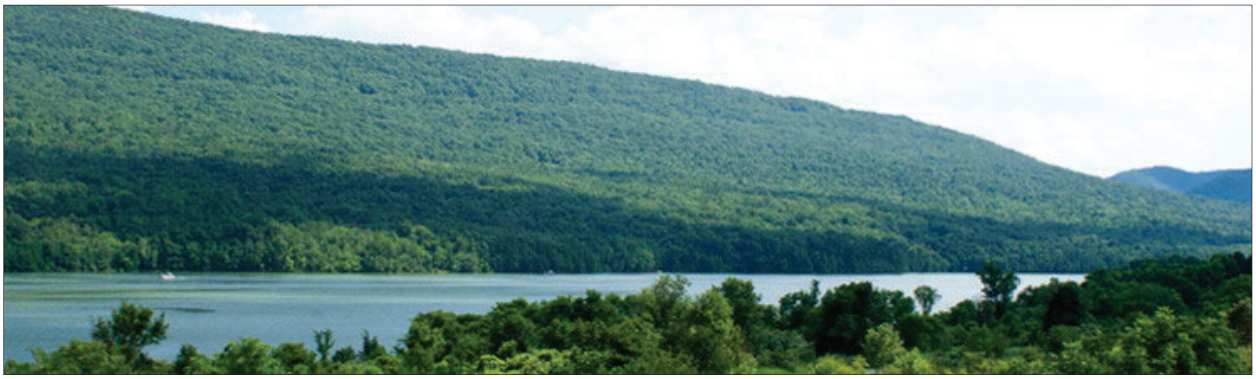
Final Environmental Assessment for Recreational Facility Improvements at Bald Eagle State Park

Centre County, Pennsylvania

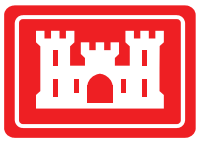


October 2020

pennsylvania
DEPARTMENT OF CONSERVATION
AND NATURAL RESOURCES

US Army Corps
of Engineers
Baltimore District

FINAL ENVIRONMENTAL ASSESSMENT
BALD EAGLE STATE PARK
CENTRE COUNTY, PENNSYLVANIA



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October 2020

FINDING OF NO SIGNIFICANT IMPACT

Bald Eagle State Park Recreational Facilities Improvements
Howard, Centre County, Pennsylvania

The U.S. Army Corps of Engineers, Baltimore District (USACE) has conducted an environmental analysis in accordance with the National Environmental Policy Act of 1969, as amended. This final Environmental Assessment (EA), for the Bald Eagle State Park Recreational Facilities Improvements addresses campground expansion opportunities and feasibility at Bald Eagle State Park in Howard, Centre County, Pennsylvania (PA).

The final EA evaluated various alternatives that would provide for additional campground facilities in the study area. The recommended plan includes construction of a campground loop with 22 camp sites, a parking area, and associated roads and infrastructure located over a total area of approximately 8 acres. The 22 new campsites would be full-service hook-up with water, electric and sewer connections. An existing cottage would be incorporated into the expansion. The proposed expansion is located to the south/southeast of the Modern Campground in an area covered by scrub and deciduous trees. There is a pond-wetland complex to the north of the site, adjacent to the project footprint.

In addition to a "no action" plan, four alternatives were evaluated. The initial analysis completed for siting of the proposed campground loop at Bald Eagle State Park involved evaluating open areas directly adjacent to the existing modern campground loops in the park. Four alternatives with similar designs and number of camp sites were examined at four different locations near the modern campground to determine the most suitable site with the least impact. Alternatives were considered near this site due to the existence of sewer, water, and electric infrastructure located at the modern campground. The proposed campground would include modern amenities and would require extension of utilities to the adjacent sites of the proposed campground, thus the proximity to the existing modern campground would reduce costs and impacts to undisturbed areas.

SUMMARY OF POTENTIAL EFFECTS:

For all alternatives, the potential effects were evaluated, as appropriate. A summary assessment of the potential effects of the recommended plan are listed in Table 1:

Table 1: Summary of Potential Effects of the Recommended Plan

	Insignificant effects	Insignificant effects as a result of mitigation	Resource unaffected by action
Aesthetics	☒	☐	☐
Air quality	☒	☐	☐
Aquatic resources/wetlands	☐	☒	☐
Invasive species	☐	☒	☐
Fish and wildlife habitat	☒	☐	☐
Threatened/Endangered species/critical habitat	☒	☐	☐
Historic properties	☒	☐	☐
Other cultural resources	☐	☐	☒
Floodplains	☒	☐	☐
Hazardous, toxic & radioactive waste	☐	☐	☒
Hydrology	☐	☒	☐

	Insignificant effects	Insignificant effects as a result of mitigation	Resource unaffected by action
Land use	☒	☐	☐
Navigation	☐	☐	☒
Noise levels	☒	☐	☐
Public infrastructure	☐	☐	☒
Socio-economics	☒	☐	☐
Environmental justice	☒	☐	☐
Soils	☒	☐	☐
Tribal trust resources	☐	☐	☒
Water quality	☐	☒	☐
Climate change	☒	☐	☐
Vegetation	☐	☒	☐
Recreation	☐	☒	☐

All practicable and appropriate means to avoid or minimize adverse environmental effects were analyzed and incorporated into the recommended plan. Best management practices (BMPs) as detailed in the EA will be implemented, if appropriate, to minimize impacts and meet stormwater management and erosion/sediment control regulations. The project is situated within the Chesapeake Bay watershed, for which there is a Total Maximum Daily Load (TMDL) for nitrogen, phosphorus, and sediment. The project is not anticipated to serve as an additional source of nitrogen, phosphorus, or sediment that would need to be accounted for in PA's Watershed Implementation Plan. Approximately 80 individual trees would be removed by the proposed project. Individual trees were surveyed for the site to thoroughly screen and identify the most appropriate trees for removal and preservation, and to limit the disturbance of large trees and concentrated vegetative areas. Additional plantings would be included in the development plan, but not at a 1:1 ratio due to funding and available space within the project extent. Trees would be felled between October 1 and March 31 to avoid impacts to northern long-eared bats and Indiana bats. Erosion and sedimentation controls would be implemented during construction to prevent negative impacts to water quality including, but not limited to earthen diversion berms, silt sock, erosion control blankets, and outlet protection. Impervious area was reduced by proposing a one-lane road and efficiently laying out campsites along the loop. Stormwater detention ponds are proposed to mitigate peak flow and volume increases. The stormwater management ponds would discharge to an energy dissipater such as a rock apron to eliminate erosion situations. Natural drainage paths would be maintained on the site to avoid further impacts to aquatic resources. Resulting stormwater would continue to follow natural drainage paths in order to feed the wetland; therefore the earthen berm and eastern stormwater detention pond are configured to direct and discharge stormwater runoff to the wetland area. Designs have factored in volume and overflow controls. Construction is planned for fall/winter to have minimal disturbances to wildlife and recreational users, and no disturbance to aquatic resources. It is anticipated that construction would occur over a 3 month timespan. Access to the construction zone has been designed to minimize impacts to recreational users. Invasive species present within the project area (e.g. autumn olive) would be removed during construction if in conflict with the project by DCNR. Management measures, including mechanical removal and herbicides, could be used in the future by DCNR to manage invasive species following development of the area for the campground. The park primarily uses mechanical removal of invasive plant species. Application of herbicides would only be used as a last resort in treating invasive vegetation. Any herbicides would be applied by a licensed applicator following all guidelines in doing so.

COMPENSATORY MITIGATION

COMPENSATORY MITIGATION NOT REQUIRED

No compensatory mitigation is required as part of the recommended plan.

PUBLIC REVIEW

Three comments were received in response to the study initiation notice published July 10, 2019, and are included in the Appendix. Public review of the draft EA and FONSI was conducted from August 19 to September 21, 2020. Six stakeholders submitted comments on the draft EA. These comments are provided in the Appendix; and where relevant, the Final EA and FONSI have been revised to address specific comments.

OTHER ENVIRONMENTAL AND CULTURAL COMPLIANCE REQUIREMENTS:

ENDANGERED SPECIES ACT

INFORMAL CONSULTATION

Pursuant to Section 7 of the Endangered Species Act of 1973, as amended, USACE determined that the recommended plan may affect but is not likely to adversely affect the following federally listed species or their designated critical habitat: northern long-eared bat, Indiana bat, northern bulrush, and small whorled pogonia. The U.S. Fish and Wildlife Service (USFWS) concurred with USACE's determination on May 8, 2020.

NATIONAL HISTORIC PRESERVATION ACT

NO EFFECT TO HISTORIC PROPERTIES

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, USACE consulted with the Pennsylvania State Historic Preservation Office and determined that the recommended plan has no potential to cause adverse effects on historic or cultural resources.

CLEAN WATER ACT SECTION 401 COMPLIANCE

401 WQC PENDING

A water quality certification pursuant to Section 401 of the Clean Water Act will be obtained by the contractor on behalf of PA DCNR prior to construction from the Pennsylvania Department of Environmental Protection.

OTHER SIGNIFICANT ENVIRONMENTAL COMPLIANCE

All applicable environmental laws have been considered and coordination with appropriate agencies and officials has been completed.

FINDING

All applicable laws, executive orders, regulations, and local government plans were considered in evaluation of alternatives.[1] Based on this report, the reviews by other federal, state and local agencies, tribes, input of the public, and the review by my staff, it is my determination that the recommended plan would not cause significant adverse effects on the quality of the human environment; therefore, preparation of an Environmental Impact Statement is not required.[2]

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Date

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John T. Litz
Colonel, U.S. Army
Commander and District Engineer

[1] 40 CFR 1505.2(B) requires identification of relevant factors, including any essential to national policy, which were balanced in the agency decision.

[2] 40 CFR 1508.13 states that the FONSI shall include an EA or a summary of it and shall note any other environmental documents related to it. If an assessment is included, the FONSI need not repeat any of the discussion in the assessment but may incorporate by reference.

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ACRONYMS

AMD	acid mine drainage
AMSL	above mean sea level
BMP	best management practice
CAA	Clean Air Act
CAFO	concentrated animal feeding operation
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulation
CWA	Clean Water Act
DCNR	Pennsylvania Department of Conservation and Natural Resources
DO	dissolved oxygen
EA	Environmental Assessment
EO	Executive Order
EPA	United States Environmental Protection Agency
ER	Engineer Regulation
ESA	Endangered Species Act
FJS	Foster Joseph Sayers
FWCA	Fish and Wildlife Coordination Act
HAB	harmful algal bloom
IPaC	USFWS's Information for Planning and Consultation
km	kilometer
LDG	Larson Design Group
MBTA	Migratory Bird Treaty Act
mi	mile
NEPA	National Environmental Policy Act
NGVD	National Geodetic Vertical Datum
NLEB	Northern long-eared bat
NPDES	National Pollutant Discharge Elimination System
PA	Pennsylvania
PADEP	Pennsylvania Department of Environmental Protection
PFBC	Pennsylvania Fish and Boat Commission
PHMC	Pennsylvania Historical & Museum Commission
PGC	Pennsylvania Game Commission
PNDI	Pennsylvania Natural Diversity Inventory
PCD	Project Construction Datum
PSU	Pennsylvania State University
RCRA	Resource Conservation and Recovery Act
SGL	State Game Lands
SHPO	State Historic Preservation Office
SP	sampling point
SRBC	Susquehanna River Basin Commission
TMDL	Total Maximum Daily Load
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service

WIP	Watershed Implementation Plan
WQC	Water quality certificate

1. INTRODUCTION

1.1 Purpose and Need for the Action

In compliance with the National Environmental Policy Act (NEPA), the U.S. Army Corps of Engineers, Baltimore District (USACE), is preparing an Environmental Assessment (EA) for the development of expanded recreational facilities on the premises of Bald Eagle State Park, located on land owned by USACE and under a lease agreement with the Pennsylvania Department of Conservation and Natural Resources (DCNR). The purpose of the project is to provide additional overnight camping capacity to meet increased demand. The recommended plan needs to provide the additional recreational facilities while minimizing environmental impacts. The EA is being prepared by USACE in cooperation with DCNR.

1.2 Background

Bald Eagle State Park is a 5,900 acre park surrounding Foster Joseph Sayers (FJS) Dam and Reservoir (also referred to as Sayers Lake or reservoir), located along Bald Eagle Creek in Centre County, Pennsylvania (PA). Bald Eagle State Park is managed by DCNR and primarily used by the public for recreation including camping, boating, fishing, swimming, hiking, and wildlife viewing. DCNR also offers environmental education and interpretive programs, and lodging at The Nature Inn situated on park lands.

The lands were originally acquired by USACE as part of the authorization and subsequent construction of FJS Dam and Reservoir, a flood risk management dam and associated 1,730[1] acre reservoir, which help reduce flooding downstream of Bald Eagle Creek in the West Branch Susquehanna River Basin. The Bald Eagle State Park is managed by DCNR through a lease with USACE-Baltimore District (Real Estate Division) and in accordance with the FJS Dam and Reservoir Master Plan (Master Plan), a strategic plan used to guide how all project lands, water, and natural resources will be conserved, enhanced, developed, managed, and used in the public interest. The lease requires that DCNR submit annual management plans to Real Estate Division that describe the activities proposed for the upcoming year. The activities are to be in compliance with the lease and the Master Plan. The Master Plan is currently being updated.

Bald Eagle State Park has existing recreational facilities including developed and undeveloped campgrounds to accommodate overnight visitors. The park has experienced growth in the number of visitors and visitor use of park facilities. As a result of the increase in demand for park facilities, DCNR has proposed the construction of a campground extension loop to accommodate overnight visitors, near the existing Russell P. Letterman Modern Campground. This EA is being prepared to evaluate alternatives for the development of recreational facilities including an additional

[1] For the purpose of this report, the acreage of the lake at summer pool elevation will be noted as 1,730 acres. This acreage is based on the 1974 Master Plan, where the summer pool elevation yielded a surface area of 1,730 acres. This value is lower than the current summer pool surface acreage of 1,814 acres. The larger acreage was recently established through a recommended sedimentation survey.

campground loop adjacent to existing campground facilities. The EA is required to review the environmental impacts of any major structural development as outlined in the lease agreement between USACE and DCNR in Condition Number 36 of the Department of the Army Lease Number DACW-31-1-72-605.

