent views of the dam, lakebed, and clubhouse/cottages. Mindful of the important spatial relationship between the Lake View House and the dam and former lakebed, the park located the visitor parking lot and access road uphill from the visitor center so as not to block the historic views down the hill. Today the structures associated with Lake View Farm retain their approximate locations relative to each other and the lakebed preserving the Lake View Farm cluster (Figure 25). (CLR 2021: 169-170)

--South Fork Fishing and Hunting Club Cottage Cluster.
(contributing)
The core of the South Fork Fishing and Hunting Club was on the southwestern shore of Lake Conemaugh, about one mile upstream from the South Fork Dam. The first building constructed was the clubhouse in 1881, which was built on the lakeshore and oriented northwest-southeast so that its front façade and covered porch would face the lake. In addition to functioning as the center of club activities, the siting of the clubhouse influenced the location of the private cottages that were built in subsequent years. By 1888, four single cottages and a double cottage were located northwest of the clubhouse and eleven cottages were situated southeast. Like the clubhouse, the cottages were oriented toward the lake in a row with front porches to capture lake breezes and views. Boathouses and docks extended out into the lake and were connected to a boardwalk with earthen paths. Privies, ice houses, carriage houses and barns were located behind the cottages on the carriage road so as not to block the panoramic lake views. (CLR 2021: 168-169; Review comments, D.Bosley, 3 August 2026)

The club house and cottages owned by the NPS remain in their original locations and retain their original orientation toward the north, though Lake Conemaugh, boathouses, and docks no longer exist (Figure 26). (CLR 2021: 169)

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Lakebed	211030	Contributing					No
Lake View Farm Cluster	211029	Contributing					No
South Fork Fishing and Hunting Club Cottage Cluster	211031	Contributing					No

Landscape Characteristic Graphics:



Figure 25. View looking west at the spring house/foundation and Lake View House (Unger House). In the background between the buildings is the South Fork Dam's north abutment. (OCLP 2026)



Figure 26. View looking south from the Unger House porch toward the former lake bed. The cluster of buildings in the distance, at image center, is the approximate locations of the South Fork Fishing and Hunting Club clubhouse and cottages. (OCLP 2026)

Landscape Characteristic: Land Use

Land uses are the principal activities in a landscape that form, shape, and organize the landscape as a result of human interaction. During the period of significance, the land that comprised the Johnstown Flood NMem was used for both farming and private recreation (including sailing, boating, fishing, and hunting). Only farming, as represented in the meadows south of Lake View Farm, remains as a contributing land use today. (CLR 2021: 170)

In 1853 the South Fork Dam and Western Reservoir were completed by the Commonwealth of Pennsylvania to provide a reliable supply of water to the canal in Johnstown. In 1857 the Pennsylvania Railroad Company purchased the entire Main Line works, leaving the dam and reservoir virtually unattended. Following a breach in the dam, vegetation took hold in the partially drained lakebed. In the years that followed, farmers cultivated fields and grazed livestock in the lakebed, while locals fished in pools that remained near the broken dam. (CLR 2021: 170)

In 1879 the South Fork Fishing and Hunting Club purchased the dam and former reservoir, then a mostly empty lakebed, for use as a private resort where wealthy families from Pittsburgh could hunt, fish, and enjoy the outdoors. The dam was rebuilt in 1880-1881, and the refilled impoundment was named Lake Conemaugh. A clubhouse and private cottages with docks and boathouses were built on the lake's southwestern shoreline. Elias Unger purchased what would become Lake View Farm on the northern border of the lake. Unger cultivated field crops and meadows for grazing on the hillsides around the farmhouse and barn, allowing for views of Lake Conemaugh and the dam below. Use of the land and lake as an idyllic resort ended with the dam break and flood on May 31, 1889, after which the club disbanded. (CLR 2021: 170)

New land uses were introduced in and around the former Lake Conemaugh soon after the tragic events of May 1889. In 1891, the South Fork Branch Railroad, a subsidiary of the mainline of the Pennsylvania Railroad, built a rail line through the bottom of the empty lakebed and the breach in the dam. By 1904, they had added a second track and a multi-track railyard in the southeastern portion of the former lakebed. On the lake's southwestern shore just southeast of the club cottages, the Maryland Coal Company opened a mine in 1907 and established the company town of St. Michael. The company purchased the former cottages for employee housing and built additional houses nearby. Another developer purchased the clubhouse and possibly the double cottage for use as a hotel and restaurant. On the lake's northeastern shore, the Lake View Farm was sold to a series of owners who worked the fields and raised livestock. Local roads were also built in portions of the lakebed and along the shorelines. Some of the roads were eventually improved as part of the state highway system. During this time, areas of the lakebed that were not developed reverted to woodlands, including one area set out as a conifer plantation (outside the park boundaries). (CLR 2021: 170-171)

Land uses in the area changed again in the 1950s and 1960s, beginning with the mine's closure around 1958 and the construction of U.S. Route 219 northwest of the dam in the mid-1960s. In 1964 Congress authorized Johnstown Flood National Memorial as a unit of the national park system to commemorate the tragedy and to preserve the remains of the dam and portions of the lakebed. The park's initial land acquisitions included the dam abutments, a small portion of the lakebed, and a hill to the southwest where it developed a picnic area, parking lot, and later a maintenance facility. Two boundary increases in the 1970s allowed the park to acquire additional lands in the lakebed, the former Lake View Farm, and other lands to serve as scenic buffers. The boundary was increased again in 2006 when the NPS gained ownership of the former South Fork Fishing and Hunting Club clubhouse and three cottages. (CLR 2021: 171)

Today park visitors may engage in interpretative programs and exhibits at the visitor center. They may view waysides on the trails on and around the dam abutments, including a nature trail near the picnic grounds that uses part of the carriage road trace. Additional visitor and park management uses include four parking lots, park offices at the Lake View House, and maintenance facilities adjacent to the picnic grounds. The clubhouse is used for interpretative programming, and cottages

owned by the NPS are used for rental housing or are in stabilized condition awaiting future uses. The railroad running through the middle of the lakebed is still active and is operated by Norfolk-Southern. (CLR 2021: 171)

Feature Evaluation:
--Agricultural Use.
(contributing)
During the period of significance the property surrounding Lake View Farm was used for agriculture, growing field crops and providing meadow for livestock foraging. The low growing vegetation on the hillside above the dam abutments allowed views from Lake View Farm to the lake and distant lakeshore to the southeast. The area to the east of Lake View House is currently managed as a meadow, which suggests the earlier agricultural use, contributing to the historic setting of Lake View Farm and allowing views to the lake basin and South Fork Dam abutments. (CLR 2021: 171-172)

--Picnic Grounds.
(non-contributing, compatible)
Built in the early 1970s, the picnic grounds is located atop a hill southwest of the South Fork Dam. Accessed by two-lane road, the area features an open-sided picnic pavilion, eight grills and picnic tables anchored into the ground, and several movable picnic tables. These features are set within maintained lawns dotted with mature trees (Figure 27). Dense woods surround the area and screen it from the adjacent US Route 219. The maintenance area is located just to the north, while the Arbor Trail leads through the woods to the Carriage Road Trace.

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Agricultural Use	211032	Contributing					No
Picnic Grounds	211033	Noncontributing – Compatible					No

Landscape Characteristic Graphics:



Figure 27. View looking south at the picnic grounds. (OCLP 2026)

Landscape Characteristic: Circulation

Circulation refers to the spaces, features, and applied material finishes that constitute systems of movement in a landscape. Circulation during the South Fork Dam's original construction between 1839 and 1853 likely consisted of cart and wagon roads at the dam site and through the proposed lakebed to allow crews to remove vegetation. Drawings of the dam indicate the crest of the dam was wide enough to allow passage of a single wagon, but part of this road was destroyed when the dam failed in 1862. The existence of other circulation features is not known. The Carriage Road Trace is the only extant circulation feature that was present
during the period of significance. Circulation features that post-date the period of significance include local state roads and NPS-era access roads. (CLR 2021: 172)

Feature Evaluations:
--Arbor Nature Trail.
(non-contributing, compatible)
The Arbor Nature Trail was not present during the period of significance. The NPS likely constructed this trail soon after developing the picnic grounds in 1972 and 1973 to provide a connection between the picnic grounds and the south abutment. The earthen and gravel trail currently extends from the north end of the picnic grounds to the carriage road trace. The trail crosses moderately steep terrain and is around eight feet wide. A recent Boy Scout project added small signs identifying trees. (CLR 2021: 177)

--Carriage Road Trace.
(contributing)
The South Fork Fishing and Hunting Club's reconstruction of the dam in 1880 and 1881 lowered the

dam's crest so that a carriage road across the top of the dam would be wide enough to allow two carriages to pass. The road on the dam was part of a longer carriage route that transported club members between the train station in South Fork and the club grounds on the lake's southwestern shoreline. From South Fork, the carriage road approached the north end of the dam, crossed the creek at the lower (north) end of the spillway on a bridge, and continued up the face of the dam to the upper (south) end of the spillway. At this point the road split, with one fork crossing on a bridge across the spillway toward the Lake View Farm and the other fork continuing across the dam. At the south end of the dam, the carriage road turned and tracked southwesterly along the hillside, generally parallel to the lake's southwestern shoreline to the club grounds in what is now St. Michael. The carriage road then likely extended behind the clubhouse and cottages as a boardwalk occupied the narrow space between the front of the buildings and the shoreline. The boardwalk itself was constructed with wide transversely set boards. In steep areas, steps and bridges were built along the boardwalk and featured rustic railings inset with randomly sized and spaced crisscrossed branches. Paths and wooden walkways connected the houses, boathouses, and numerous wooden docks to the boardwalk. (CLR 2021: 173)