1.3 Scope of Action

This EA was prepared to evaluate existing conditions and potential impacts of proposed alternatives for the development of recreational facilities at Bald Eagle State Park. The proposed action is siting of a new campground loop on non-developed land directly adjacent to the two existing campground loops at the Russell P. Letterman Modern Campground (Modern Campground) within the boundaries of Bald Eagle State Park. Four alternatives were formulated and considered by DCNR in consultation with USACE staff at FJS Dam. Alternatives are located in the vicinity of the existing campgrounds to allow for the extension of existing electrical utility and water infrastructure at the Modern Campground. Evaluation of proposed alternatives includes consideration for impacts to the human and natural environment including impacts to existing and future land and water uses, natural and biological resources, wildlife, cultural and historical resources, and human populations. This EA was prepared pursuant to the National Environmental Policy Act (NEPA), 40 Code of Federal Regulations (CFR), 1500-1517, and in accordance with Council on Environmental Quality (CEQ) regulations and Engineer Regulation (ER) 200-2-2 Policy and Procedures for Implementation of NEPA (1988).

1.4 Project Location and Setting

The project area for the proposed campground facilities is located adjacent to the Russell P. Letterman Campground in Bald Eagle State Park's High Density Recreation Area, as shown in Figure 1. The project area is primarily in Liberty Township, with a small area under consideration being located in Howard Township. The project area is undeveloped and primarily on wooded uplands with a mix of deciduous and coniferous forests, an overgrown field, a pond, and a wetlands complex, previously delineated by Larson Design Group (LDG) in July 2018.

The primary area of economic influence for Bald Eagle State Park and FJS Reservoir consists of Blair, Centre, Clinton and Huntingdon counties surrounding Bald Eagle Creek. Major population centers include State College, Lock Haven, Jersey Shore, Williamsport, and Sunbury.

1.5 History of the State Park

Bald Eagle State Park was opened on July 4, 1971 and consists of 5,900 acres of park land surrounding FJS Reservoir. The State Park is located in the Bald Eagle Valley, in the western part of the Ridge and Valleys of the Appalachian Mountains. The State Park is part of the 7,921 acres originally acquired by USACE as part of the authorization and subsequent construction of FJS Dam and Reservoir, a flood risk management dam and associated 1,730 acre reservoir. While USACE owns the lands, the Commonwealth of Pennsylvania and DCNR manage the 5,900 acres of the state park for recreation under a long-term lease dating back to 1973. The long-term lease agreement between the Commonwealth of Pennsylvania and USACE was extended until the year 2048 in July 2008.

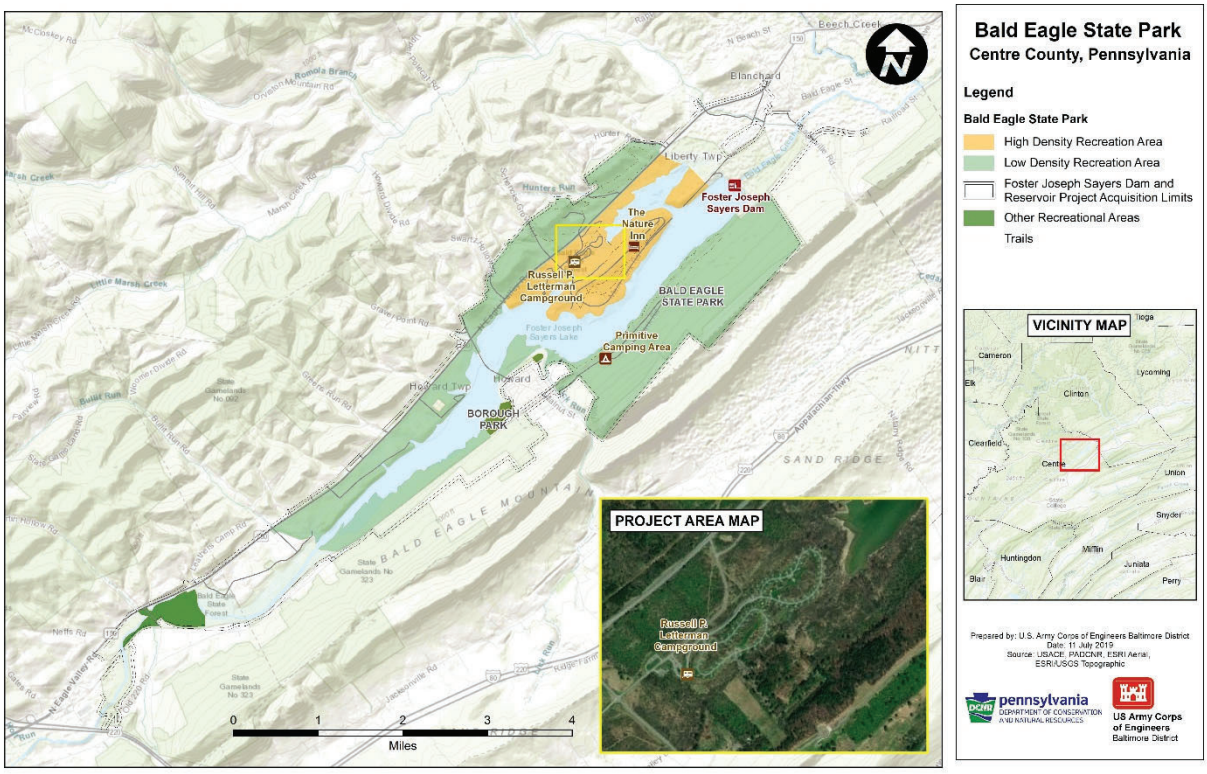

Figure 1. Bald Eagle State Park with an inset for the Proposed Project Area

1.5.1 Real Estate Outgrants

In a lease with USACE, Baltimore District and the Commonwealth of Pennsylvania, signed June 1, 1973, portions of project lands were set aside for Bald Eagle State Park. Basic facilities for public use and access have been provided by the USACE, Baltimore District, and leased to the Commonwealth of Pennsylvania. These basic facilities included sewage trunk lines and treatment plant, a water supply distribution system with wells as a source of supply, bases for roads and parking areas, boat launching ramps, and docks. The Commonwealth furnishes all secondary connections to both sewage and water systems. Additionally, paving for roads and parking areas, camping, picnic, beach, and marina facilities as well as landscaping is the responsibility of the Commonwealth. The Commonwealth will operate Bald Eagle State Park and the sewage treatment plant, in addition to maintaining the areas within the Park.

2. ALTERNATIVES

NEPA requires preparation of a document to evaluate the impacts of a proposed action on environmental and cultural resources, and the human environment. DCNR, in coordination with USACE staff formulated five alternatives for development of the proposed campground loop, including a no action alternative. Alternatives evaluated in this EA are compared to each other and to the no action alternative in order to identify the preferred alternative.

2.1 Alternatives Considered

The initial analysis completed for siting of the proposed campground loop at Bald Eagle State Park involved evaluating non-developed areas directly adjacent to the existing Modern Campground loops in the park. Four alternatives with similar designs and number of camp sites were examined at four different locations near the Modern Campground to determine the most suitable site with the least environmental impact on the natural environment. Alternatives were considered near this site due to the existence of sewer, water, and electric infrastructure located at the Modern Campground. The proposed campground would include modern amenities and would require extension of utilities to the adjacent sites of the proposed campground, thus the proximity to the existing Modern Campground would reduce costs and impacts to undisturbed areas. The elevation of each alternative considered is above the spillway crest of the dam (657'). Five alternatives, including the no action alternative, were considered for the proposed action. Alternatives 2 through 5 involve a similar site design for the proposed campground development, but represent four different locations for the campground in the park that were evaluated and compared in this EA. The size and configuration of the alternatives was based on existing conditions. The proposed campground loop would cover approximately 8 acres and include the creation of 22 campsites, regardless of alternative. This configuration maximizes the available space to provide the quality of campground facilities desired. The alternatives are described below and are depicted in Figure 2.

2.1.1 Alternative 1: No Action Alternative

The no action alternative serves as the baseline for evaluating the potential impacts of proposed alternatives. Under the no action alternative, USACE would take no action and no new campground facilities would be constructed. DCNR would continue operating existing recreational facilities and there would be no change to ongoing operation and maintenance activities by DCNR at the State Park or USACE at the FJS Dam and Reservoir.

2.1.2 Alternative 2: Campground Loop to the North of the Modern Campground

Alternative 2 involves construction of a campground loop to include 22 camp sites, a parking area, and associated roads and infrastructure located over a total area of approximately 8 acres. The 22 new campsites would be full-service hook-up with water, electric and sewer connections. Two additional cottages may be considered for addition at a future time, but are not part of the project evaluated by this NEPA document. The alternative 2 proposed campground loop is located to the north of the Modern Campground and across the West Launch Road. The site has flat topography and is primarily forested with deciduous trees and would require clearing and grubbing of vegetation on the site.

2.1.3 Alternative 3: Campground Loop to the Northeast of the Modern Campground

Alternative 3 is similar in site design to the previous alternative and also involves construction of a campground loop to include 22 camp sites, a parking area, and associated roads and infrastructure located over a total area of approximately 8 acres. The 22 new campsites would be full-service hook-up with water, electric and sewer connections. Two additional cottages may be considered for addition at a future time, but are not part of the project evaluated by this NEPA document. The alternative 3 proposed campground loop is located to the northeast of the Modern Campground on

an overgrown field. Wetlands are present within the site. The site has varied topography with sparse trees, and an existing trail crossing the site that connects to the existing campground loop.

2.1.4 Alternative 4: Campground Loop to the Northwest of the Modern Campground

Alternative 4 is similar in site design to the previous alternatives and also involves construction of a campground loop to include 22 camp sites, a parking area, and associated roads and infrastructure located over a total area of approximately 8 acres. The 22 new campsites would be full-service hook-up with water, electric and sewer connections. Two additional cottages may be considered for addition at a future time, but are not part of the project evaluated by this NEPA document. The alternative 4 proposed campground loop is located to the northwest of the Modern Campground in an area covered by scrub, deciduous trees, and wetland hummocks. An existing trail adjoins the campground site.

2.1.5 Alternative 5: Campground Loop to the South of the Modern Campground

Alternative 5 is similar in site design to the previous alternatives and also involves construction of a campground loop to include 22 camp sites, a parking area, and associated roads and infrastructure located over a total area of approximately 8 acres. The 22 new campsites would be full-service hook-up with water, electric and sewer connections. An existing cottage would be incorporated into the expansion. Two additional cottages may be considered for addition at a future time, but are not part of the project evaluated by this NEPA document. The alternative 5 proposed campground loop is located to the south/southeast of the Modern Campground in an area covered by scrub, deciduous trees, and a pond-wetland complex to the north of the site.

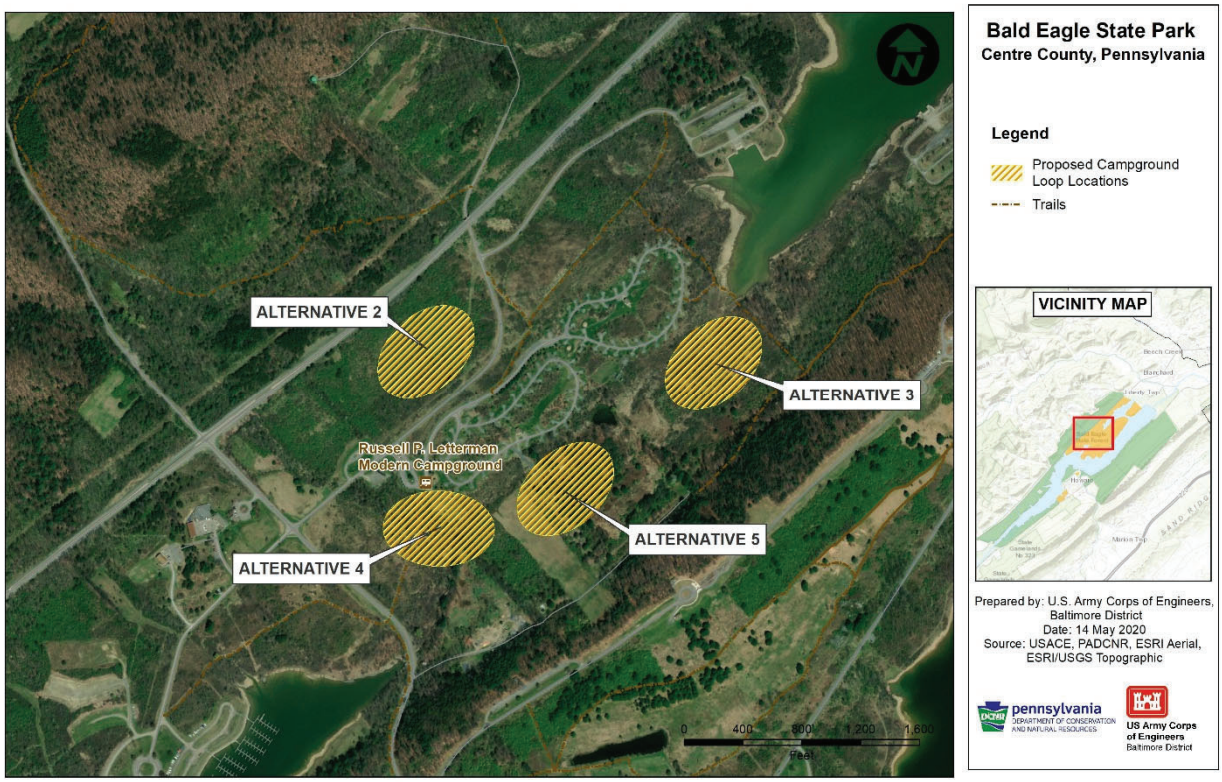

Figure 2. Alternatives Considered

2.2 Evaluation of Alternatives

2.2.1 Alternative 1

Alternative 1 would not provide additional recreational facilities to meet the need for increased resources. This alternative would not meet the purpose and need of the study.