Following the destruction of the dam the carriage road leading from Lake View Farm to the dam and on to the cottages on the southwestern shore of the former Lake Conemaugh was most likely not maintained. Following NPS acquisition, however, the trace of the carriage drive was incorporated into interpretation and circulation plans. Presently the longest and most intact segment of the Carriage Road Trace extends from the intersection with the Picnic Grounds access road to the parking lot at the south abutment. A recent Boy Scout project added small signs identifying trees (Figure 28). Shorter extant sections still extend along the top of the dam, both of which terminate as overlooks (Figures 29 and 30). The trail along the crest of the south abutment is grass except at the overlook where the surface is gravel. The trail along the crest of the north abutment features a universally accessible PVC lumber boardwalk. The segment of the trace descending the downstream face of the dam alongside the spillway is overgrown with vegetation and barely discernable in the winter. This segment was once part of a now-abandoned interpretive trail that the park built alongside the downstream toe of the north abutment to the river. (CLR 2021: 173)

--Lake Road Parking Lot and Trail to the North Abutment.
(non-contributing, compatible)
The parking lot and trail to the north abutment were not present during the historic period of significance. The park built the parking lot in the late 1980s, at the point where the alignment of Township Road 352 was shifted from its c.1904 alignment heading toward the spillway to its new 1960s alignment heading around the Lake View Farm hillside. Aerial photographs suggest the old roadbed was retained for use as a trail to the north abutment and spillway until the late 1980s, when it was removed and reseeded. At that time, the park constructed this trail between the old and new road alignments. The trail also connected to the footbridge over the spillway and a trail to the Lake View Farm. Today, the asphalt-paved parking is striped for seven vehicles, while the asphalt-paved trail is around six feet wide. Both non-historic features are compatible with the historic scene. An analysis of topographic maps and the 1889 shoreline suggests the asphalt trail may approximate the route of the carriage road that presumably led to the Lake View Farm during the historic period. (CLR 2021: 175)

--Maintenance Yard and Service Drive.
(non-contributing, compatible)
This area was not present during the period of significance. In the early years of the park, the park's maintenance facility was a collection of shacks set in a work yard north of the Picnic Grounds Road loop. The first permanent building, a maintenance shop, was constructed in 1985 at the south end of the yard. In 1996 the yard was extended to the north for construction of the maintenance office. Today, the rectangular-shaped maintenance yard and entrance drive is surfaced in gravel and provides workspace and storage for materials and vehicles. (CLR 2021: 177)

--Parking Area at Clubhouse.
(non-contributing, compatible)
This parking lot northwest of the building did not exist during the period of significance. During the many decades that the clubhouse functioned as a hotel, rooming house, and restaurant, this area

may have been used for parking, although the layout is unknown. This roughly rectangular-shaped, earthen and gravel lot is accessed from Main Street. (CLR 2021: 177)

--Path of the Flood Trail.
(non-contributing, compatible)
This 14-mile trail stretches from Johnstown Flood NMem to Johnstown. In the park, the crushed stone route includes new trail construction dating to 2022-2023 and the use of existing trails. For cyclists, the route begins at the South Abutment Road where a new trail section traverses the lakebed, connecting the road to the existing South Abutment Loop Trail (Figure 31). Another section of new trail then heads downstream from the loop trail and out of the park. Pedestrians can also access the Path of the Flood Trail from the south abutment parking lot, via the stairs on the South Abutment Loop Trail. The Path of the Flood Trail was named Pennsylvania's 2025 Trail of the Year by the Department of Conservation and Natural Resources.

--Picnic Grounds Road and Parking Lot.
(non-contributing, compatible)
This road and parking lot did not exist during the period of significance. The park built this road and parking lot between 1972 and 1973 to provide access from the South Abutment Road to the picnic grounds on the hilltop southwest of the south abutment. The road includes a culvert with a stone headwall and ends as a one-way parking lot loop. Parking spaces for nineteen vehicles occupy the east side of the loop; proposed parking on the west side was never built. The asphalt-paved road is twenty-feet-wide with grass shoulders and several paved gutters. Both non-historic features are compatible with the historic scene. (CLR 2021: 175)

--Service Road and Parking Area.
(non-contributing, compatible)
Though portions of the Service Road fall within the alignment of the former entrance to Lake View Farm, the Service Road and parking area were not present during the period of significance. The park converted this earthen and gravel lane, which was once the entrance into the core of the farm, in the late 1980s into a service road after completing the Visitor Center Road and parking lot. Simultaneously, a small parking area was built into the hillside just east of the Lake View House for staff parking. Today, the northern half of the road is paved in concrete, while the southern half (from the visitor center to the Lake View House) was recently paved as the previously inlaid precast road stabilizer units failed to minimize erosion. The parking area is surfaced in concrete and supported on three sides by mortared stone retaining walls (Figure 32). (CLR 2021: 176)

--South Abutment Loop Trail.
(non-contributing, compatible)
This trail was not present during the period of significance. The park constructed a loop trail at the south abutment in the late 1970s for visitors to access the river and the ruins of the sluice. The trailheads are on either side of the abutment, and both include staircases to traverse the steep slopes, while trail sections in the lakebed and along the river are mostly level (Figure 33). The widths of the earthen and crushed stone trail surfaces range from four to eight feet. The trail also connects to the Path of the Flood Trail. (CLR 2021: 176)

--South Abutment Road and Parking Lot.
(non-contributing, compatible)
The South Abutment Road and parking lot did not exist during the period of significance. Beginning around 1904-1905, the route developed along the former lake shoreline, downhill from the former carriage road, possibly for mining activities near the dam. In the 1930s the road was improved with culverts and a retaining wall and designated as State Route 869. By 1958 the portion of State Route 869 was relocated to the southwest, as part of a new highway, US Route 219, that would eventually span the river just west of the breached dam. The abandoned portion of the former State Route 869 was renamed Township Road 308. (CLR 2021: 174)

Township Road 308 served as the primary entrance road in the park's early years, providing access to the south abutment. Between 1972 and 1973, its connection to the rerouted State Route 869 was reconfigured as a T-intersection to improve safety, while steel guardrails and several new

culverts were installed along the road's length. Adjacent to the south abutment, at the site of an old cinder pit and possible location of the dam operator's house, the road was transformed into a one-way parking lot loop laid out in two levels to conform to the site's topography. Today, the two-way asphalt-paved road is twenty feet wide with narrow grass shoulders, steel guardrails, paved gutters, and culverts with stone headwalls. Four speed bumps help regulate traffic at pedestrian/bike crossings. The one-way asphalt-paved parking lot loop at the northern end of the road is striped for twenty-eight spaces and includes a wood staircase with wood rails that connects the two levels of the lot (Figure 34). (CLR 2021: 174)

--Visitor Center Road, Parking Lot, and Sidewalks.
(non-contributing, compatible)
These circulation features were not present during the historic period of significance. The park completed the road, parking lot, and sidewalks in the late 1980s in conjunction with the construction of the visitor center at the site of the former Unger barn. The two-way road began north of the farm buildings at Township Road 352 and headed south, briefly paralleling the original farm lane before dividing into a one-way parking lot loop, which also included a return loop at the north end. The parking lot was laid out in two levels to conform to the hillside terrain, and plans show the lot was designed to be extended to the southeast if needed. Both the road and parking lot included culverts and drop inlet drains. (CLR 2021: 175-176)

Today, the asphalt-paved road is 20 feet wide, and the asphalt-paved parking lot is striped for sixty vehicles and spaces for buses and other longer vehicles. Concrete sidewalks, steps with steel railings, and an accessible ramp with steel railings extend throughout the parking lot and connect to a concrete sidewalk and stone-paver patio at the visitor center entrance (Figure 35). The concrete sidewalks range from six to ten feet wide, while the stone pavers vary in dimensions. (CLR 2021: 176)

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Carriage Road Trace	176750	Contributing	081980		Location	21661	Yes
Arbor Nature Trail	176764	Noncontributing – Compatible			Location	16348	Yes
Lake Road Parking Lot and Trail to North Abutment	176756	Noncontributing – Compatible			Location	236371	No
Maintenance Yard and Service Drive	176766	Noncontributing – Compatible			Location	16361	No
Parking Area at Clubhouse	176768	Noncontributing – Compatible			Asset	1269041	Yes
Path of Flood Trail	211034	Noncontributing – Compatible					No
Picnic Grounds Road and Parking Lot	176754	Noncontributing – Compatible			Location	45906	Yes
Service Road and Parking Area	176760	Noncontributing – Compatible			Location	16312	No
South Abutment Loop Trail	176762	Noncontributing – Compatible			Location	16321	Yes
South Abutment Road and Parking Lot	176752	Noncontributing – Compatible			Location	42679	Yes
Visitor Center Road, Parking Lot, and Sidewalks	176758	Noncontributing – Compatible			Asset	1269034	Yes

Landscape Characteristic Graphics:



Figure 28. View looking south at the Carriage Road Trace. (OCLP 2024)



Figure 29. View looking north at the route of the carriage road atop the south abutment. (OCLP 2026)



Figure 30. View looking southwest at the old route of the Carriage Road atop the north abutment. (OCLP 2026)



Figure 31. View looking southeast at a portion of the Path of Flood Trail. Mature trees mark the edges of the South Abutment Road. (OCLP 2026)



Figure 32. View looking southeast at the Service Road and small parking area in the distance. The visitor center is at image left, spring house/foundation is in the distance, and the Lake View House is at image right. (OCLP 2026)



Figure 33. View looking south at the staircases on the South Abutment Loop Trail, on the downstream side. (OCLP 2026)



Figure 34. View looking south at the staircases on the South Abutment Loop Trail, on the downstream side. (OCLP 2026)



Figure 35. View looking west from the Visitor Center Road toward the pedestrian circulation at the visitor center entrance. Note the native plant garden next to the building. (OCLP 2026)

Landscape Characteristic: Topography

Topography is the three-dimensional configuration of the landscape surface characterized by features (such as slope and articulation) and orientation (such as elevation and solar aspect). While topographic characteristics shaped the evolution of the property that would become the Johnstown Flood NMem there are no contributing or non-contributing topographic features that are not classified under other cultural landscape characteristics. (CLR 2021: 178)