2.2.2 Alternative 2

This area was rejected from consideration due to the fact that it would be separated from the existing loop by a heavily used park road that connects the park entrance to one of the park boat launches. This would have been a safety concern by directing campers across the road to access the shower facilities. This area is also bounded on the northern side by State Route 150, a heavily traveled road with a 55 miles per hour speed limit. This was a concern for visitor safety as well as the noise created by passing cars.

2.2.3 Alternative 3

Wetlands are present in this area as well as along the edge of the adjacent portion of the reservoir. This alternative was screened out due to the potential for extensive environmental impacts.

2.2.4 Alternative 4

Alternative 4 was also dismissed due to extensive wetlands and the need for a water crossing. A freshwater emergent wetland covers a substantial portion of the western half of this area (USFWS, 2019). Selection of this alternative would have also created unnecessary environmental impacts.

2.2.5 Alternative 5

This area consists mostly of woodland with an open field to the west. This area has existing access from the camping loop via a road that connects to the existing cottage in the area. There is also an existing electrical line and transformer servicing this area, which will reduce the impact of running a new line to the site. The topography of the site is only slightly sloping and would allow for development of the site with minimal grading. Due to the limited environmental impacts anticipated, this area to the south was chosen for the new campground loop developments.

2.3 Selection of Recommended Plan

Based on potential environmental impacts and access to existing campground infrastructure, Alternative 5 was selected as the recommended plan. Considerations were made to reduce impacts throughout plan development. The initial survey of the proposed site mapped all of the trees within the development area and the layout was designed to minimize the removal of trees and shrubs on site. By maximizing the vegetation left on site, a better camping experience would be provided, disturbance to the landscape would be minimized, and natural landscape would be conserved to mitigate stormwater. As part of Alternative 5, two stormwater basins would be created on site. These basins are designed to capture stormwater from the impervious areas resulting from campground expansion. The use of detention basins should protect the adjacent wetlands by removing sediment before it reaches the wetlands and incorporating an energy dissipater to eliminate erosion situations. As designed, stormwater should infiltrate into the ground rather than directly discharging the runoff at high volumes and rates to the wetlands. In an effort to reduce

the impervious footprint of the development, the road width was minimized by creating a one-way loop. This reduces the amount of new paving and stormwater runoff.

3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

3.1 Climate

The climate of central Pennsylvania is a mixture of relatively dry mid-western continental conditions with the more humid eastern seaboard. Prevailing westerly winds move from the interior of the county and coastal storms affect northeastward air flow primarily influenced by Atlantic Ocean. As recorded at State College, PA, the average day time temperature varies between 20 – 46°F in the winter (January to March) and 53 – 82°F in the summer (July through September) (U.S. Climate Data, 2020). Average snow fall is approximately 45 inches and average rainfall is approximately 40 inches (U.S. Climate Data, 2020).

Impacts: No climate impacts would be expected from the proposed project.

3.2 Topography, Physiography, and Geology

3.2.1 Topography

Bald Eagle State Park is located within Bald Eagle Valley. The reservoir is a prominent topographic feature formed by damming Bald Eagle Creek. The topography of the Bald Eagle Creek watershed consists of three major landforms: the generally flat valley floor (0- to 15-percent slope), the ridges and slopes to the northwest (15- to 30-percent slope), and Bald Eagle Mountain (slopes 30-percent and greater) (USACE, 1996). Elevations in the Bald Eagle Creek watershed range from as high as 2,420 feet in National Geodetic Vertical Datum of 1929 (NGVD 1929) along the northern ridge of the watershed, to 583 feet NGVD 1929 in the channel at the dam location, to about 535 feet NGVD 1929 in the channel at its confluence with the West Branch Susquehanna River near Lock Haven, PA.

Impacts: It is expected there would be minor, permanent alterations to topography due to grading at the selected 8-acre site for the proposed project. However, the recommended plan was selected partially due to the existing topography and the minimal need for grading.

3.2.2 Physiography and Geology

Bald Eagle Valley is in the western part of the Ridge and Valley of the Appalachian Mountains. The oldest rock layers from deep within the eroded mountain are now exposed on the east side of the Bald Eagle ridge. Younger rocks from the outer layers of the arch are exposed in the Bald Eagle Valley, with the youngest at the foot of the Allegheny Front.

The geology of the Bald Eagle Valley consists primarily of resistant sandstone forming ridges and limestone and dolomite underlying the valleys. Tuscarora quartzite, a Silurian formation, and Bald Eagle sandstone, laid down during the Ordovician, form Bald Eagle Mountain, the northernmost ridge of the Ridge and Valley Province. Bedrock of the northwest facing slope of Bald Eagle Mountain, the Bald Eagle Valley, and Plateau foothills is formed from a series of Devonian and Upper Silurian deposits of limestone, shale, siltstone, and sandstone. The valley floor is a part of the Harrisburg peneplain.

Impacts: No physiography or geology impacts would be expected from the proposed project.

3.3 Land Use

The forested project area is located on state park land used primarily for recreation. Together, USACE, DCNR, Pennsylvania Fish and Boat Commission (PFBC), and Pennsylvania Game Commission (PGC) manage several park areas that include wildlife management and recreation components (Figure 3). The DCNR, Bureau of State Parks leases approximately 5,900 acres of land and water at FJS for park and recreational purposes, of which 985 acres is classified as high density recreation. Areas included in this classification are developed and managed for intensive recreational activities including campgrounds, day use/recreation areas, secondary access areas (i.e., boat ramps and overlooks), commercial marinas and state parks. The park areas provide recreation opportunities such as picnicking, camping, hiking, wildlife viewing, boating, fishing and hunting. Central to the park facilities are the beach and swimming areas, surrounded by picnic pavilions, a comfort and first aid station, open space, marina, and playgrounds.

The project area is located to the southeast of existing modern campsite loops and within close proximity of Sayers Lake. The area has an existing road and small rental cabin in the center of the project area along with electrical hook-ups.

Impacts: The area would remain designated as parkland but on a local scale, there would be a long-term, direct impact to land use. The proposed project would result in the direct and long-term conversion of 8 ac of the undeveloped park to a developed campground. Currently, the site is a mix of forest and overgrown field. Although an effort will be made to conserve as many trees as possible, the proposed project would result in the direct loss of trees and understory vegetation. There would be a long-term increase in imperviousness of the site from the addition of road and parking.

3.4 Terrestrial Resources

3.4.1 Vegetation

Bald Eagle State Park has a distinct assemblage of plant communities within its boundaries. These plant communities range from a mixed oak community that covers the majority of the slope of the Allegheny Plateau and an oak-pine community that covers the lower slopes in the Plateau. The location of plant communities is influenced by slope, aspect, elevation, and soil conditions. Figures 4 and 5 provide images of the vegetation at FJS.

The top of Bald Eagle Ridge is dominated primarily by chestnut oak (*Quercus montana*) with occasional groupings of white pine (*Pinus strobus*) in saddles along the ridge line. The heavy talus area of the upper mid-slope of the Bald Eagle Ridge supports a birch-oak community. The upper and lower elevational limits are almost entirely defined by the distribution of large stones. The lower mid-slope is mixed oak with species composition being quite similar to that of the plateau slope. This community then integrates into an oak-pine community in the lower slope position.

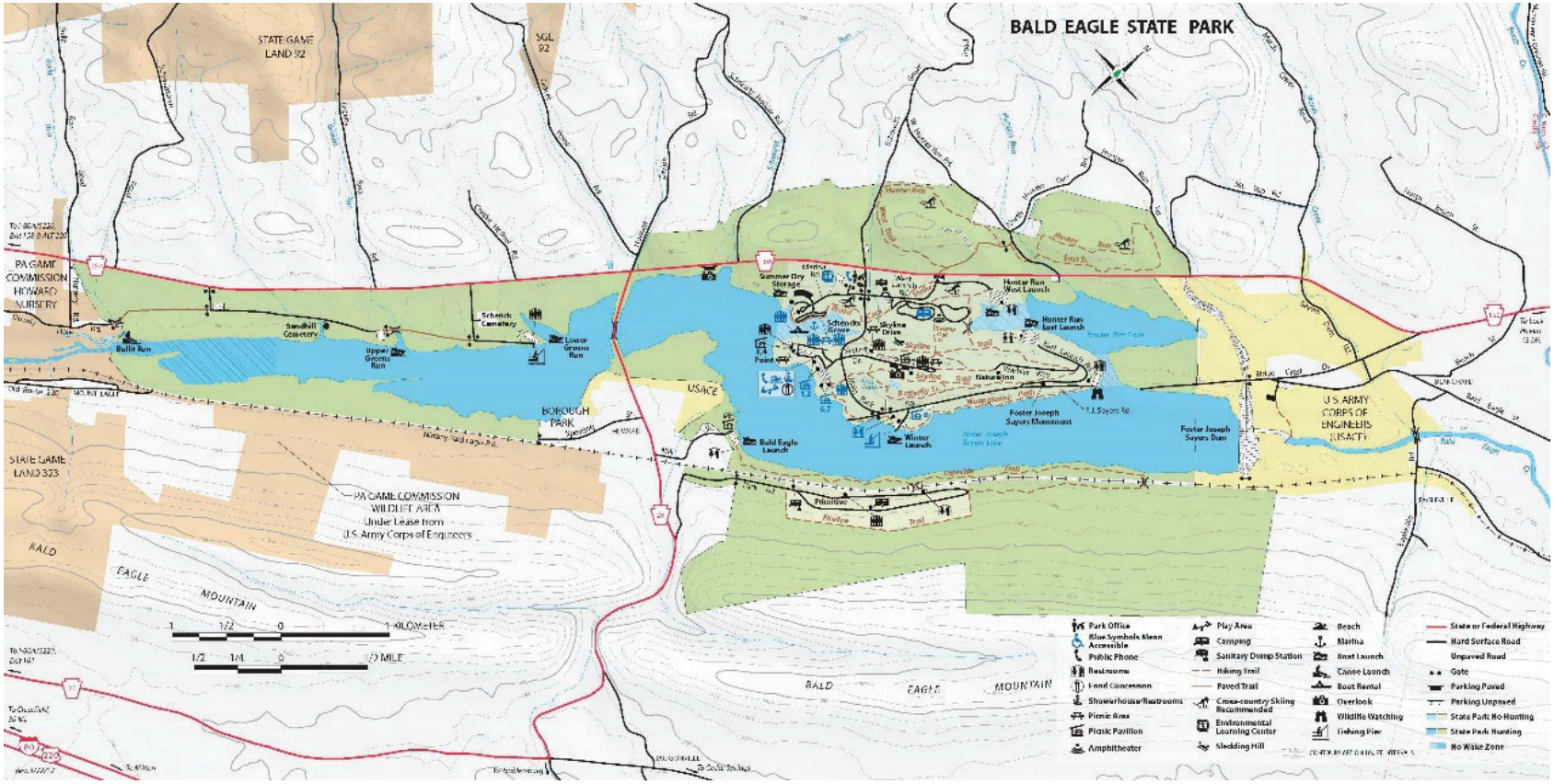

Figure 3. Bald Eagle State Park and surrounding conservation lands.

Figure 4. Vegetative Communities at FJS as viewed from the Nature Inn

Figure 5. White oak in campground vicinity

The remainder of the state park is in abandoned farmland, which varies from communities composed largely of goldenrod (*Solidago* spp.) to hawthorn (*Crataegus* spp.), hawthorn-white pine and aspen-white pine mixtures depending upon the length of time since agriculture last occurred. The invasive species Autumn olive (*Elaeagnus umbellata*) and Russian olive (*Elaeagnus angustifolia*) are also moving into these fields at a rapid rate and are threatening to dominate. Dense thickets of red alder (*Alnus rubra*) may also be found invading these areas but are much more site specific. They are usually restricted to the wettest sites in the abandoned pastures.

The last distinct community of the state park occurs within the annual flood plain of Bald Eagle Creek and its feeder streams. This community is rich in both overstory and understory species.

The overstory is generally dominated by hardwoods composed of slippery elm (*Ulmus rubra*), sycamore (*Platanus occidentalis*) and white oak (*Quercus alba*), although white pine and hemlock (*Tsuga canadensis*) may be locally important. The most important understory species is red osier dogwood (*Cornus sericea*) which, in the wetter areas, forms essentially impenetrable thickets.

Outside of the state park, there are an additional 952 acres in the southern portion of FJS that are located entirely within PGC State Game Land (SGL) 323. The game land is mostly covered with hard and softwood stands (nearly 100% of the acreage is forested). Those areas not forested consist of a small area of wildlife food plots and several large rock and boulder fields (PGC 2018).

The project location consists of mixed deciduous and coniferous forest habitats with an overgrown relic field to the north and east. There is a silted-in pond and wetland complex located to the north, northwestern side of the project area.

Impacts: The proposed project would have a direct and long-term impact on vegetation at the project site. The vegetative assemblage (trees, shrubs, and herbaceous plants) would be reduced at the site with decreased connectivity due to construction of the project. An effort was made to minimize tree loss, but eighty trees would be lost due to the proposed project. Individual trees were surveyed in order to limit the disturbance of large trees and concentrated vegetative areas. Limited project funding, and available space within the limit of disturbance after development, would not allow for a 1:1 replacement of trees lost as part of this project, but additional plantings would be included in the development plan. Native plantings would be used to stabilize areas of disturbance throughout the site, including the detention basins.