Topographic characteristics of this landscape were dramatically altered in 1839 when the state began construction on the South Fork Dam and Western Reservoir. After the South Fork Fishing and Hunting Club and the Unger family acquired the property in the 1880s, road and building construction resulted in grade changes. At the Lake View Farm, the house, barn, and other buildings were built into the hillside, which required walls and steps to address the grade changes. Topographic changes were also made in the early 1880s by the South Fork Fishing and Hunting Club to build the carriage road that approached the dam's north abutment, crossed the dam, and continued along the hillside southwest of the dam to the club grounds. In St. Michael, topographic changes were made with the construction of the clubhouse, cottages, boardwalks, and carriage road behind the cottages, especially southeast of the clubhouse where the terrain was relatively steep. (CLR 2021: 178)

Following the destruction of the dam, changing land uses, including the introduction of new roads and rail lines, resulted in more topographic changes to the lakebed and surrounding hillsides. One of the first occurred in 1891 when the South Fork Branch Railroad constructed a rail line on a raised berm through the lakebed and the gap in the dam. By 1905 roads were built along and below the lake's northeastern shoreline and through the spillway and just above the southwestern shoreline. In the 1930s, a road on the southwestern shoreline was improved with retaining walls and culverts as part of its designation as State Route 869. In the 1960s, the road on the northeastern shoreline was relocated uphill from the spillway as part of the construction of US Route 219. The topography of the former lakebed, to the north of the cottages in St. Michael, was also altered to allow for residential and commercial development. Since the park was established, landforms have been altered to construct visitor parking lots, an access road to the picnic grounds and maintenance yard, trails, and a new visitor center at the former barn site on the Lake View Farm. (CLR 2021: 178-179)

Feature Evaluations:
n/a

Landscape Characteristic: Vegetation

Vegetation includes deciduous and evergreen trees, shrubs, vines, groundcovers, and herbaceous plants and plant communities, whether indigenous or introduced in the landscape. There are four existing vegetative communities that remain within the monument that were present during the period of significance and thus contribute to the property's historic integrity. They are the forested downstream face of the dam abutments, the open meadows and fields on the hillside south of visitor center, forest vegetation on the hill southwest of South Dam Abutment, and the old field vegetation growing within the historic lakebed. (CLR 2021: 179)

Before the development of the South Fork Dam and Western Reservoir, the land that became Johnstown Flood NMem was forested with species including sugar maple (Acer saccharum), black cherry (Prunus serotina), butternut (Juglans cinerea), hickory (Carya sp.), chestnut (Castanea dentata), ash (Fraxinus sp.), oak (Quercus sp.), hemlock (Tsuga sp.), and spruce (Picea sp.). Beginning in 1840, contracts were let to clear and burn over four hundred acres of land to construct the dam and reservoir. After the dam's first break in 1862, grasses and other vegetation returned in the lakebed but were underwater again by 1881 when the dam was rebuilt to form Lake Conemaugh. Additional trees were likely removed along the shoreline as the lake's capacity was increased to around five hundred acres. Historic photographs reveal that in 1889, only a few young

trees were growing on the upstream side of the dam's crest but were more thickly growing on the rocky downstream sides of the dam. There were no trees in the center portion of the dam, which was rebuilt by 1881. (CLR 2021: 179)

At the South Fork Fishing and Hunting Club, selective tree clearing presumably occurred to construct the clubhouse and cottages, boardwalks, and carriage road. However, historic photographs indicate that some mature trees and shrubs were retained in front of and between the buildings, and that dense woodlands stood behind the buildings. Some cottages also featured small gardens. At the Lake View Farm, historic photographs show open fields surrounding the farm buildings. There were a few trees and shrubs around the Lake View House, and groups of trees between the barn and spring house and north of the barn. (CLR 2021: 179-180)

Vegetation within the park boundaries today reflects the use of the land over time and current management policies and practices. The evolution of these vegetative communities, both contributing and non-contributing, are addressed below. (CLR 2021: 180)

Feature Evaluations:
--Forested Areas on Downstream Faces of Dam Abutments.
(contributing)
Historic photographs reveal that in 1889 trees were growing on the rocky downstream sides of the dam, though not within the portion of the dam that was repaired by the South Fork Fishing and Hunting Club. Today, both large and small trees remain on the downstream sides of the North and South Dam Abutments (Figure 36). These trees suggest the tree growth present during the period of significance and help screen visual and noise pollution from the adjacent freeway. (CLR 2021: 180)

--Forest Vegetation on Hill southwest of South Dam Abutment.
(contributing)
Historic photographs reveal that during the period of significance the hillside southwest of the south abutment was forested in deciduous vegetation. This hill remained wooded after 1889, although some trees were removed by 1904-1905 for construction of a local road just downhill from the carriage road, and a small clearing was made for mining activities near the dam. Additional trees were taken down along the road in the 1930s when the road was improved and designated State Route 869. By 1958, a corridor of trees was removed on the southwest side of the hill for the new alignment of State Route 869. In the 1960s, a much larger wooded area was removed on the northwest side of the hill to construct US Route 219 and its associated engineering features. Under park ownership, trees were removed at the top of the hill in 1972-1973 for construction of the Picnic Grounds Road and parking lot, but mature trees were retained in the picnic area itself. Additional trees were cleared to construct a maintenance facility in the early 1980s and its expansion in the mid-1990s. Today, the hill retains its deciduous forest, including mature sugar maple, American beech, red maple, black cherry, and other species (see Figure 27). (CLR 2021: 181)

--Maple Tree on Crest of North Dam Abutment near end of Pedestrian Bridge.
(undetermined)
The large maple tree located at the western end of the pedestrian bridge on the crest of the North Dam Abutment, may date to the period of significance (Figure 37). Dendrological research is necessary to determine the age of the tree. (CLR 2021: 185)

--Mature Red Maple, Black Locust, and Hemlock that Line Lakebed Side of the South Abutment Road.
(non-contributing, compatible)
During the period of significance, the thin band of trees between the lake and carriage road (the South Abutment Road did not exist) was not present. The mature red maple, black locust, and hemlock that line the lakebed side of the South Abutment Road were retained by the NPS when the South Abutment Road was constructed. However, some trees at the southern end of the road have been managed to enhance views of the lakebed (see Figure 31). (CLR 2021: 182)

--Mature Hardwood Forest south of Visitor Center and south of Lake Road.

(non-contributing, compatible)
Historic photographs dating to the period of significance show that the land south of the present-day Visitor Center and Lake Road was cleared of forest, a portion of which was under the water of Lake Conemaugh. Following the destruction of the South Fork Dam, this area was drained of water and grew up in hardwoods. Though this vegetative community does not contribute to the historic significance of the property it is compatible with the historic setting (see Figure 26). (CLR 2021: 182 -183)

--Meadow Vegetation on Hillside south of Visitor Center.
(contributing)
During the period of significance the hillside south of Lake View Farm was covered in field crops and/or meadow that allowed for views from Lake View House looking south-southeast to Lake Conemaugh. Today a meadow stretches from the Visitor Center down the hillside southward to Lake Road which allows for views of the lake basin, helping visitors to envision the former Lake Conemaugh and magnitude of the dam's destruction (see Figure 26). (CLR 2021: 180-181)

--Old Field Vegetation within Historic Lakebed.
(contributing)
After the dam break the water drained from Lake Conemaugh leaving a muddy basin. Over time grasses and forbs and eventually successional woody vegetation grew to cover the contours of the basin of the former lake. Today the low growing grasses and meadow forbs that make up the Old Field vegetation within the lakebed allow the magnitude of the former Lake Conemaugh to be revealed to visitors through the basin's contours. An herbaceous subtype identified as "Old Field" by the Pennsylvania Natural Heritage Program dominates this vegetative community. The "Old Field" vegetative community currently contains graminoid and herbaceous plants of both native and non-native species. Old Field vegetation is currently limited within the lake basin due to the growth of successional woody species. (CLR 2021: 181)

--Plantings and Lawns around Lake View House and Visitor Center.
(non-contributing, compatible)
Plantings and lawns growing around the Lake View House and Visitor Center postdate the period of significance. With the rehabilitation of the Lake View House and construction of the visitor center in the late 1980s, the park installed trees around the buildings and parking lot, including tulip tree, red oak, red maple, sugar maple, American beech, hawthorn, and dogwood. Substantial masses of shrubs and grasses were proposed on the hill between the visitor center and spring house, but not all were planted. The park installed lawns throughout this area. Today a garden of native plants grows near the entrance to the visitor center, and specimen shrubs are interspersed throughout the lawn near Lake View House and the spring house. Species include maple, tuliptree, lilac, and sumac (see Figures 25 and 35). (CLR 2021: 184)

--Trees and Shrubs near Clubhouse and Cottages.
(non-contributing, compatible)
The NPS-era plantings of trees, shrubs, and lawn planted near the clubhouse and cottages were not present during the period of significance. After the historic period, scattered trees continued to mature around the former clubhouse and cottages, while the former lakebed that fronted the cottages was transformed into housing lots. A 1939 aerial photograph indicates lawns with scattered trees around the club buildings, like the character of the surrounding residential neighborhoods of St. Michael. There was also a small woodlot between the clubhouse and double cottage by this time, some of which may have been present during the historic period. By the late 1950s, most trees at the clubhouse had been removed, while the woodlot between the clubhouse and double cottage had matured and expanded. (CLR 2021: 184-185)

Today, there is red maple-black cherry forest/woodland at the rear of the Brown and Lippincott (Moorhead) Cottages, which is part of a larger wooded area to the south and west. The clubhouse and double cottage are maintained as lawns except for the small woodlot between the two buildings, which has become smaller due to the loss of trees from old age and disease. (CLR 2021: 185)

--Woodlot/Orchard southeast of Lake View House.
(non-contributing, compatible)
The Woodlot/Orchard growing southeast of the Lake View House postdates the period of significance. Comprised of hawthorns and apples, it was established by 1939 but was reduced in size in the late 1980s by construction of the visitor parking lot. (CLR 2021: 183-184)

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Forested Areas on Downstream Face of Dam Abutments	176718	Contributing					No
Forest Vegetation on Hill southwest of Dam	176722	Contributing					No
Meadow Vegetation on Hillside south of Visitor Center	211035	Contributing					No
Old Field Vegetation within Historic Lakebed	211036	Contributing					No
Mature Hardwood Forest Growing south of Visitor Center and south of Lake Road	211037	Noncontributing – Compatible					No
Mature Red Maple, Black Locust, and Hemlock that Line Lakebed Side of South Abutment Road	211038	Noncontributing – Compatible					No
Plantings and Lawns around Lake View House and Visitor Center	176728	Noncontributing – Compatible			Location	16312	Yes
Trees and Shrubs near Clubhouse and Cottages [tbd]	211039	Noncontributing – Compatible			Location	16335	Yes
Woodlot/Orchard southeast of Lake View House	176726	Noncontributing – Compatible			Asset	1269043	Yes
Maple Tree Growing on Crest of North Dam Abutment near end of Pedestrian Bridge	211040	Undetermined					No

Landscape Characteristic Graphics:



Figure 36. View looking south at trees on the downstream side of the North Abutment. (OCLP 2026)



Figure 37. View looking east at the maple tree (in the foreground) at the upper end of the spillway. (OCLP 2026)

Landscape Characteristic: Buildings and Structures

Buildings are elements constructed primarily for sheltering any form of human activity in a landscape, while structures are elements constructed for functional purposes other than sheltering human activity. There are nine buildings and structures located within the Johnstown Flood NMem that were present during the period of significance and retain integrity: South Fork Dam Abutments (north and south), the South Fork Dam Spillway, the South Fork Dam Overflow Sluice Ruins, Lake View House, the South Fork Fishing and Hunting Clubhouse, the Double Cottage, the Brown Cottage, and the Lippincott Cottage. There are additional buildings on the landscape of Johnstown Flood National Memorial that are compatible with the historic setting but do not contribute to the property's historic integrity. (CLR 2021: 186)

Construction on the South Fork Dam and Western Reservoir was begun in 1840 by the Commonwealth of Pennsylvania for the Main Line of Public Works, a system of canals and rail lines linking Philadelphia and Pittsburgh. Civil engineer William E. Morris designed the dam and reservoir, and when completed in 1853, they were hailed as an engineering masterpiece. The dam was 931 feet long, 72 feet high, more than 500 feet wide at the bottom, and approximately ten feet wide at the top, wide enough for a single wagon to pass. The top of the dam was ten feet higher than the water level of the reservoir. Although preliminary estimates had indicated a central core of masonry, it was instead composed of successive layers of clay earth that was found in the vicinity, each layer having been well rammed or packed down (puddled) by allowing it to sit under a skim of water for a period of time so as to be watertight. This puddled clay core was supported on both sides by stone and gravel layers. The dam's downstream face was riprapped with heavy loose rocks, while the upstream face was riprapped with a layer of smaller stones about two and a half feet thick. Between the outer riprap and central core was a layer of native slate broken down into four-inch size pieces. The downstream face slope was constructed with a sixty-six percent slope while that of the upstream face was slightly less steep at a fifty percent slope. (CLR 2021: 186)

The dam's control mechanism consisted of a sluice gate of five, twenty-four-inch diameter cast iron pipes were secured within a cut stone arch culvert (twenty-five feet wide at the base) that extended through the entire width of the dam at its base. Water was discharged from the reservoir through these pipes into the river. The water then flowed twelve to fourteen miles downriver to the canal at Johnstown. A wood-frame valve control tower with a log and stone foundation at the bottom of the reservoir extended about fifteen feet above the top of the water surface and regulated water discharge. A rowboat served as the only access from the dam to the control tower. The south end of the dam was anchored to the hillside by a stone wall twenty feet high and buttressed every twenty feet through the base. At the north end of the dam, a spillway was cut through the solid rock to prevent the water behind the dam from rising to the top and flowing over its crest. At its narrowest width, the spillway was seventy feet wide. The floor of the upper end of the spillway was approximately ten feet below the crest of the dam. Two timber bridges crossed the spillway and featured trestle designs. The bridge at the upper end of the spillway was 123 feet long and supported by seven supports spaced fifteen feet apart and anchored into the spillway floor. The ends of the bridge sat on stone abutments or ledge. The wood bridge railings were supported by wood posts with diagonal crossbars. The design and dimensions of the bridge at the lower end of the spillway are not known. Concurrent with the dam's construction, a brick and stone house and a stable were built at the reservoir site, possibly just northwest of the south abutment. The building housed the dam's construction supervisor and then the person who maintained and operated the dam and reservoir, but its use by the South Fork Fishing and Hunting Club is unknown. Following the club's acquisition of the property, club president Elias Unger built a house and farm outbuildings on the lake's northeastern shoreline. (CLR 2021: 187)

Several buildings and structures that were present at the Lake View Farm in 1889 are no longer extant. During the Holsopple family period of ownership in 1912-1949, they painted the farm's L-shaped barn, and carriage or machine shed red with white trim and replaced the cupolas with dormers. During the Furlong family ownership from 1950-1981, the two buildings deteriorated, and by 1975 both had collapsed. After 1981 the park removed the ruins and incorporated into the new

visitor center and museum. The smokehouse, chicken coop, and pig pen present during the historic period and the Holsopple's ownership, were removed by the Furlongs. The Holsopples and Furlongs also added buildings and structures that have since been removed. The Holsopples constructed a well near the spring house, and when the park took ownership of the property, it was marked by a well house made of cinder blocks and topped with a low wooden shed with vertical board siding. The park removed the well in the late 1980s. (CLR 2021: 187)

The Holsopples constructed a silo in the heel of the L-shaped barn and shed. The silo stood slightly taller than the barn and featured vertical wood boards with steel staves set on a concrete foundation. It collapsed in the early 1970s, and the foundation was removed in the late 1980s. The Holsopples also constructed a privy, which stood to the north of the house and was connected to it by a short walk. The privy was removed by the Furlongs when they constructed a new garage on the west side of the driveway between the house and barn. The Furlongs built the three-bay garage because the barn and shed were in such poor condition, and used material excavated from the hillside near the house to create a level site. The park removed the garage in the 1980s. (CLR 2021: 188)

While the Unger family was constructing Lake View Farm, club members built the clubhouse and cottages on Lake Conemaugh's southwestern shore. The large clubhouse served as the center of the community of cottages, which spread out in a line facing the shore. The wood-frame cottages were constructed in the architectural styles characteristic of the 1880s. They were typically three-stories tall with high ceilings, long windows, and covered porches to maximize the lake views. At least two, if not all, cottages had privies in the back yards, but none had kitchens because members dined in the clubhouse. Historic photographs show loose stone walls supported some of the steeper slopes around the houses and steps and bridges along the boardwalk. Other structures at the club complex included floating or moored docks and boathouses, including a large multi-slip structure with gable roofs anchored in front of the clubhouse. There was likely a barn or stable somewhere on club property to house the horses and carriages that transported club members to and from the club grounds. (CLR 2021: 188)

Feature Evaluations:
--Brown Cottage.
(contributing)
The Brown Cottage was constructed in 1888 as a summer residence for the James W. Brown family as a modest two-story building with an asymmetric, steeply pitched, hipped and gabled roof and a one-story wraparound front porch oriented toward Lake Conemaugh. The Brown Cottage became the property of the Maryland Coal Company in 1907 to house company employees and was converted to a duplex by the company in 1921. Vinyl siding and asphalt roof shingles, and a one-story addition to the back facade were added in the 1990s. The building is still in its original location and retains its wraparound porch and asymmetrical massing. Today, the building's rehabilitated interior contains two apartments for use by park seasonal employees (Figure 38). (CLR 2021: 194; Review comments, D.Bosley, 3 August 2026)

--Comfort Stations.
(non-contributing, compatible)
The NPS built a two-room vault toilet at the Picnic Grounds in 1981. Located on the west side of the loop at the end of the Picnic Grounds Road, the approximately 18 x 10-foot structure features a gabled roof and is set on a concrete pad. The park constructed a one-room vault toilet at the south abutment parking lot in 2023. Located at the north end of the lot's median, the approximately 9 x 5-foot structure features a gabled roof and is set on a concrete pad. Both structures are painted brown to minimize their appearance.

--Culverts at South Abutment Road and Parking Lot.
(non-contributing, compatible)
The stone culverts did not exist during the historic period. The road culverts were built in the 1930s when the local unimproved road was upgraded and paved as part of its designation as State Route 869. The culvert inlets are typically drop-inlets with metal grates and/or metal or concrete curbs, while seven culvert outlets feature headwalls with coursed rough-cut stone. The largest structure

measures thirteen feet long by eighteen inches wide by six feet high, and the smallest measures five feet long by eighteen inches wide by three feet high. When the park constructed the parking lot at the south abutment in the 1970s, they connected some of the parking lot's drainage system into the existing road culverts. A substantial outlet headwall is located just northeast of the parking lot at the edge of the mowed lawn. (CLR 2021: 197)

--Culvert at Picnic Grounds Road.
(non-contributing, compatible)
This stone culvert did not exist during the historic period of significance. The single modern culvert structure, initially constructed in the early 1970s, at the junction of the Picnic Grounds Road and the parking lot. It features a drop-inlet with metal grates and an outlet set in a mortared stone headwall. (CLR 2021: 197)

--Culverts at Visitor Center Road and Parking Lot.
(non-contributing, compatible)
These features date to construction of the visitor center in the late 1980s. Catch basins near and within the parking lot convey stormwater to a concrete outlet on the northeast side of the lower parking bay, which in turn continues down the hillside via a rock waterway.