3.4.2 Soils & Prime Farmland

Soils in the vicinity of the reservoir (Table 1) are primarily silty loam, sandy loam, and mixed variations of stony loam with mixed clay, shales and rubble making up the remaining textures (USDA NRCS 2017). The most frequently found soil types include Andover, Berks, Brinkerton, Laidig and Hazelton. These soils are generally deep to very deep in profile and are generally comprised of residuum of shale, siltstone, and sandstone. Soils characterized as Prime Farmland account for 9% and an additional 16% are characterized as Farmland of Statewide Importance.

Table 1. Soils Types in the Foster Joseph Sayers Reservoir Vicinity (USDA NRCS, 2017)

Map Unit Symbol	Map Unit Name	Slope	Farmland Classification
AlB	Allegheny silt loam	2 to 8%	All Areas Prime Farmland
AnB	Andover channery silt loam	0 to 8%	Not Prime Farmland
AoB	Andover very stony loam	0 to 8 %	Not Prime Farmland
AoC	Andover very stony loam	8 to 15%	Not Prime Farmland
At	Atkins silt loam	-	Farmland of Statewide Importance
Ba	Basher Loam	-	All areas Prime Farmland

Map Unit Symbol	Map Unit Name	Slope	Farmland Classification
BkB	Berks channery silt loam	3 to 8 %	Farmland of Statewide Importance
BkC	Berks channery silt loam	8 to 15%	Farmland of Statewide Importance
BkD	Berks channery silt loam	15 to 25%	Not Prime Farmland
BMF	Berks and Weikert soils	steep	Not Prime Farmland
BrA	Brinkerton silt loam	0 to 3%	Not Prime Farmland
BrB	Brinkerton silt loam	3 to 8%	Not Prime Farmland
BrC	Brinkerton silt loam	8 to 15%	Not Prime Farmland
BsB	Brinkerton very stony silt loam	0 to 8 %	Not Prime Farmland
BuB	Buchanan channery loam	3 to 8 %	All area Prime Farmland
BuC	Buchanan channery loam	8 to 15%	Farmland of Statewide Importance
BxB	Buchanan extremely stony loam	0 to 8 %	Not Prime Farmland
BxD	Buchanan extremely stony loam	8 to 25%	Not Prime Farmland
Ch	Chagrin soils	-	All areas Prime Farmland
DAM	Dams and impoundment structures	-	Not Prime Farmland
Du	Dunning silty clay loam	-	Farmland of Statewide Importance
ErB	Ernest channery silt loam	3 to 8%	Farmland of Statewide Importance
ErC	Ernest channery silt loam	8 to 15%	Farmland of Statewide Importance
ErD	Ernest channery silt loam	15 to 25%	Not Prime Farmland
HTF	Hazleton-Dekalb association	Very steep	Not Prime Farmland
HuA	Hublersburg silt loam	0 to 3%	All areas Prime Farmland
HuB	Hublersburg silt loam	3 to 8%	All areas Prime Farmland
HuC	Hublersburg silt loam	8 to 15%	Farmland of Statewide Importance
HuD	Hublersburg silt loam	15 to 25%	Not Prime Farmland
LaB	Laidig channery loam	3 to 8%	All areas Prime Farmland
LaC	Laidig channery loam	8 to 15%	Farmland of Statewide Importance
LaD	Laidig channery loam	15 to 25%	Not Prime Farmland
LcB	Laidig extremely stony loam	0 to 8 %	Not Prime Farmland

Map Unit Symbol	Map Unit Name	Slope	Farmland Classification
LcD	Laidig extremely stony loam	8 to 15%	Not Prime Farmland
LDF	Laaidig extremely stony loam	steep	Not Prime Farmland
LvB	Leetonia sand, variant	3 to 8%	Not Prime Farmland
LvC	Leetonia sand, variant	8 to 15%	Not Prime Farmland
Lx	Lindside soils	-	All areas Prime Farmland
MaB	Markes silt loam	2 to 10%	Not Prime Farmland
Mm	Melvin silt loam	-	Farmland of Statewide Importance
MoB	Monongahela silt loam	2 to 8%	Farmland of Statewide Importance
MuC	Murrill channery silt loam	8 to 15%	Farmland of Statewide Importance
OhB	Opequon-Hagerstown complex	3 to 8%	Farmland of Statewide Importance
OhC	Opequon-Hagerstown complex	8 to 15%	Farmland of Statewide Importance
OhD	Opequon-Hagerstown complex	15 to 25%	Not Prime Farmland
Ph	Philo loam	-	All areas Prime Farmland
Pk	Philo and Atkins very stony soils	-	Not Prime Farmland
Po	Pope soils	-	All areas Prime Farmland
Pu	Purdy silt loam	-	Not Prime Farmland
QU	Quarry	-	Not Prime Farmland
Ru	Rubble land	-	Not Prime Farmland
Ty	Tyler silt loam	-	Farmland of Statewide Importance
URB	Urban land- Hagerstown complex	Gently	Not Prime Farmland
VaC	Vanderlip loamy sand	5 to 20%	Not Prime Farmland
WeC	Weikert shaly silt loam	5 to 15%	Not Prime Farmland
WeD	Weikert channery silt loam	15 to 25%	Not Prime Farmland
WhB	Wharton silt loam	3 to 8%	All areas Prime Farmland
WhC	Wharton silt loam	8 to 15%	Farmland of Statewide Importance

Within the proposed project area, soils are primarily Berks channery silt loam (BkB and BkC) and Markes silt loam (MaB) as depicted in Figure 6. Just south of the proposed site is Vanderlip loamy sand (VaC), to the north soils are classified as Wharton silt loam (WhB), and to the east and west

there are areas classified as water (W). Markes silt loam is the only soil type considered hydric (LDG 2018). Wharton silt loam is classified as prime farmland, but the project would not affect those soils.

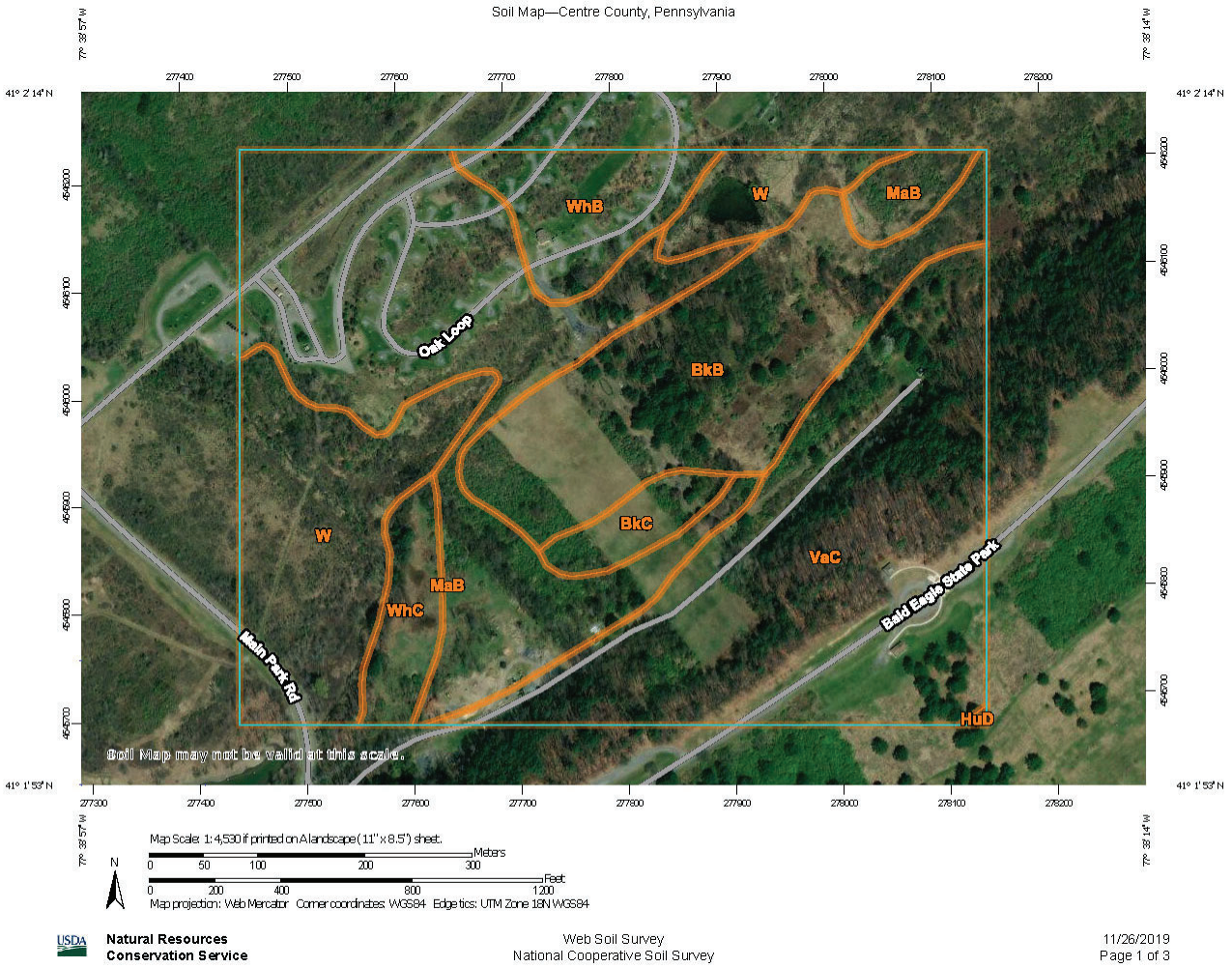

Figure 6. Soils map for the proposed site

Impacts: Soils would be disturbed by construction, and some soils permanently covered with impervious surface where the campground loop is proposed. Erosion and sedimentation controls would be implemented during construction including, but not limited to earthen diversion berms, silt sock, erosion control blankets, and outlet protection. Impervious area was reduced by proposing a one-lane road and efficiently laying out campsites along the loop. The stormwater management ponds would discharge to an energy dissipater such as a rock apron to minimize erosion potential. No impacts to prime or unique soil would be expected from the proposed project. An existing road and maintenance area would be used to stage and access the site during construction to minimize further disturbance.

3.4.3 Wildlife and Migratory Birds

Terrestrial wildlife management practices are established for FJS project lands to benefit all species. However, specific enhancements are in place for species that afford recreation opportunities such as hunting and wildlife viewing. These species include Northern bobwhite quail (*Colinus virginianus*), ruffed grouse (*Bonasa umbellus*), ring-necked pheasant (*Phasianus colchicus*), American woodcock (*Scolopax minor*), snow goose (*Chen caerulescens*), white-tailed deer (*Odocoileus virginianus*), black bear (*Ursus americanus*), wild turkey (*Meleagris gallopavo*) and elk (*Cervus canadensis*).

The United States Fish and Wildlife Service (USFWS) administers wildlife practices within project lands associated with the Centre Wildlife Care. This area is managed primarily for migratory waterfowl including a significant concentration of snow geese. Although management practices are in place to enhance migratory waterfowl populations, there are a number of other species that are known to benefit from this area as well. At Bald Eagle Ridge, bald eagles are common and a few pair nest year-round in the area. Other species known to winter within this area include northern shrike (*Lanius excubitor*), northern mockingbird (*Mimus polyglottos*), and song sparrows (*Melospiza melodia*).

In summer months other species have been observed resting and feeding in this area including great blue herons (*Ardea herodias*) and fish crows (*Corvus ossifragus*). In the fall common bird species that are known to benefit from this area include red-eyed vireo (*Vireo olivaceus*), scarlet tanager (*Piranga olivacea*), ovenbird (*Seiurus aurocapilla*), wood duck (*Aix sponsa*), green herons (*Butorides virescens*), eastern bluebirds (*Sialia sialis*), and American woodcock (*Scolopax minor*).

Impacts: No long-term, direct impacts to wildlife and migratory birds is expected. Noise and increased activity in the area during construction would temporarily disturb some wildlife and birds. It would be expected that wildlife and birds may avoid the project area during construction. Within the project area, wildlife and birds may experience a long-term, indirect impact from displacement due to the conversion of the natural area to a campground. However, this is not expected to significantly affect these populations as there is expansive, comparable habitat in the area surrounding the campground.

3.5 Aquatic and Water Resources

3.5.1 Fisheries

FJS Reservoir is a 1,730-acre warm water fish habitat. Many of the fish species present are a result of a stocking program instituted by the PFBC. Common fish species are listed in Table 2 below. Many fish species, particularly centrarchids (i.e., sunfish, bass), use relatively shallow nearshore habitats for foraging and reproduction. Fish communities upstream of the reservoir include more cyprinid species that are found in cool, fast-flowing waters. Downstream of the reservoir, more ictalurid and centrarchid species are present, which favor cool, slow-flowing waters (Brightbill and Bilger 1998). Species observed downstream include common shiner (*Luxilus cornutus*), swallow tail shiner (*Notropis procne*), fallfish (*Semotilus corporalis*), yellow bullhead (*Ameiurus natalis*), brown bullhead, pumpkinseed, bluegill, black crappie, yellow perch and white sucker (*Catostomus commersonii*). Many of these species are associated with stream pools and aquatic vegetation.

Table 2. Fish Species Commonly Found in Foster Joseph Sayers Reservoir

Scientific Name	Common Name
Poxoxis nigromaculatus	Black Crappie
Perca flavescens	Yellow Perch
Esox masquinongy	Tiger Muskellunge
Ictalurus punctatus	Channel Catfish
Micropterus salmoides	Largemouth Bass
Lepomis gibbosus	Pumpkinseed
Lepomis macrochirus	Bluegill
Ameiurus nebulosus	Brown Bullhead

Source: PFBC

Multiple year classes of wild brown trout (*Salmo trutta*) have been found in Bald Eagle Creek between the reservoir outfall and Masden Run. The PFBC has determined that the limits for wild trout management in Bald Eagle Creek extend from the headwaters downstream to the confluence with Harvey's Run. Bald Eagle Creek is one of the largest streams in Pennsylvania that supports wild trout and benefits from the limestone geology, springs and coldwater tributary streams that flow throughout its length.