--Double Cottage (Clubhouse Annex).
(contributing)
In circa 1887 this two-story frame building was constructed northwest of the clubhouse providing accommodations for four families. The building included a two-story covered front porch facing the lake. A two-story icehouse was purportedly located behind the clubhouse, and two-story privy may have been located behind the clubhouse, possibly connected to it by elevated walkway or a rope bridge or located behind the double cottage. Archeological investigations have been unable to verify their locations. (CLR 2021: 194)

Today the Double Cottage is a two-story rectangular building with a raised basement and a two-story full-width front porch with walls clad in wood siding and vertical boards in the gable ends (Figure 39). Although the building and front porch were raised two feet circa 1934, the building retains its original location, orientation, and design, and thus contributes to the historic integrity of the property. The rehabilitated interior of the building contains four identical apartments leased to tenants by the NPS. The building is painted in its historic colors found through paint analysis by Matthew Mosca. (CLR 2021: 194; Review comments, C.Curry, 15 July 2026, citing PMIS 226826)

--Lake View House (Elias J. Unger House).
(contributing)
The two-story, wood, balloon-frame house was constructed in the vernacular Gothic Revival style as the home of the Unger family. Club member Elias Unger constructed his house on a hillside above the lake's northeastern shoreline sometime between June 1883 and September 1888. The two-story frame house was built into the slope of the hill and was painted white with red trim. The building featured a cross-gable roof with two chimneys, a small covered porch on the northeast side, and a larger two-story covered porch on the southwest elevation overlooking the lake and dam. A wide wood staircase descended from the southwest porch to the surrounding lawn. (CLR 2021: 191)

On the hillside above the house, Unger built a spring house, barn, and carriage/wagon/machine shed. The two-story frame and stone spring house had a gable roof, central chimney, and was painted a light color, possibly the same white with red trim as the main house. The 2.5-story barn and 1.5-story shed formed an L shape, leaving the "heel" of the L open. The barn and shed featured gabled roofs with cupolas and heavy timber construction on stone foundations. A photograph taken in 1889 shows both to have been painted a dark color with light trim. The same photograph shows small structures southeast of the shed, possibly a smokehouse, chicken coop, or pig pen. There was presumably a privy on the grounds as well. (CLR 2021: 192)

Today the building measures thirty-six feet long and thirty feet wide and features a steep, wood-shingled, cross-gable roof with two brick chimneys along the primary roof ridge (Figure 40). The

walls, including the exposed south basement wall, are clad in wood shiplap siding trimmed with corner and eave boards, while the foundation and remaining three basement walls are rubble fieldstone. A one-story pedimented porch shelters an entrance on the northeast elevation and a full-width two-story porch with a low-pitched shed roof spans the southwest elevation. The house was restored between 1987–1990 and again in 1993-1994. The park's administrative offices are housed in the building. The park has requested funding to rebuild the home's porches. (CLR 2021: 192)

--Lake View Spring House (Unger Spring House Rubblestone Foundation).
(non-contributing, compatible)
The spring house was constructed between 1883 and 1888 with a rubblestone foundation and frame second story which was slightly smaller than that of the existing spring house. The spring house remains in its original location today on a mostly reconstructed foundation. In 1988 the NPS removed the deteriorated upper frame portion of the spring house and replaced it with one similar in style to the earlier structure but smaller in size. At the same time the open west end of the remaining stone foundation was also stabilized. Though the upper story of the structure is slightly smaller than the original, the design of the wood frame building is similar. The spring house is currently used for offices in the upper level and storage in the lower level (Figure 41). (CLR 2021: 192-193; NR 2016, Sec.7: 15; Review comments, D.Bosley, 3 August 2026)

--Lippincott Cottage (Moorhead Cottage).
(contributing)
The Lippincott Cottage was constructed possibly in 1887 as a summer residence for the Jesse Lippincott family as a Queen Anne-style building with asymmetric, hipped and gabled roof; a distinctive octagonal tower; and multiple projecting bays and porches. Like all the cottages within the South Fork Fishing and Hunting Club, the building was oriented towards Lake Conemaugh. The Maryland Coal Company acquired the Lippincott Cottage in 1907 for company housing, converting it into a side by side duplex in the 1930s. The company shortened the tower roof and removed a substantial portion of the front porch. The company sold the house in 1955, and when the Preservation Society acquired the property in the late 1980s or early 1990s, the building was vacant. The NPS stabilized the house in 2005 and officially purchased it the following year. (CLR 2021: 194-195)

Today the three-story, Queen Anne style building features an asymmetric, hipped and gabled roof; a distinctive octagonal tower; and multiple projecting bays and porches (see Figure 38). The steeply pitched roofs have asphalt shingles and exposed eaves, while the tower has a polygonal roof with flared eaves. The walls are clad in aluminum siding applied irregularly over the original coved wood shiplap siding. Some original wood shingle cladding remains on two sides of the tower at the third-floor level. The foundation was completely rebuilt in 2025 (PMIS 322969); the cottage was raised and a new footer and block walls were installed. The main support beam was also repaired. A two-story, end-gabled wing extends south from the rear (south) west elevation. The back porches were removed in 2021. A non-historic set of wood steps leads up to the two-story porch from the road. The Lippincott Cottage is currently vacant and undergoing stabilization. (CLR 2021: 195; Review comments, C.Curry, 15 July 2026)

--Maintenance Office.
(non-contributing, compatible)
The Maintenance Office did not exist during the historic period. The park's maintenance facility was initially a collection of shacks set in a work yard north of the picnic access road loop. In 1985 the park constructed a shop and parking area at the south end of the yard. By 1993, additional workspaces and structures had been added to the north, including a modular trailer office, three frame sheds, and storage tanks. In 1996 a maintenance office and garage were constructed at the north end of the yard, and in 2011 the maintenance shop was enlarged with an addition to the north. After 2016 additional shed structures and a office trailer were added to the yard. The maintenance office is a two-story shed-roof building with vertical board walls and a concrete slab foundation and includes two double-height metal overhead garage doors (Figure 42). (CLR 2021: 196)

--Maintenance Sheds and Portable Office.

(non-contributing, compatible)
After 2016 additional shed structures and an office trailer were added to the maintenance yard (see Figure 42).

--Maintenance Shop.
(non-contributing, compatible)
The Maintenance Shop did not exist during the historic period. Located at the park's maintenance facility, the Maintenance Shop is a one-story, side-gable building with a metal roof, vertical board walls, and a concrete slab foundation. Four metal overhead garage doors line the west elevation; the southernmost door is smaller and set back under a slight roof overhang. (CLR 2021: 196)

--National Park Service Visitor Center.
(non-contributing, compatible)
The NPS Visitor Center did not exist during the historic period. The visitor center was completed in 1989, the year of the 100th Anniversary of the Johnstown Flood. Designed as a replica of the barn, the two-story building's hillside location provided expansive views to the dam abutments and former lakebed. Today, the building contains a bookstore, museum exhibits, auditorium, restrooms, and utility areas. It features two offset rectangular blocks with asphalt-shingled side-gable roofs, vertical board walls painted red, and a poured concrete foundation (see Figure 36). A stone-clad entrance vestibule with a flat roof projects at an angle from the northeast end, where a small concrete patio and native plant garden are partially enclosed by a low stone retaining wall. Doors centered in the southwest wall of the west block provide access from the building's lower level to the farm lane at the rear that leads to the Lake View House and the spring house. Overall, the size, materials, and character of the building evoke the design of the original barn at the site. (CLR 2021: 195)

--Picnic Pavilion.
(non-contributing, compatible)
The Picnic Pavilion did not exist during the historic period. Located at the picnic grounds, this structure was constructed in 1989 east of the parking lot loop. The open-sided pavilion has a shallow-pitched end-gable roof with asphalt sheathing supported by eight square metal posts set in a concrete slab (Figure 43). (CLR 2021: 197)

--Retaining Wall at Lake View House Parking Area.
(non-contributing, compatible)
The retaining wall did not exist during the historic period of significance. The U-shaped reinforced concrete and stone-faced wall dates to the late 1980s and defines three sides of the parking area east of the Lake View House. The total length of the wall is around 65 feet. The height of the wall tapers upwards to conform to the hillside topography, and ranges in height from 4-8 feet. The stone wall is similar in character to the adjacent stone foundations of the Lake View House and spring house. (CLR 2021: 198)

--Retaining Wall at South Abutment Road.
(non-contributing, compatible)
The retaining wall did not exist during the historic period. It was built in the 1930s when the local unimproved road was upgraded and paved as part of its designation as State Route 869. The retaining wall of coursed, rough-cut fieldstone is located on the east side of the road and measures seventy-nine feet long by two feet wide by five feet high. (CLR 2021: 197)

--Retaining Walls at Visitor Center.
(non-contributing, compatible)
The retaining walls did not exist during the historic period of significance. Constructed in the late 1980s as part of the new visitor center, three cut stone façade retaining walls line the walkway from the parking lot to the building. Two walls situated on the south side of the walkway are around two feet in height to serve as seat walls. The wall closest to the parking lot is around forty-five feet long, while the wall at the entrance is around forty feet long. Another wall, between four and five feet high and two hundred feet long, stands along the north side of the walk and then makes a series of turns to support the entrance patio as a shorter seat wall. (CLR 2021: 197-198)

--Retaining Wall at Visitor Center Parking Lot.
(non-contributing, compatible)
The retaining wall did not exist during the historic period of significance. Constructed in the late 1980s as part of the new visitor center, this stone-faced wall is around 210 feet long and 5 feet high except at the ends where it angles outward and tapers down to around 2 feet high. (CLR 2021: 197-198)

--South Fork Dam Abutments (North and South).
(contributing)
The South Fork Dam was constructed between 1838 and 1853, altered in 1862 and 1880, and partially destroyed in 1889. When it was built, the South Fork Dam was nine hundred and thirty-one feet long, seventy-two feet high, more than five hundred feet wide at the bottom, and approximately ten feet wide at the top. The top of the dam was ten feet higher than the water level of the reservoir. The puddled clay core was supported on both sides by stone and gravel layers. (CLR 2021: 188)