American eel populations (*Anguilla rostrate*) have declined along the Atlantic coast and especially in streams and rivers with dams. Eels frequently serve as a host for common freshwater mussels and as one population expands so will commensal organisms. An eel stocking effort was conducted by USFWS from 2010 – 2013 in the Susquehanna River but no eels have been noted in fish surveys conducted in the project area in 1997 or 2016. However, monitoring of common freshwater mussels conducted in 2014 indicated expanded recruitment and widespread distribution. The presence of healthy mussel beds provide streambed stability, water filtration and increased macroinvertebrate biodiversity.

Stream macroinvertebrate sampling by the Susquehanna River Basin Commission in 2009 found similar numbers of genera upstream (32) and downstream (28) of the reservoir. Sampling in 2016 found slightly more genera at two stations upstream (22 and 24) compared with two downstream stations (19 and 9), but more individuals downstream (241 and 252) than upstream (226 and 221).

Impacts: No fishery impacts would be expected from the proposed project.

3.5.2 Wetlands

FJS Reservoir encompasses a variety of wetland features. Emergent wetlands known to exist in the shallow fringe areas of the reservoir encompass common aquatic vegetation species such as duckweed (*Lemna minor*), swamp smart weed (*Persicaria hydropiperoides*), common rush (*Juncus effusus*), spike rush (*Eleocharis palustris*), and soft stem bull rush (*Schoenoplectus tabernaemontani*). Forested/shrub wetlands exhibit combinations of woody and grass-like species. Common species associated with these habitat areas include Pennsylvania sedge (*Carex pensylvanica*), woodland sedge (*Carex blanda*), inland rush (*Juncus interior*), Torrey's rush (*Juncus torreyi*), switchgrass (*Panicum virgatum*), rough leaf dogwood (*Cornus drummondii*), dull

leaf indigo bush (*Amorpha fruticosa*), coral berry (*Symphoricarpos orbiculatus*), bitternut hickory (*Carya cordiformis*), cottonwood (*Populus deltoides*) and pecan (*Carya illinoinensis*). Wetland resources support healthy ecosystems and provide important habitat for fish and wildlife. In support of regional stewardship goals and PFBC management goals, USACE incorporates operational practices at FJS project to enhance and protect these resources.

According to the National Wetlands Inventory, there are wetlands present within the immediate investigative area (Figure 7). These include various freshwater emergent wetlands: palustrine, persistent, seasonally flooded, and impounded wetlands (PEM1Ch); palustrine, emergent, persistent and seasonally flooded wetlands (PEM1C); and palustrine, persistent, temporary flooded (PEM1Ah); plus riverine (R4SBC) and lake (L1UBHh) habitats.

Within the proposed project area, a wetland survey was conducted on May 7, 2017 on approximately 20 acres within the existing Bald Eagle State Park. One area was identified by the survey that met the criteria required to be designated as a wetland through the combined presence of hydrophytic vegetation, hydric soils, and hydrology. No streams or other aquatic resources were identified during the investigation.

The identified wetland (Figure 8) is a large multi-habitat wetland that consists of open water, forested, scrub shrub and emergent types. As depicted in Figure 9, the wetland is located on the north and western side of the project area. The wetland is bound by the existing campground loop and a hiking trail. There are culverts that keep the wetland hydraulically connected to the fringe wetlands of Sayers Lake. Vegetation observed throughout this area consists of red maple (*Acer rubrum*), autumn olive, honeysuckle (*Lonicera tartarica*), multiflora rose (*Rosa multiflora*), barberry (*Berberis thunbergii*), sensitive fern (*Onoclea sensibilis*), woolgrass (*Scirpus cyperinus*), moneywort (*Lysimachia nummularia*), soft rush (*Juncus effusus*), buttercup (*Ranunculus acris*), willowherb (*Epilobium coloratum*), reed canary grass (*Phalaris arundinacea*), goldenrod (*Solidago sp.*), and jewelweed (*Impatiens capensis*).

Impacts: No long-term, significant impacts are anticipated to wetlands. The proposed campground loop has been designed to avoid wetlands. Best management practices (BMPs) would be employed. Natural drainage paths would be maintained in order to preserve the integrity and health of the wetlands through the configuration and design of the site and stormwater facilities. The wetland area requires that stormwater continue to flow and feed the wetland; therefore, an earthen berm and the eastern stormwater detention pond are configured to continue to direct and discharge stormwater runoff to the wetland area. The berm terminates over 150 feet prior to the delineated wetland to allow any concentrated water to disperse into a sheet flow condition prior to reaching the wetland. The discharge pipe from the stormwater pond would limit the outflow through a weir that would reduce the volume entering the wetland on a normal basis. There would be an overflow designed for the discharge pipe to accommodate larger storms so that the constructed stormwater facility would not overflow. Native plantings would be used to stabilize areas of disturbance throughout the site, including the detention basins.

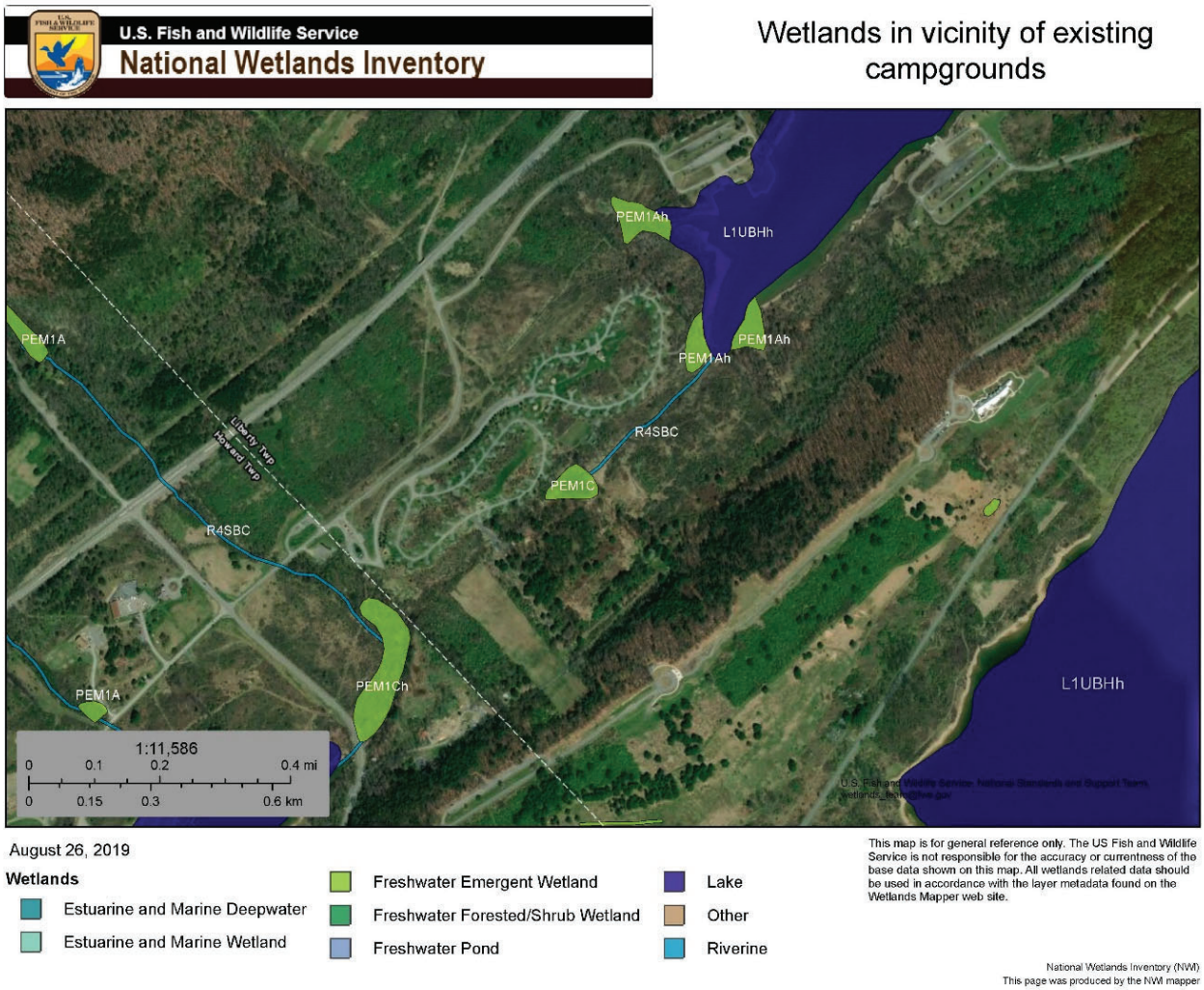

Figure 7. Wetlands in the project area based on the National Wetlands Inventory (USFWS 2019)

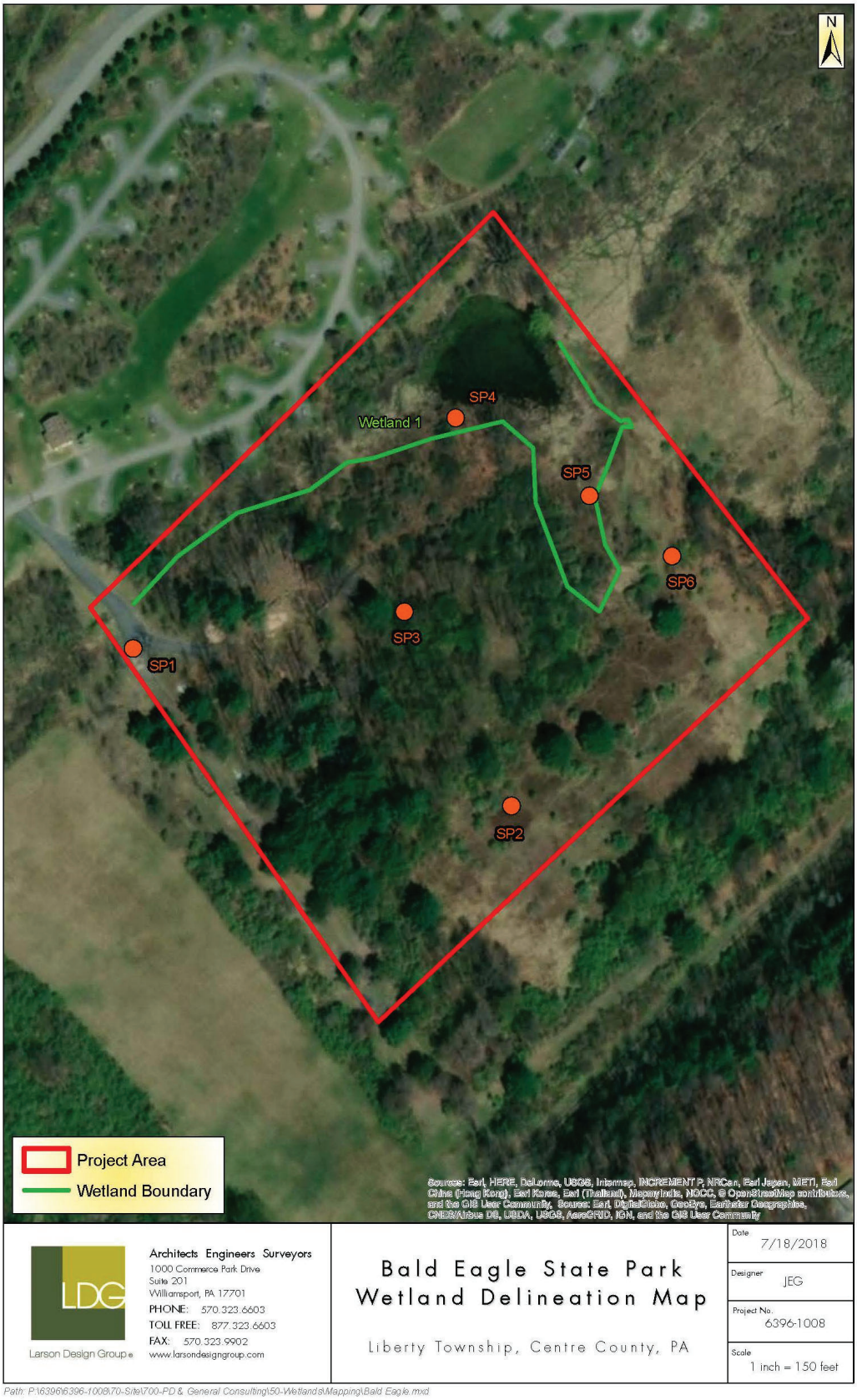

Figure 8. Wetland Delineation Map (SP = sampling point) (reproduced from LRG 2018)

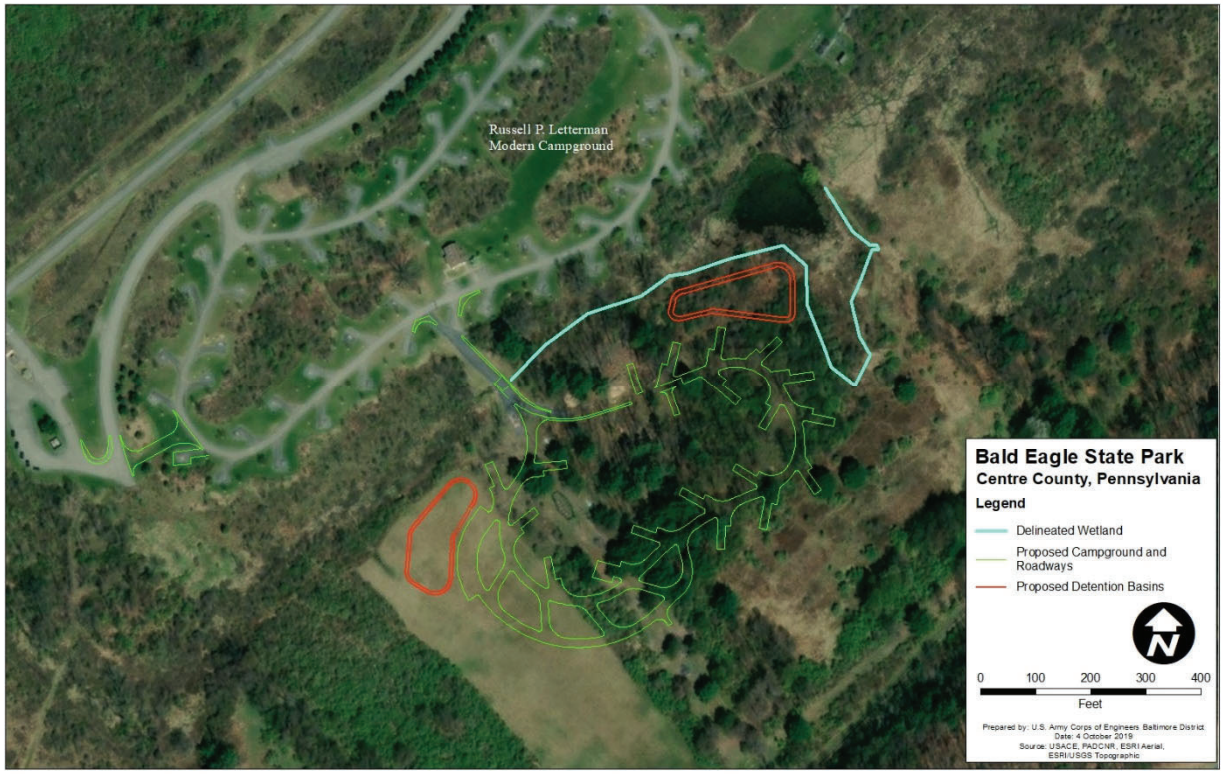

Figure 9. Proposed campground loop configuration, delineated wetland, and proposed detention basins.

3.5.3 Wild and Scenic Rivers (Public Law 90-542)

There are no Wild and Scenic River designations for Susquehanna River or Bald Eagle Creek. Wild and Scenic River designations are provided to areas that are free of impoundments or pollution and watersheds that are primitive with little or no development and public access. These designations do not apply to FJS Reservoir or related adjacent areas.

Impacts: No impacts would occur to Wild and Scenic Rivers as a result of the proposed project.

3.5.4 Hydrology

Surface water from Bald Eagle Creek flows eastward along the base of the foothills of the Appalachian Plateau and empties into the West Branch of the Susquehanna River approximately 15 mi (24 km) east of the project area. Small streams flow into Bald Eagle Creek from the Appalachian foothills to the north. Larger streams, such as Spring Creek, dissect the northernmost ridge of the Ridge and Valley Province and drain the valleys and ridges to the south. Marsh Creek and Beech Creek enter Bald Eagle Creek below the reservoir. The reservoir extends nearly 8 miles upstream and has 23 miles of shoreline. Because of its role in flood control, the reservoir level varies throughout the year. In November of each year, the USACE begins a 5 foot reservoir draw down, then between mid-February and early March the water level can be lowered an additional 15 feet to maximize the flood protection storage in the reservoir. Depending on weather conditions, the reservoir usually reaches the summer recreational pool by mid-May. There are no surface waters in the area to be developed into a campground.

Within the project area, the high point of the site is south of the proposed camping loop resulting in stormwater flowing north across the site to the wetland.

Impacts: As there are no surface waters in the area to be developed into a campground, no impacts would be expected from the proposed project. Although the project is designed to maintain natural drainage patterns to the existing wetland, drainage across the site would be altered by the proposed project. Offsite stormwater runoff from the south would be diverted by earthen berms around the campground sites. Runoff originating from the campsite area would sheet flow either west or east through the campground loop to a detention pond on the west and to a culvert that discharges to another detention pond on the east. The detention pond on the east is adjacent to the wetland and would discharge to the wetland area in order to continue the natural hydrology path that feeds the wetland. The basins would be designed and permitted in compliance with Pennsylvania Department of Environmental Protection's (PADEP) requirements. These design details would be on the final project construction plans.

3.5.5 Clean Water Act

Section 303(d) of the Clean Water Act requires states to identify impaired waters within their jurisdictions. An impaired stream or lake is one that does not meet the water quality standards for its designated use. Section 303(d) authorizes the EPA to assist states, territories and authorized tribes in listing impaired waters and developing Total Maximum Daily Loads (TMDLs) for these waterbodies. A TMDL establishes the maximum amount of a pollutant allowed in a waterbody and serves as the starting point or planning tool for restoring water quality. Although there are no impaired waters within the project area, Bald Eagle State Park is located within the Chesapeake Bay watershed for which there is a TMDL for nitrogen, phosphorus, and sediment. Watershed Implementation Plans (WIPs) have been developed for each jurisdiction to serve as the roadmap for how the Bay jurisdictions, in partnership with federal and local governments, will achieve the Chesapeake Bay TMDL pollution allocations. Currently, no TMDL requirements have been identified that are applicable to this project.

Section 401 of the Clean Water Act requires every applicant for a federal license or permit for any activity that may result in a discharge into waters of the United States to obtain a State Water Quality Certification (WQC) that the proposed activity will comply with state water quality standards (*i.e.*, beneficial uses, water quality objectives, and anti-degradation policy). PADEP issues section 401 Water Quality Certifications for activities within Pennsylvania. The contractor will need to acquire all necessary permits and certifications prior to construction.

Section 301 prohibits the discharge of pollutants to "waters of the United States" from any point source unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) Permit issued pursuant to Section 402 of the Clean Water Act, or a Department of the Army permit issued pursuant to Section 404 of the Clean Water Act.. Storm water discharges associated with activities that involve earth disturbances that exceed one acre require an NPDES permit. Given the size and scope of the proposed campground, an NPDES storm water permit will likely be required.

Section 404 of the Clean Water Act (CWA) and its implementing regulations, including 33 C.F.R. 320.4(b) and Part 332, as well as 33 C.F.R. 336.1(c)(4), require the avoidance, minimization, and/or compensatory mitigation of impacts to wetlands and other waters of the United States. Section 404 authorizes the Secretary of the Army, acting through the USACE, to issue permits for the discharge of dredged or fill materials into the waters of the United States, including wetlands, at specified disposal sites. The selection and use of disposal sites must be in accordance with guidelines developed by the Administrator of the United States Environmental Protection Agency (EPA) in conjunction with the Secretary of the Army and published in 40 CFR Part 230 (known as the 404(b)(1) guidelines). Under the Section 404(b) (1) guidelines, the USACE shall examine practicable alternatives to the proposed discharge and permit only the Least Environmentally Damaging Practicable Alternative. The proposed campground expansion would not involve the discharge of dredged or fill materials into waters of the United States. As a result, a 404(b) (1) evaluation has not been completed.

3.5.6 Water Quality

The Baltimore District Water Quality Program monitors water quality at the FSJ Dam and Reservoir annually. The following text was drawn from the Water Quality Program Annual Report (USACE 2020). The data and full discussion is available in Appendix C.

The monitoring objectives of the water quality program are to compare existing conditions with pollution control standards established by state and federal water quality regulations as mandated by federal law, Executive Order (EO) 12088, to provide support to water control managers, to document the condition of the water quality of the District's reservoirs and identify significant trends, and to evaluate the effectiveness of the Water Control Plan where applicable to manage for water quality concerns. Recent water quality monitoring at the FJS Reservoir was completed in July and August 2019 at 6 stations throughout the reservoir and vicinity (inflow, outflow, and four in-reservoir stations) (Figure 10). The water temperature, specific conductance, dissolved oxygen (DO), and pH were taken with each profile reading. Alkalinity, acidity, phosphate, ammonia, and nitrate were measured from the collected point samples.

The FJS reservoir is surrounded by limestone-rich bedrock, and therefore does not experience acidity problems; however, the reservoir occasionally experiences nutrient enrichment and algal blooms. Most of the suspended sediment entering the reservoir is resultant from agricultural and construction sites in the watershed. The lower end of the reservoir is eutrophic whereas the upper end is mesotrophic.

In both July and August, all analytes measured were within the EPA standards for both the bottom of Station 4 and the outflow. Ion concentrations continued to meet EPA standards and most values fell within the expected range for both surveys. Phosphate levels during both surveys were immeasurable and therefore within the expected range with the exception of the bottom of Station 1 in July. At that time, Station 1 was the only station with a measured amount, and that amount was higher than the expected range. The ammonia level in July was higher than the historical range at most stations but all were back within range in August.

The lake transparency did not meet the EPA standard at all the surface stations in both July and August. Secchi readings at half of the stations were higher than the expected historical range in July and all within the expected range in August.

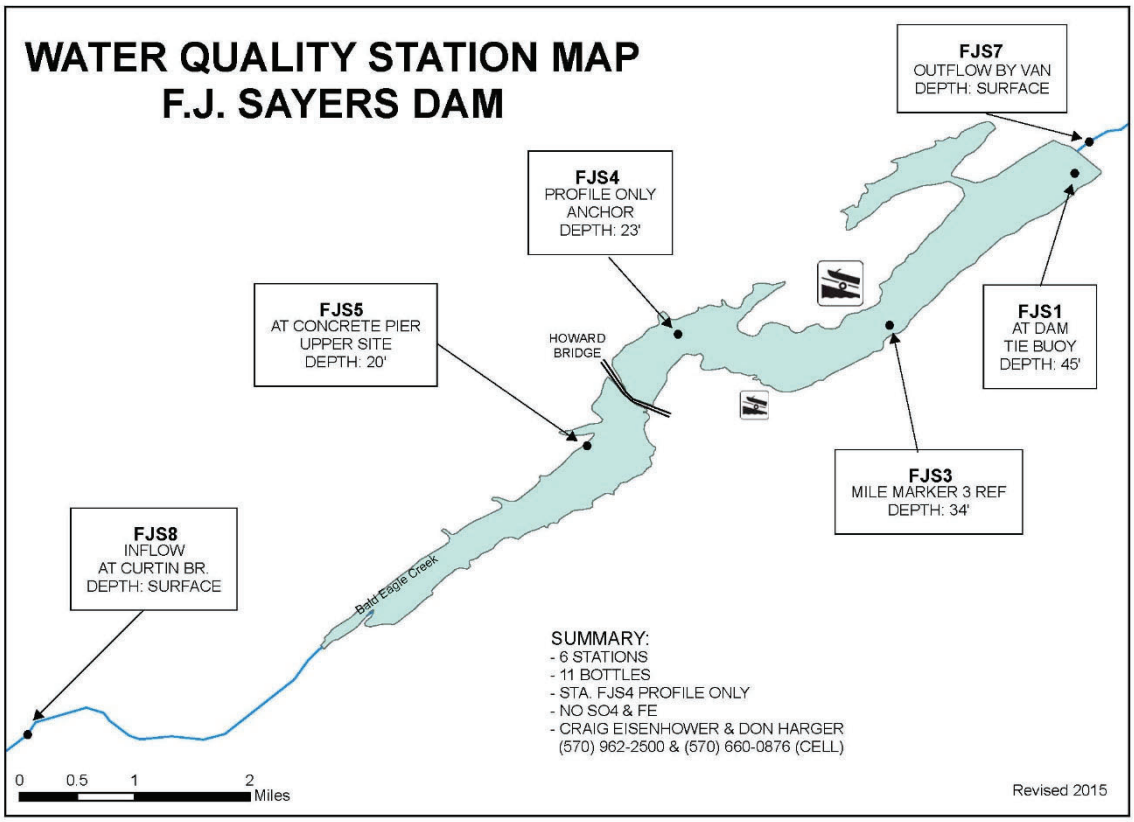

Figure 10. 2019 Water Quality Monitoring Station Map

The readings of sp. conductance, pH, and DO fell within the expected range for all stations in July and most stations in August. The sp. conductance level at the inflow was above the EPA maximum in both July and August with the addition of the bottom of Stations 3 and 5 in August. Sayers is one of the most alkaline reservoirs in the Baltimore District due to the limestone geology in its watershed and this relatively basic outflow is used to help neutralize Beech Creek (exposed to acid mine drainage (AMD)), which flows into Bald Eagle Creek downstream of the dam. Discharges from Sayers Lake were regulated, especially during spring refill, to augment Beech Creek flows and neutralize water downstream of the confluence of Beech and Bald Eagle Creeks. In August, at most stations, the surface and the next three meters of water had a pH level higher than the EPA maximum range. The DO at the bottom of Stations 1 & 3 were the only two stations below the EPA minimum standard in both July and August.

Sayers has a history of algae blooms which was observed again in 2019 with the entire lake appearing a green or olive color in July and August. High chlorophyll readings also confirm this. In August, there were depths at Stations 3, 4, and 5 that had very high chlorophyll levels that are

approaching a concerning amount of enrichment. No harmful algal blooms (HABs) have been reported at Sayers Lake to current date.

Bald Eagle Creek downstream of FJS Dam to the confluence of the West Branch Susquehanna River is listed on Pennsylvania's 303(d) list for impairments to aquatic life because of metals and pH from AMD and organic enrichment/low DO, thermal modifications, and flow alterations from upstream impoundment. Beech Creek, which is a tributary to Bald Eagle Creek downstream of Sayers Dam, is cited for metals and pH from AMD as well (PADEP 2016).