In 1880, the South Fork Fishing and Hunting Club acquired the dam and made repairs caused by a dam failure in 1862. The club did not reinstall sluice pipes, which eliminated the ability to remove excess water from the reservoir. In addition, the crest of the center portion of the dam was lowered by two feet to create a wider cross-section where two carriages could pass each other. This height reduction reduced the spillway's maximum flow capacity from ten feet to eight feet before water would begin to flow over the top of the dam. The flow capacity of the spillway was reduced further by a timber trestle bridge built across the upper end of the spillway to carry the carriage road to the lake's northeastern shoreline. In between the bridge supports were twenty-inch high heavy fish screen grids to prevent the loss of stocked fish. In addition, a V-shaped log boom projected into the lake to keep brush and debris from piling against the screens. On May 31, 1889, despite valiant efforts to save the dam, rising water levels flowing across the the low center section pushed it downstream at around 3:15 pm, creating an opening more than three hundred feet wide and the full depth of the dam. The water drained out of Lake Conemaugh, leaving behind the muddy slopes of the remaining dam abutments. (CLR 2021: 188-189)

After May 1889, the remaining portions of the earthen and stone dam eventually became overgrown with grasses, shrubs, and trees. Remnants of the stone sluice culvert and timber support cushion of the valve control tower remained visible near the streambed that passed through the gap. It is possible that the construction of the first railroad track in 1891 through the breach, and/or the second track by 1904, may have required the removal of some of the dam ruins in the breach area. Today, the earthen South Fork Dam Abutments are partially covered with grasses, shrubs, and trees. The west or downstream faces are covered with stone riprap pierced through by deciduous and coniferous trees. The north abutment measures twenty feet wide by 390 feet in length by seventy-two feet in height. The south abutment measures twenty feet wide by 230 ft in length by seventy-two feet in height. The gap between the north and south abutments, marking the section of the dam that collapsed on May 31, 1889, is approximately two-hundred-and-fifty to three-hundred feet wide. With their upstream faces recently cleared of woody vegetation, the dam abutments reveal the magnitude of the size of the former dam and contribute to visitor understanding of the tragedy (Figure 44). (CLR 2021: 189)

--South Fork Dam Overflow Sluice Ruins.
(contributing)
The sluice was constructed between 1839 and 1853 and was altered in 1862 when the dam failed. It was again altered between 1875–1879 when the iron sluice pipes were removed, and for the final time in 1889 with the dam failure. Originally, the control mechanism for the dam consisted of a sluice gate whose five, twenty-four-inch diameter cast iron pipes were secured within a cut stone arch culvert (twenty-five feet wide at the base) that extended entirely through the base width of the dam. Water was discharged from the reservoir through these pipes, but by 1879 the pipes had been removed. A wood frame valve control tower, with a log and stone foundation at the bottom of the reservoir, extended about fifteen feet above the top of the water surface and was used to regulate the discharge of water. (CLR 2021: 190)

Today the sluice consists of the masonry control foundation ruins and the adjacent wood protective cushion ruins, located in the streambed immediately upriver (east) of the breach (Figure 45). In the winter the structure is submerged by ice and water. The cut, dressed, and coursed stones (each block is two feet wide by four feet long by one-and-one-half feet high) of the sluice control foundation ruins form a rectangle. The exposed section is fifteen feet wide by twenty-one feet long with a tiered section that is two-foot-wide by nine feet long by three feet high. A four-foot-square section remains consistently submerged. Several six-inch square timbers remain from the eleven-by fifteen-foot wood cushion east of the foundation. Wood and culvert foundation stones near the river and at the bottom and center of the original dam mark the only remains of the original stone arch culvert that housed the sluice discharge pipes. (CLR 2021: 191)

--South Fork Dam Spillway.
(contributing)
At the north end of the dam, a spillway was cut through the solid rock to prevent the water behind the dam from rising to the top and flowing over its crest. At its narrowest width, the spillway was seventy feet wide. The floor of the upper end of the spillway was approximately ten feet below the crest of the dam. The spillway was free of vegetation. Today, the opening is two hundred and eighty feet long and measures between sixty and one hundred feet in width. The spillway is overgrown by grass and shrubs and includes delineated wetlands (Figure 46, see also Figure 37). (CLR 2021: 189-190)

--Spillway Footbridge.
(non-contributing, compatible)
This feature did not exist during the historic period of significance. The club's original timber trestle bridges across the upper and lower ends of the spillway were removed by 1904 when a local road (Township Road 352) was built along the lakebed's northeastern shoreline and through the spillway. The park constructed the wood bridge across the upper end of the spillway between 1988 and 1989 to complete the trail from the visitor center to the north abutment. Today the bridge is twelve feet wide by one-hundred-and-forty-three feet long and sits approximately fourteen feet above the spillway floor (Figure 47). It is constructed with pine timbers supported by eight pairs of wood columns set in concrete. Wood handrails stretch along the entire length of the bridge. Although the architectural details of the bridge differ from the historic timber trestle bridge, the structure blends in with the surrounding landscape. (CLR 2021: 198)

--South Fork Fishing and Hunting Clubhouse.
(contributing)
The original residential scale two-and-a-half story frame building was completed in 1881 with seventeen guest rooms and a dining hall seating ninety, and then enlarged in 1888 with a larger three-story frame L-shaped addition that increase capacity to forty-seven rooms and the dining hall to 150. The clubhouse also featured an office, billiard room, parlor, kitchen, bakery, and a long covered front porch overlooking Lake Conemaugh. After 1889 the clubhouse underwent extensive alteration. From 1958 into the 1990s, the building was used as a rooming house, restaurant, and lounge. Near the end of this period, the building was purchased by the 1889 South Fork Fishing and Hunting Club Historical Preservation Society (now Friends of the Johnstown Flood National Memorial), who reconstructed the covered front porch. The NPS purchased the building in 2006 and removed two non-historic additions. (CLR 2021: 193; Review comments, C.Curry, 15 July 2026)

Today the three-story, L-shaped building features a hip roof and a wide one-story front porch (Figure 48). The main and pent roofs are clad in asphalt shingles and have exposed rafter tails, and corbelled brick interior chimneys are located at the north end of the east and west roof slopes. The walls are clad in beveled shiplap siding, except the east sidewall that is clad in coved shiplap siding installed when the older portion of the building was removed. The frame building rests on a stone foundation and piers. The covered porch runs along the north elevation and wraps around the northwest corner of the building. Wide wood steps are located at the porch's east end and at the center of its west side, and a modern wood ramp is attached to the rear of the wraparound portion. The building's ground floor is used for NPS programming, and the upper two floors are currently not used. (CLR 2021: 193)

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Brown Cottage	176774	Contributing	764704		Location	86516	Yes
Double Cottage (Clubhouse Annex)	176772	Contributing	764672		Location	86518	Yes
Lake View House (Elias J. Unger House)	176778	Contributing	080057		Location	16309	Yes
Lippincott Cottage (Moorhead Cottage)	176776	Contributing	748636		Location	16341	Yes
South Fork Dam Abutments	211042	Contributing	000747		Asset	1690321	Yes
South Fork Dam Spillway	211043	Contributing	081988		Asset	1690321	Yes
South Fork Dam Overflow Sluice Ruins	211044	Contributing	081981		Asset	1690321	Yes
South Fork Fishing and Hunting Clubhouse	176770	Contributing	757628		Location	16334	Yes
Comfort Stations	211041	Noncontributing – Compatible					No
Culvert at Picnic Grounds Road	176794	Noncontributing – Compatible					No
Culverts at South Abutment Road and Parking Lot	211049	Noncontributing – Compatible					No
Culverts at Visitor Center Road and Parking Lot	176796	Noncontributing – Compatible					No
Lake View Spring House	176780	Contributing	080058		Location	16311	Yes
National Park Service Visitor Center	176782	Noncontributing – Compatible			Location	16310	Yes
Picnic Pavilion	176784	Noncontributing – Compatible			Asset	1253617	Yes
Maintenance Office	176788	Noncontributing – Compatible			Location	16355	Yes
Maintenance Sheds and Portable Office	211046	Noncontributing – Compatible					No
Maintenance Shop	176786	Noncontributing – Compatible			Location	16356	Yes
Retaining Wall at Lake View House Parking Area	176800	Noncontributing – Compatible					No
Retaining Walls at Visitor Center	176798	Noncontributing – Compatible					No
Retaining Wall at Visitor Center Parking Lot	211047	Noncontributing – Compatible					No
Retaining Wall on South Abutment Road	211048	Noncontributing – Compatible					No

Spillway Footbridge	176802	Noncontributing – Compatible			Asset	1253618	Yes

Landscape Characteristic Graphics:



Figure 38. View looking east at the Lippincott (Moorhead) Cottage (image foreground) and Brown Cottage (image background). (OCLP 2026)



Figure 39. View looking east at the Double Cottage (clubhouse annex). (OCLP 2026)



Figure 40. View looking southwest at the Lake View House, with the South Abutment and lakebed in the background. (OCLP 2026)



Figure 41. View looking northwest at the Spring House. (OCLP 2026)



Figure 42. View looking north at the maintenance yard, with the maintenance office in the background (image center). (OCLP 2026)



Figure 43. View looking west at the picnic grounds from the picnic pavilion. The comfort station is visible in the background. (OCLP 2026)



Figure 44. View looking west at (right to left) the upstream face of the north abutment and overlook, breach and railroad tracks, and south abutment and overlook. The US Route 219 bridge is in the background. (OCLP 2026)



Figure 45. View looking north at the remnants of the sluice culvert and valve control tower foundation. (OCLP 2026)



Figure 46. View looking north at the upper end of the spillway from the pedestrian bridge. (OCLP 2026)



Figure 47. View looking east at the pedestrian bridge at the upper end of the spillway. (OCLP 2026)