There are a number of possible sources of contamination or nutrient enrichment in the watershed:

1. Fish Hatcheries - Four hatcheries are within the watershed and one has repeatedly violated the nutrient discharge standard (EPA ECHO 2019).
2. Sewage Treatment Plants – There are several large municipal treatment plants upstream of FJS Dam and Reservoir; one with significant violations for fecal coliform, nitrogen, phosphorous, and total suspended solids. Three others with lesser violations (EPA ECHO 2019).
3. Concentrated Animal Feeding Operation (CAFO) - There is one CAFO documented in the watershed (PennFuture 2018 and Susquehanna River Basin Commission (SRBC) Water Resources Portal 2019).
4. Industry - A lime quarry and lime manufacturer (with significant violations for sulfur dioxide in 2014), concrete factory, nuclear reactor, several metal products companies (one with major violations for Zinc, 2008), and plastics, foil, and paper bag manufacturer are all located upstream of the reservoir. The facilities with permit violations in the past three years are the Bestway Travel Center, a mining waste treatment facility, two auto salvage yards, a golf course, and a petroleum station (EPA ECHO 2019).
1. Hydraulic Fracturing – There are three surface water withdrawal locations and two consumptive use dockets (SRBC 2019).

Impacts: The proposed project would not be expected to have a direct or long-term impact on water quality. BMPs would be utilized to meet local stormwater management and erosion/sediment control. Therefore it is not anticipated that the project will serve as an additional source of nitrogen, phosphorus, or sediment that would need to be accounted for in PA's WIP. An indirect effect of the proposed project would be the generation of an increased volume of wastewater from campground visitors. This wastewater would be treated at the wastewater treatment plant but would have a minor, indirect impact on water quality by resulting in increased effluent volume that is discharged to local waterways.

3.6 Floodplains and Floods

The proposed project is located in a floodplain and a flood hazard zone. Flooding occurs occasionally in the lower Sycamore Loop when USACE holds water in the reservoir. However, no

recent high water events have impacted the area or access to the area. There is an existing cottage being incorporated into the campground expansion. Two additional cottages may be considered as additions to the campground at a future time, but are not part of this project.

Impacts: The proposed project would add impervious roadway and parking pads to the floodplain, but would not increase flood levels. The proposed campground loop is planned to be at an elevation above the spillway crest of the dam to reduce flooding risk, although, an extreme high water event could impact access to the site.

3.7 Invasive Species

Invasive species cause significant economic or ecological harm and/or harm to human health. EO 13122, Invasive Species, requires federal agencies to engage in practices and prevention measures to minimize risks associated with the introduction or spread of invasive species.

An invasive terrestrial plant known to occur on FJS project lands is the spiny plumeless thistle (*Carduus acanthoides*, Figure 11a). The populations of plumeless thistle are minimal and would not affect project operations. The project uses monitoring and established BMPs to limit this species as much as possible.

The invasives autumn olive (*Elaeagnus umbellata*) and Russian olive (*Elaeagnus angustifolia*) have been moving into the fields at FJS at a very rapid rate and are threatening to dominate.

Curly pondweed (*Potamogeton crispus*, Figure 11b) and hairy willow-herb **(***Epilobium hirsutum*, Figure 11c**)** are major invasive aquatic plant species of concern in the Commonwealth of Pennsylvania. These species can cause major degradation of natural habitats and often cause damage to infrastructure and have been documented in regions in or near the reservoir, however, populations of these species are currently at minimal levels.

Zebra mussels (*Dreissena polymorpha*), a widely recognized invasive species, were documented in New York and Pennsylvania portions of the upper Susquehanna River in 2007, but have not been found at FJS at this time. The PFBC implements monitoring and management plans for invasive species in order to protect and preserve resources associated with FJS.

Impacts: There could be long-term and direct impacts to invasive species at the proposed project. It is expected that invasive species present (e.g. autumn olive and Russian olive) would be removed during construction by DCNR where in conflict with the project design. Management measures such as mechanical removal or herbicides could be used to manage invasive species following development of the campground. The park primarily uses mechanical removal of invasive plant species. Applications of herbicides would only be used as a last resort in treating invasive vegetation. Any herbicides would be applied by a licensed applicator following all guidelines in doing so.

a. *Carduus acanthoides*

b. *Potamogeton crispus*

c. *Epilobium hirsutum*

Figure 11. Invasive Species at FJS

3.8 Threatened and Endangered Species

3.8.1 Federally-listed Species

Based on information from USFWS's Information for Planning and Consultation (IPaC), there is the potential for four federally-listed species in the project area. Two species of bats listed in the IPaC information are the endangered Indiana bat (*Myotis sodalis*) and the threatened northern long-eared bat (*Myotis septentrionalis*) (NLEB). Two flowering plants, the threatened small-whorled pogonia (*Isotria medeoloides*) and the endangered northeastern bulrush (*Scirpus ancistrochaetus*) also have potential to occur within project lands.

The bald eagle (*Haliaeetus leucocephalus*) was previously an endangered species but is now on its way to recovery. In June of 2007, bald eagles were removed from the Federal List of Endangered Species after USFWS surveys found an estimated 9,789 nesting pairs in the continental US. Ninety-six breeding pairs were estimated in Pennsylvania in 2006. However, eagles remain protected under the Bald and Golden Eagle Protection Act. There are two nests currently located on the southeastern side of the reservoir at the toe of Bald Eagle Mountain but these are inactive (November 2019).

With respect to bats, the proposed project is not located within 0.25 miles of a known NLEB hibernaculum or within 150 feet from a known, occupied maternity roost tree. There are no documented natural caves or abandoned mines within or near the state park. Therefore, although unlikely, any incidental take that may occur is not prohibited in accordance with the conservation rule (*i.e.*, 4(d) rule) specific for this species. Trees greater than or equal to 5 inches in diameter at breast height will only be removed from the project area for construction between October 1 and March 31 to avoid killing or injuring Indiana bats. Where possible, shagbark hickory, dead and dying trees, and trees greater than 12 inches in diameter at breast height would be retained.

Table 3 summarizes federal and state-listed species, their rank, and status.

Table 3. State-listed Threatened and Endangered Species

ELCODE	Scientific Name	Common Name	State Rank	State Status	Federal Status
ABNCA02010	*Podilymbus podiceps*	Pied billed grebe	S3B, S4N	N/A	N/A
ABNKC10010	*Haliaeetus leucocephalus*	Bald eagle	S2B	PT	N/A
AMACC01100	*Myotis sodalis*	Indiana bat	S1	PE	Endangered
AMACC01150	*Myotis septentrionalis*	Northern long-eared bat	S1		Threatened
PMCYP0Q030	*Scirpus ancistrochaetus*	Northeastern bulrush	S3	PE	Endangered
PMORC1F010	*Isotria medeoloides*	Small-whorled Pogonia	S1	PE	Threatened

PE **Pennsylvania Endangered** - Species which are in danger of extinction throughout most of their natural range within this Commonwealth, if critical habitat is not maintained or if the species is greatly exploited by man. This classification shall also include any populations of species that have been classified as Pennsylvania Extirpated, but which subsequently are found to exist in this Commonwealth.

PT **Pennsylvania Threatened** - Species which may become endangered throughout most or all of their natural range within this Commonwealth, if critical habitat is not maintained to prevent their future decline, or if the species is greatly exploited by man.

S1 **Critically Imperiled -** Critically imperiled in the nation or state because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state.

S2 **Imperiled -** Imperiled in the nation or state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state.

S3 **Vulnerable -** Vulnerable in the nation or state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

S4 **Apparently Secure -** Uncommon but not rare; some cause for long-term concern due to declines or other factors.

B **Breeding population**

N **Non-breeding population**

Impacts: With concurrence from the USFWS (letters dated May 8, 2020 and August 5, 2020), USACE determined that the project is not likely to adversely impact any of the listed species. The seasonal restriction for tree clearing would be followed to avoid impacts to Indiana bats. NLEB are unlikely to be in the area and the project aligns with the 4(d) conservation rule. The recommended plan was designed to avoid wetland areas and includes efforts to maintain natural drainage paths and BMPs to avoid impacts to Northeastern bulrush. A habitat assessment (see Appendix B) identified that no optimal small-whorled pogonia habitat is within the project area.

Based on coordination with USFWS (email dated December 11, 2019), the proposed campground construction would be well outside the Service's standard recommended nest buffer distance of 660 feet for development activities. Consequently, USFWS concurs with USACE'S determination that the proposed project is unlikely to disturb nesting bald eagles.

USFWS recommends that the project reexamine the location of bald eagle nests each breeding season until construction begins. Bald eagles occasionally establish new nests within existing territories. Additionally, as Pennsylvania's bald eagle population continues to grow, new territories appear each year. In the event a new nest is discovered within 660 feet of the proposed project site, USACE would contact USFWS for further guidance.

3.8.2 State-listed Species of Concern

The Pennsylvania Natural Diversity Inventory (PNDI) report identified one state-listed species of concern in the project area, the pied-billed grebe (*Podilymbus podiceps*).

Impacts: No impacts are expected from the proposed project to state-listed species of concern.

3.8.3 Critical Habitat

No areas are listed as critical habitat or Natural Heritage Areas by the Pennsylvania Natural Heritage Program (PNHP) or USFWS in the vicinity of the project.

Impacts: No impacts are expected from the proposed project to critical habitats.

3.8.4 Important Bird Areas

The project area is located in the vicinity of the Important Bird Area known as Bald Eagle Ridge. Bald Eagle Ridge, which runs from Altoona to Williamsport, PA is identified as an Important Bird Area. This designation is for globally important habitats for the conservation of birds. This ridge has varied habitats including mature forests, late successional stage field, wetlands, perennial and intermittent streams and hillside seeps. The large expanses of unfragmented forest provide breeding habitat for Neotropical migrant species such as worm-eating warbler, wood thrush, scarlet tanager and ovenbird. The ridge is also an important flyway for raptors.

Impacts: No impacts are expected from the proposed project to important bird areas.

3.9 Archeological and Historic Resources

In the larger regional area there are hundreds of archaeological sites and historic standing structures on record with the Pennsylvania State Historic Preservation Office (SHPO) and Pennsylvania Historical & Museum Commission (PHMC). Historic structures in Bald Eagle State Park include two cemeteries and the FJS Memorial. The Schenck Cemetery is located in Lower Green's Run area and is an inholding owned and maintained by the Schenck's Cemetery Association. Schenck's Cemetery is leased from USACE and not the Commonwealth. Lands leased to the Commonwealth surround it. Sand Hill Cemetery is located at the west end of Green's Run LDA Management Unit and is approximately 0.36 acres. The FJS Statue and War Memorial is located along the old Rt. 220, in the main park area near the Hunter Run Inlet.

The following sections contain excerpts from the 2017 Integrated Cultural Resources Management Plan and a report titled, "Archeological Inventory and Assessment of FJS Lake Shoreline, Centre County PA," prepared by John Milner Associates, Inc. for USACE, Baltimore District (USACE 2017).

3.9.1 Existing Archaeological Surveys

A minimal amount of archeological survey work was conducted within and around FJS Reservoir due to its construction occurring before passage of the National Historic Preservation Act of 1966. The reservoir was completed in 1969, before any amendments to the original act were enacted. However, in 1966 archeologist Jacob Gruber, Ph.D., now a professor emeritus in the Department of Anthropology at Temple University, completed a general overview report for the National Park Service on FJS and the associated archeological investigations conducted in the vicinity, in which he documented the presence of large Late Woodland village sites at the headwaters and mouth of Bald Eagle Creek, southwest and northeast of the current project area. Before and since that date, local artifact collectors have found diagnostic prehistoric artifacts dating to the Archaic and Early Woodland periods in agricultural fields along the creek.

In the late 1980s, a Phase I archeological survey was conducted on a 74-acre (30 hectares) site prior to the construction of the Russell P. Letterman Campground within Bald Eagle State Park, along the north side of the reservoir in Liberty Township. The survey entailed systematic shovel testing and resulted in the identification of one archeological site with a historical domestic component (36CE374), which was determined not to warrant Phase II archeological evaluation (Miller and Boyko 1989). USACE-Baltimore completed a Phase I archeological survey of a proposed wetland-mitigation site in 1992, which was built to mitigate the effects of the Lock Haven Local Flood Protection project. No prehistoric or historical cultural resources were identified (USACE 1992).

In January 2008, human skeletal remains were discovered by a visitor to FJS. The remains were exposed within the winter drawdown zone east of the borough of Howard, and upon further investigation by a Mercyhurst College physical anthropologist, they appeared to be the bundle burial of two individuals contained within separate, shallow pits. Based on physical characteristics, a prehistoric Native American ethnic identity is indicated. Subsequent pedestrian reconnaissance by Baltimore District staff in the vicinity of the burials resulted in the observation that several bone fragments remained in the larger, eastern pit. The remainder of the soil within this pit was excavated and screened to recover all of these fragments. The burial location, which was assigned an archeological site number of 36CE524, was determined to have undergone severe wind and water erosion, which has occurred around substantial portions of the reservoir edge and has resulted in a deflated landscape. This erosion is accelerated by the annual winter drawdown of the reservoir level, which exposes the supersaturated, un-vegetated shoreline sediments and subjects them, upon drying out, to wind-induced erosion. In the greater vicinity of the burials were a number of prehistoric artifacts, including nine projectile points (5 rhyolite and 2 argillite broadspears, 2 chert Lehigh/Snook Kill), lithic debitage (52 rhyolite, 26 chert, unknown quantity of jasper), and two grooved axes manufactured from sandstone. However, due to the highly disturbed context, none of these artifacts could be clearly associated with the burials.

The remnants of a wall and a circular silo foundation, both of poured concrete, were noted during the pedestrian reconnaissance about 30 m (100 ft) south of the burial site. These probable twentieth-century features, with an associated surface scatter of historical ceramics and glass that likely date to the early portion of that century, are apparently part of a farmstead that Herbert S. Schenck owned as of 1965, as plotted on a USACE map prepared that year; a total of eight structures are depicted at the location (USACE, Baltimore District 2008a). Also in 2008, a Phase

I cultural resources investigation was conducted at the proposed site of the Nature Inn at Bald Eagle State Park. There was no evidence of any cultural activity occurring on the site (USACE Baltimore District 2008b).