Figure 48. View looking south at the recently painted clubhouse. (OCLP 2026)

Landscape Characteristic: Views and Vistas

A view is the expansive and/or panoramic prospect of a broad range of vision that may be naturally occurring or deliberately contrived. A vista is a controlled prospect of a discrete, linear range of vision, which is deliberately contrived. Available views and vistas were not considered by engineers when they designed and built the South Fork Dam and Western Reservoir to supply water to the canal in Johnstown. However, the ability to create beautiful views and vistas was a significant factor when the South Fork Fishing and Hunting Club chose the property for their lakeside resort and developed the cottage community and Lake View Farm. Today, four main nodes of visitor engagement support the most important interpretative views of the lakebed and surrounding landscape. The viewsheds are formed by topography and framed by vegetation. (CLR 2021: 199)

Feature Evaluations:
--Views from the Visitor Center/Lake View Farm.
(contributing)
Club president Elias Unger built his farmstead on the lake's northeastern shoreline and sited the house in a hillside field so the Unger family would have a panoramic view of the South Fork Dam, Lake Conemaugh, and the South Fork Fishing and Hunting Club cottages on the distant shoreline. Today a meadow grows on the hillside just east of the Unger House. Recent and ongoing vegetation management in the lakebed basin and the dam abutments have removed woody vegetation, allowing visitors to view the contours of the lakebed and thereby understand the enormity of the former lake and the destructive capacity of the dam breech. (CLR 2021: 199)

--Views from South Abutment Road.
(contributing)
The recent and ongoing efforts to remove woody vegetation in the lakebed has reopened views from the South Abutment Road to the lakebed, dam breach, and Lake View Farm. Trees have been retained between the road and former shoreline to help delineate the former shoreline, but at the southern end of the road there are breaks in the treeline (Figure 49).

--Views from the Lake Road Parking Lot.
(contributing)
Historic photographs from the period of significance suggest that this point, which was near the path of an early road, provided views across Lake Conemaugh and of the upstream face of the South Fork Dam. After the breach, views from the top of the South Abutment revealed the muddy basin of the lakebed in this location. The recent removal of woody vegetation has revealed the contours of the lakebed from this important viewpoint, enhancing visitors' ability to visualize the enormity of the former Lake Conemaugh and therefore the significance of the dam's failure. (CLR 2021: 200)

--Views from the North Abutment Overlook.
(contributing)
Historic photographs from the period of significance suggest that trees and woody vegetation grew on the downstream or west side of the South Fork Dam, while views to the east encompassed Lake Conemaugh. After the breach, views from the top of the north abutment revealed the muddy basin of the lakebed. Currently, the recent removal of woody vegetation reveals the contours of the lakebed from this important viewpoint, enhancing visitors' ability to visualize the enormity of the former Lake Conemaugh and therefore the significance of the dam's failure. (CLR 2021: 199)

--Views from the South Abutment Overlook.
(contributing)
Historic photographs from the period of significance suggest that trees and woody vegetation grew on the downstream or west side of the South Fork Dam, while views to the east encompassed Lake Conemaugh. After the breach, views from the top of the south abutment revealed the muddy basin of the lakebed. Woody vegetation that until recently blocked this view has been removed, revealing the contours of the lakebed from this important viewpoint. Now, visitors can visualize the enormity of the former Lake Conemaugh and therefore the significance of the dam's failure. (CLR 2021: 200)

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Views from the Visitor Center/Lake View Farm	176806	Contributing			Asset	1690321	Yes
Views from South Abutment Road	211050	Contributing			Asset	1690321	Yes
Views from the Lake Road Parking Lot	211051	Contributing			Asset	1690321	Yes
Views from the North Abutment Overlook	211052	Contributing			Asset	1690321	Yes
Views from the South Abutment Overlook	211053	Contributing			Asset	1690321	Yes

Landscape Characteristic Graphics:



Figure 49. View looking north across the lakebed from South Abutment Road. (OCLP 2026)

Landscape Characteristic: Small Scale Features

Small-scale features are elements that provide detail and diversity for both functional needs and aesthetic concerns in the landscape. Historic photographs provide some information on small-scale features associated with the South Fork Fishing and Hunting Club, such as a flagpole attached to

the top of one of the boathouses, but knowledge about historic small-scale features at the site is limited. Today, there are no existing small-scale features that were present during the period of significance. Contemporary small-scale features designed to support park operations include benches, fences, gates, guardrails, directional and interpretive signage, and light standards. These features are appropriate in scale and design and are compatible with the historic landscape. (CLR 2021: 201)

Historic photographs reveal that the South Fork Fishing and Hunting club installed a telephone line attached to poles across the crest of the dam. The line presumably connected to the club grounds and the railroad station in South Fork, and possibly the Lake View Farm. The line across the dam was destroyed in the 1889 flood. The club also began installation of a cast iron sewer line in 1889 along the lakeshore, extending from the clubhouse and cottages to the dam. Work crews on the sewer line aided in the May 31 efforts to save the dam, after which the project was abandoned. (CLR 2021: 201)

At the Lake View Farm, several historic photographs show a fence around the house and post and board fencing near the dam and northeastern shoreline. The latter fence was apparently the result of an agreement between Elias Unger and the club to erect and maintain a fence between the Unger property and the club's dam property. Part of this fence ran along the edge of the hill above the spillway. Other portions of club property were reportedly fenced, gated, or signed to prohibit public access, but locations of such features are not known. (CLR 2021: 201)

After the flood, the club sold their property and the Unger family sold Lake View Farm. By the late 1910s, during the Holsopple ownership of the farm, a picket fence with gates surrounded the house. The fence was replaced by a barbed wire fence later. As the Holsopple and Furlong families actively farmed the land and raised animals, there were likely fenced barnyards and pastures. (CLR 2021: 201-202)

Feature Evaluations:
--Benches.
(non-contributing, compatible)
Wood benches with backs and metal supports are located along the trail to the north abutment, along the south abutment loop trail, and at the south abutment parking lot next to the loop trail. A wood bench with a back and concrete supports can be found along the carriage road trace. (CLR 2021: 202)

--Bollard Lights at Visitor Center.
(non-contributing, compatible)
There are five black-painted bollard lights alongside the sidewalk to the visitor center and around the entrance patio. (CLR 2021: 202,226)

--Clothesline.
(non-contributing, compatible)
A wood clothesline is located behind the Double Cottage (CLR 2021: 202)

--Fence and Metal Gate at Maintenance Area.
(non-contributing, compatible)
A chain-link fence enclosure with plastic inserts surrounds part of the maintenance shop at the picnic grounds, and a black metal swing gate marks the entrance to the maintenance yard. (CLR 2021: 202)

--Flagpole.
(non-contributing, compatible)
A black-painted flagpole stands just southeast of the visitor center, adjacent to the parking lot. (CLR 2021: 202)

--Grills.
(non-contributing, compatible)

Metal barbeque grills are scattered under the trees between the picnic pavilion and parking lot. Anchored in concrete the grills are clearly modern yet of a subtle design that is compatible with the historic setting. (CLR 2021: 202,225)

--Guardrails.
(non-contributing, compatible)
A steel-backed wood guardrail lines a portion of Lake Road, and a brown steel guardrail stretches along the western edge of the South Abutment Road. (CLR 2021: 202)

--Horseshoe Pit.
(non-contributing, compatible)
A horseshoe pit can be found in the parking lot median at the Picnic Grounds. (CLR 2021: 202)

--Park Entrance Sign.
(non-contributing, compatible)
The park's main entrance sign is comprised of a wood sign and redwood arrowhead emblem mounted to a stone veneer concrete structure. It is located on the west side of Lake Road between the parking lot and the Visitor Center Road. (CLR 2021: 202)

--Picnic Tables.
(non-contributing, compatible)
At the picnic grounds, stationary wood picnic tables and movable metal picnic tables are scattered under the trees between the picnic pavilion and parking lot. (CLR 2021: 202)

--Rail Fences at Dam Abutments.
(non-contributing, compatible)
There are sections of post and board fencing with angled top boards at the end of each dam abutment overlook to protect visitors from the steep slope formed by the dam's breach (CLR 2021: 202)

--Split Rail Fence along Lake Road.
(non-contributing, compatible)
A split rail fence installed by the NPS is located along the west side of Lake Road. The fence is in the approximate location of the fence installed by the South Fork Fishing and Hunting Club along the Unger property line above the spillway. (CLR 2021: 202)

--Visitor Center Parking Lot Lights.
(non-contributing, compatible)
A row of four pole-mounted solar-powered lights stand in the median of the visitor center parking lot. They are painted black to minimize their appearance. (CLR 2021: 202,226)

--Water Fountain.
(non-contributing, compatible)
A water fountain is located at the picnic grounds. (CLR 2021: 202)

--Wayside Signs, Informational Signs, Numbered Signposts.
(non-contributing, compatible)
Wayside signs are located at the Lake View Farm, at the dam abutments and spillway, along the loop trail to the river, and at the picnic grounds. Most of these signs are constructed with angled framed laminate panels attached to fence railings or supported by two black metal posts anchored into the ground or into the top of retaining walls. Vertical framed laminate information panels with a small gable roof attached to two black metal posts are located at the south abutment parking lot and the picnic grounds parking lot. Four combination wayside/information signs with vertical framed panels and two support posts are in front of the Clubhouse, Double Cottage, and Brown and Lippincott Cottages in St. Michael. The native plant garden at the visitor center's entrance features smaller interpretive signs attached to single posts set into the ground. Numbered wood signposts line the Arbor Nature Trail and the Carriage Road Trace, which correspond to a brochure describing trees in the park. The most recent sign, acknowledging the success of the Path of Flood Trail, is

located in the median of the south abutment parking lot (see Figure 34). (CLR 2021: 202)

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Benches	176820	Noncontributing – Compatible					No
Bollard Lights at Visitor Center	176832	Noncontributing – Compatible					No
Clothesline at Double Cottage	176830	Noncontributing – Compatible					No
Drinking Fountain	176822	Noncontributing – Compatible			Asset	1269020	Yes
Fence and Metal Gate at Maintenance Area	176816	Noncontributing – Incompatible			Asset	1269013	No
Flagpole at Visitor Center	176836	Noncontributing – Compatible					No
Grills	176824	Noncontributing – Compatible			Asset	1269018	Yes
Guardrails	176818	Noncontributing – Compatible					No
Horseshoe Pit at Picnic Grounds	176828	Noncontributing – Compatible					No
Park Entrance Sign on Lake Road	176810	Noncontributing – Compatible			Asset	1269022	Yes
Parking Lot Lights	176834	Noncontributing – Compatible					No
Picnic Tables	176826	Noncontributing – Compatible					No
Split Rail Fence along Lake Road	176812	Noncontributing – Compatible					No
Split Rail Fences at Dam Abutments	176814	Noncontributing – Compatible					No
Wayside Signs, and Information Signs, and Numbered Signposts	176808	Noncontributing – Compatible					No

Landscape Characteristic: Archeological Sites

Archeological sites are the locations of ruins, traces, or deposited artifacts in the landscape and are evidenced by the presence of either surface or subsurface features. Only sites identified in approved National Register documentation are identified in this report.

The record of archeological research at Johnstown Flood National Memorial comprises nearly a dozen investigations conducted between 1977 and 2015. All the work was undertaken to meet compliance obligations under Section 106 and Section 110 of the National Historic Preservation Act (NHPA), and ranged from identification surveys to data recovery/mitigation excavations. Ten resources are inventoried in the Cultural Resources Inventory System (CRIS-Archeology) for the park; they all have corresponding CRIS-Historic Structures numbers and are currently listed in the National Register as contributing buildings or structures. Broadly speaking, these ASMIS-inventoried resources consist of park-owned residential properties associated with the South Fork Fishing and Hunting Club (the Clubhouse, Double Cottage, Brown and Lippincott cottages, and Lake View House) and the South Fork Dam and its associated infrastructure. (NR 2024, Sec.8: 47)

All of the ASMIS-listed resources have undergone some level of archeological investigation, with the Lake View House and Clubhouse being the most explored. The results of this work have largely corroborated the archival and photographic record or yielded information that does not provide substantive new insights into the park's 1879-1889 period of significance. For further information, refer to the National Register documentation for Johnstown Flood National Memorial. (NR 2024, Sec.8: 47)

Condition

Assessment Interval (Years): 6

Next Assessment Due Date: 08/24/2032

Condition Assessment and Impacts

Condition Assessment: Good

Assessment Date: 08/24/2026

Condition Assessment Explanatory Narrative:

The condition of the park landscape is evaluated as “good” due to recent and ongoing efforts to remove non-historic woody vegetation from the lakebed. The property shows no clear evidence of major negative disturbance and deterioration by natural and/or human forces. The property’s cultural and natural values are as well preserved as can be expected under the given environmental conditions. No immediate corrective action is required to maintain its current condition.

Condition Assessment: Good

Assessment Date: 06/23/2025

Condition Assessment Explanatory Narrative:

The overall landscape is well-maintained and in good condition. Projects aimed at removing woody vegetation from portions of the lakebed have been completed, allowing visitors to understand the extents of the former lake.

Condition Assessment: Fair

Assessment Date: 06/29/2016

Condition Assessment Explanatory Narrative:

Overall, the Johnstown Flood National Memorial landscape is in “fair” condition, primarily because of the reestablishment of trees in the lakebed since the late 1980s and early 1990s. The bed of Lake Conemaugh and the remnants of the South Fork Dam are a destination for visitors to witness and reflect on the cause of the devastating Johnstown Flood of May 31, 1889. The lake’s former shoreline is a critical component of the park’s interpretive program, but it has become increasingly obscured by vegetation. If left to continue, it will be increasingly difficult for visitors to visualize the size of Lake Conemaugh, understand the volume of water that poured through the dam’s breach, and recognize the physical relationship between the dam, lake, and club buildings. The park is currently exploring vegetation management alternatives in the lakebed that balance cultural resource goals with natural resource regulations and practices. In addition, recent (2012-13) condition assessments evaluated the dam spillway as “good,” dam abutments and carriage road trace as “fair,” and the sluice culvert and valve control tower ruins as “poor.”

A “fair” condition assessment indicates the property shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and some degree of corrective action is needed within 3-5 years to prevent further harm to its cultural and/or natural values. If left to continue without the appropriate corrective action, the cumulative effect of the deterioration of many of the character defining elements will cause the property to degrade to a poor condition.

Impacts

Type of Impact: Adjacent Lands

Other Impact:

External or Internal: External

Impact Narrative: Suburban, industrial, and energy development in adjacent lands may affect viewsheds and the quality of water and air. The highway traffic generated by elevated U.S Route 219 northwest of the dam creates visual and noise intrusions and impacts the aesthetics and interpretation of the area.

Date Identified: 08/24/2026

Resolved? No

Type of Impact: Adjacent Lands

Other Impact:

External or Internal: External

Impact Narrative: In summer 2022, Cambria County erected a 260-foot tall 911 communications tower on private land northeast of the park's visitor center. It is visible when trees do not have foliage.

Date Identified: 08/24/2026

Resolved? No

Type of Impact: Deferred Maintenance

Other Impact:

External or Internal: Internal

Impact Narrative: At the picnic grounds, the narrow path connecting the parking lot to the picnic shelter is mostly overgrown, making it potentially hazardous to visitors with accessibility issues.

Date Identified: 08/24/2026

Resolved? No

Type of Impact: Erosion

Other Impact:

External or Internal: Internal

Impact Narrative: The remains of the dam abutments are at risk of damage from slope failures and frost wedging.

Date Identified: 08/24/2026

Resolved? No

Type of Impact: Inundation/Flooding

Other Impact:

External or Internal: Both Internal and External

Impact Narrative: Although Lake Conemaugh and the dam that once held it back are now gone, there is continued risk of damage and loss of resources due to future flooding associated with the South Fork of the Little Conemaugh River and other small streams, springs, and seeps in the vicinity of the park. Floods are most common during spring runoff, and seasonal storm events.

Date Identified: 08/24/2026

Resolved? No

Type of Impact: Operations On Site

Other Impact:

External or Internal: Internal

Impact Narrative: The Norfolk-Southern railroad line running parallel to the river bisects the park and passes between the dam abutments. The rail line is visual intrusion and greatly impacts the historical integrity of the cultural landscape. The railroad embankment also affects lakebed hydrology and vegetative communities.

Date Identified: 08/24/2026

Resolved? No

Type of Impact: Pests/Diseases

Other Impact:

External or Internal: Internal

Impact Narrative: The viburnum leaf beetle has been discovered in the park's early successional woodlands, such as the woodland south of SR 869.

Date Identified: 08/24/2026

Resolved? No

Type of Impact: Pollution

Other Impact:

External or Internal: Both Internal and External

Impact Narrative: Past land use activities, especially mining and industry have altered the air and water quality of the region. The South Fork Little Conemaugh River, which runs through the former lakebed, is impaired from abandoned mine drainage, along with several upstream tributaries.

Date Identified: 08/24/2026

Resolved? No

Type of Impact: Vegetation/Invasive Plants

Other Impact:

External or Internal: Internal

Impact Narrative: Non-native invasive plant species still present in the park are threats to the park's vegetation communities. They include multi-flora rose, shrub honeysuckle, knotweed, and wild garlic.

Date Identified: 08/24/2026

Resolved? No

Treatment

Stabilization Measures

Treatment Documents

Document Type: Cultural Landscape Report Parts 1 and 2

Document Date: 2021-01-01

Title:

IRMA Link:

Narrative:

In 2021 the park published the “Cultural Landscape Report for Johnstown Flood National Memorial,” which included a site history, existing conditions, analysis and evaluation, treatment, record of treatment, and lakebed vegetation management. The primary objective of the landscape treatment plan was to reveal the contours of the former lakebed and dam abutments through economically and environmentally sustainable methods. The treatment recommendations and tasks were developed in collaboration with park and regional staff beginning with a treatment workshop held in St. Michael, Pennsylvania on June 24, 2019. (CLR 2021: 231)

The CLR articulated the following rehabilitation treatment philosophy:
“Johnstown Flood National Memorial exists to commemorate the tragic food of May 31, 1889, through its surviving cultural resources, including the dry Lakebed, the ruined dam, and the park-owned period buildings. Careful management of woody vegetation, long blocking views of the river valley, will give to park visitors a visual reference for understanding the magnitude of the former lake and dam. Treatment of the National Memorial landscape aspires to impart an emotional response, including a “Sense of Loss” that followed the catastrophe, providing a tranquil setting in which to reflect upon its causes and aftermath. To this end, the landscape will be treated to reveal the contours of the historic lakebed and will preserve the earthen dam structure and spillway by managing the growth of woody vegetation. Existing woodland will be converted over time to ground cover vegetation, resetting the process of ecological succession. Vegetation will be managed to both recover historic views from key vantage points, as well as to screen of-site contemporary development, supporting a positive visitor experience and effective historical interpretation. Treatment will preserve natural resource values, including the integrity of local wetlands. Treatment will also avoid erosion by limiting ground disturbance in proximity to waterways and will support the integrity of existing low growing, native plant communities.” (CLR 2021: 239-240)

To implement this treatment philosophy, the CLR recommended a Rehabilitation treatment approach. Rehabilitation would accommodate repair and replacement for deteriorated and missing historic features, while simultaneously accommodating compatible alterations and new additions to facilitate the Memorial’s continued use as a national park. (CLR 2021: 240)

Treatment Type: Rehabilitation

Treatment Completed: Yes

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Landscape Documents:

File Name	Date	Attachment Type	Source
JOFL_Johnstown Flood NMem Landscape_CLI Update Notes_2025.pdf			