Prior to 2010, thirty-one archeological sites had been previously recorded either within the current bounds of the reservoir or along its periphery. Of these, 16 are recorded as completely (100%) destroyed (36CE31, 73–81, 84–88, 524), occurring within the limits of the reservoir, while 1 site, located above the dam, is described as 90–100 percent intact (36CE82). All of the sites except for the previously noted 36CE374, the historical domestic site, are identified as having yielded exclusively prehistoric artifacts. The most-common such components, occurring at eight sites apiece, are unspecified Archaic (36CE81, 85–87, 345, 346, 349, 350), Late Archaic (36CE76, 77, 377–380, 383, 384), and undetermined prehistoric (36CE31, 73–75, 78–80, 82). Seven sites have produced artifacts dated to the Terminal Archaic period (36CE76, 88, 347, 348, 378–380), while six sites have documented Late Woodland components (36CE76, 84, 350, 378, 382, 384). The remaining identified cultural/temporal affiliations (Early Archaic, Middle Archaic, Early Woodland, Middle Woodland, unspecified Woodland, Historic) have been recognized at one or two sites each.

In 2010, the flood pool at Sayers was drawn down by USACE to approximately 620.5 feet Project Construction Datum (PCD) to facilitate a survey, carried out by John Milner Associates, Inc. for USACE, resulting in a 1,100-acre project area. The 2010 survey is the only professional archaeological investigation conducted in the drawdown zone, but the survey only included the area between elevations 630.0 and 625.5 feet PCD, and not the area between 625.5 feet PCD and the normal winter drawdown elevation of 610.0 feet PCD. The 2010 survey also did not include the entire circumference of the drawdown zone. Of 31 previously recorded sites in the Corps fee-title land, 4 were resurveyed, though no artifacts were observed at two locations. Also, 21 new sites were identified. The total includes 19 historic sites, 1 exclusively prehistoric site, 3 sites with both prehistoric and historic components, and 2 sites where no artifacts were observed. Artifacts were not collected from the sites during this survey, but a sample of in situ artifacts were photographed. Site dimensions and locations were recorded using a portable GPS unit. No additional human remains were identified (USACE, Baltimore District 2011).

The 2010 report on the surface inspection of the drawdown zone contained a preliminary recommendation that all of the archaeological sites in the drawdown zone have been disturbed by one or more natural and human processes, and no longer retain enough of their integrity to be historically significant. However, this recommendation was made in the absence of any subsurface testing that could confirm the disturbed nature of the archaeological resources, and it was not coordinated with or agreed to by the PA SHPO.

None of the known archaeological sites in the 1,100 acre project site of the 2010 surveys have been evaluated for eligibility for the NRHP, though as noted in the 2010 survey report, those sites located within the drawdown zone have likely been disturbed by natural or human processes and no longer retain their integrity.

3.9.2 Historic Background

Native Americans-Delaware, Iroquois, Mingo, and Shawnee - flourished in the early years of the project site and Centre County, with place names (typonyms) reflective of that heritage. A Delaware village that was named in honor of Chief Woapalanne (translating to "bald eagle") resulted in the naming of a number of local landmarks that include Bald Eagle Creek, Bald Eagle Mountain, Bald Eagle State Park, and Bald Eagle Valley.

In 1779, the village of Bald Eagle's Nest spanned along the east river banks at the confluence of Bald Eagle and Spring creeks north of Bellefonte and at the current site of Milesburg, and is the nearest historically documented Native American settlement to the project area (Kent et al. 1981).

During the American Revolution (1775–1781), settlers gradually moved into Bald Eagle and Penns valleys. At this time, hostilities between the Euroamerican inhabitants and the local Native Americans increased significantly, leading to the construction of a series of blockhouses by the settlers to provide protection. However, because of the lack of available military aid for these colonists during the war years, many of them resettled farther east (Mitchell 1941:12).

Farming was the predominant occupational pursuit in the region during the last quarter of the eighteenth century, but several years prior to the turn of the nineteenth century, iron-rich ore deposits were discovered in the Centre County area, which attracted the attention of businessmen and miners alike. Iron production rapidly increased in importance during the 1790s, with Chester County iron master Philip Brenner establishing an iron plant near present-day Bellefonte. Brenner was joined by John Potter in 1792, who started a blast furnace, and their ironworks soon gained the interest of other Pennsylvanian iron manufacturers, which spurred the influx of many immigrants in search of employment in the emerging local iron industry.

Upon its formation in 1800, Centre County's population stood at 2075, by which time several iron plants, as well as gristmills, sawmills, and other water powered industries were in operation. The increasing importance and extent of iron production required better transportation in the area, and new, improved roads were constructed, soon followed by the construction of canals and then railroads (Rupp 1847:250; Mitchell 1941:16, 23).

The area including Howard Township, in which over half the length of FJS is located, was settled as early as 1769 and was part of the original Centre Township for the first decade of Centre County's existence, until its formation in January 1810. It was named for philanthropist John Howard and includes the borough of Howard and the village of Mount Eagle. Liberty Township, in which the northeastern portion of F J Sayers, including the dam, is located, was also part of the original Centre Township and was created from Howard Township in August 1845. The villages of Eagleville, Blanchard, and Monument occur within its boundaries (Godcharles 1933:116).

Thirteen years later, Beach Nichols's maps of the two townships in his Atlas of Centre County, PA (Nichols 1874) shows several houses and other buildings in proximity to the creek, with names including Pletcher, Shank, Schenck, Askey, Butler, Pifer, Woodward, Long, and Hall in Howard Township, and Pletcher, Allison, Shank, Riggle, and Weedy above (southwest of) to just below the current location of the Sayers project area in Liberty Township. Outside of the borough of

Howard, the early Howard, PA (USGS 1923, surveyed in 1921) and Centre Hall, PA (USGS 1929, surveyed 1924) 15-minute topographic quadrangle maps depict sparse buildings within proximity to Bald Eagle Creek between the Hunter Run confluence, at the approximate location of the Sayers Lake dam at the northeast end of the reservoir (and the Bullit Run confluence in proximity to the southwestern end of the reservoir; nearly all of these buildings have been removed).

During the second half of the nineteenth century in Centre County in general, those inhabitants engaged in agriculture remained predominant, with residents employed in the trades and industry comprising smaller percentages of the total. The dam and reservoir were completed in 1969.

Impacts: In December 2017, a Phase IB archaeological investigation was conducted at the site of the proposed project. The survey was conducted in accordance with the *Guidelines for Archaeological Investigations in Pennsylvania* (PHMC 2016), and tested an 11-acre area with 68 shovel test pits excavated at 25 meter intervals. No cultural resources were documented as a result of the survey, and no further archaeological work was recommended for the proposed project. PHMC concurred with this recommendation in a letter dated April 26, 2018 (Appendix B). The proposed project will have no effect on historic properties.

3.10 Socioeconomic Resources and Environmental Justice

3.10.1 Aesthetics

The project area is undeveloped and primarily on wooded uplands with a mix of deciduous and coniferous forests, an overgrown field, a pond, and a wetlands complex. The recreational facilities of the park are set within this natural setting.

Impacts: It is anticipated that there would be short-term, negative impacts to aesthetics during construction. However, construction impacts would cease once the project is complete. Conducting construction in the winter months when park visitation is lowest would reduce perceived impacts. It is anticipated that construction would be completed in 3 months. Following construction, some may view the aesthetics of the area to be reduced due to removal of trees and the addition of campground facilities while other park users view the change as a positive aesthetic impact.

3.10.2 Noise

Ambient noise levels are low, and typical of those found in rural areas with low-density development. While the background noise level for persons within the vicinity of the project area might typically be 40 dBA, acute noises may occur, particularly in the daytime, associated with maintenance such as a power mower, which will generate 65-95 dBA (at 50 ft) or a leafblower 110 dBA (at 50 ft). Noise from boats using the reservoir could reach 75 to 90 dBA. Noise from vehicular traffic is typically 70 dBA (at 50 ft). Noise levels from construction equipment can range between 74 to 113 dBA (at 50 ft) depending on the equipment.

Impacts: It is anticipated that there would be short-term, negative impacts to noise during construction. However, construction impacts would cease once the project is complete. Conducting construction in the winter months when park visitation is lowest would reduce those exposed to noise impacts. It is anticipated that construction would be completed in 3 months.

3.10.3 Population

FJS is a regional resource, with a large portion of its visitors coming from the central Pennsylvania region. The zone of influence for the socio-economic analysis is comprised of four Pennsylvania counties. The counties include Centre County, where the reservoir lies, and the nearby counties of Blair, Clinton, and Huntingdon. Table 4 shows the total population for the zone of interest is 369,780. Almost 34 percent of the zone of interest total population is in Blair County, 44 percent in Centre County, 11 percent in Clinton County, and 12 percent in Huntingdon County. From 2018 to 2040, the population in the zone of interest is expected to increase to 421,163, an annual growth rate of 0.6 percent per year. The distribution of the population among gender is approximately 51 percent male and 49 percent female in geographical areas within the zone of interest.

Table 4. 2018 Population Estimate and 2040 Projections Estimate

Geographical Area	2018 Population Estimate	2040 Projection Estimate
Pennsylvania	*13,160,961*	*14,132,588*
Blair County	123,842	130,036
Centre County	161,443	188,564
Clinton County	39,074	48,164
Huntingdon County	45,421	54,399
Zone of Interest Total	***369,780***	***421,163***

Source: U.S. Census Bureau, American Community Survey (2018 ACS 5-year Estimate Data Profile); PA State Data Center (2040 Projections for PA)

Table 5. 2018 Population Estimate by Age Group

Area	Age Group									
	<5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 44	45 to 64	65 to 74	75 to 84	>85
Pennsylvania	*709,250*	*727,174*	*764,823*	*826,326*	*842,245*	*3,162,970*	*3,528,532*	*1,236,019*	*669,591*	*324,251*
Blair County	6,581	76,940	7,434	7,442	6,927	29,141	34,859	13,344	7,458	3,827
Centre County	6,443	6,485	7,174	16,322	27,403	39,6341	36,562	12,039	6,574	2,810
Clinton County	2,085	2,309	2,222	3,158	4,403	8,314	9,908	3,839	2,110	1,086
Huntingdon County	2,033	2,315	2,492	2,903	2,951	10,893	12,762	5,174	2,887	1,011
Total Zone of Interest	***17,142***	***18,049***	***19,322***	***29,825***	***41,324***	***87,979***	***94,091***	***34,396***	***19,029***	***8,623***

Source: U.S. Census Bureau, American Community Survey (2018 Estimate)

Table 5 shows the population by age group. The distribution by age group is similar among the counties, zone of interest and the state overall. Within the zone of interest, the largest age group is the 45 to 64, with the exception of Centre County where the largest age group is 25 to 44. Blair County has the most children under the age of 9 and the most people over the age of 75.

Population by Race and Origin is displayed in Table 6. For the zone of interest, 90.2 percent of the population is White, 0.07 percent American Indian or Native Alaskan, 1.4 percent two or more races, 2 percent Hispanic, and 3 percent Black. The remainder of the races totals less than 4 percent.

Table 6. 2018 Population Estimate by Race and Origin

Geographical Area	Race Group							
	White	Black	American Indian and Alaskan Native alone	Asian alone	Native Hawaiian and Pacific Islander alone	Some other race alone	Two or more races	Hispanic or Latino
Pennsylvania	*9,826,865*	*1,360,576*	*14,419*	*424,597*	*2,702*	*20,860*	*236,006*	*905,156*
Blair County	117,242	1,956	39	866	55	149	2,027	1,508
Centre County	138,021	5,857	133	10,173	49	281	2,249	4,680
Clinton County	37,217	566	49	298	6	0	361	577
Huntingdon County	41,240	2,345	52	240	4	0	682	858
Total Zone of Interest	***333,720***	***10,724***	***273***	***11,577***	***114***	***430***	***5,319***	***7,623***

Source U.S. Census Bureau, American Community Survey (2018 Estimate)

3.10.4 Education and Employment

Within the zone of interest, approximately 40 percent of the population of people 25 years and older have a high school diploma or equivalent; 17 percent have a Bachelor's degree; 14 percent have some college, but no degree; 12 percent received a Graduate or professional degree; 8 percent received an Associate degree; 6 percent finished 9th thru 12th grade without receiving a diploma; 2 percent have less than nine years of education. Within the zone of interest, 54 percent of the population that received a Graduate or professional degree were from Centre County (Table 7).

Employment by sector is presented in Table 8. In the zone of interest, approximately 38 percent of the workforce were employed in management, business, science and art occupations; 19 percent in service occupations; 21 percent in sales and office occupations; 9 percent in natural resources, construction, and maintenance occupations; and 14 percent in production, transportation and material moving occupations.

As shown in Table 9, the unemployment rate (2018 Estimate) is slightly lower in the zone of interest at 5.4 percent, than the 5.8 percent unemployment rate in Pennsylvania. Only Huntingdon County has an unemployment rate slightly higher than the state-wide estimate.

Table 7. 2018 Population Estimate by Highest Level of Educational Attainment

Geographical Area	Highest Level of Educational Attainment							
	Population: 25 years and older	Less than 9th grade	9th to 12th grade, no diploma	High school graduate (includes equivalency)	Some college, no degree	Associate's degree	Bachelor's degree	Graduate or professional degree
Pennsylvania	8,921,363	291,164	582,854	3,133,655	1,426,783	741,590	1,661,705	1,083,612
Blair County	88,518	2,024	6,005	40,191	13,960	7,918	12,371	6,049
Centre County	97,616	1,899	3,639	19,250	12,024	7,131	22,859	20,814
Clinton County	25,257	793	2,054	11,492	3,516	2,609	3,105	1,688
Huntingdon County	32,727	915	2,647	16,108	5,024	2,488	3,692	1,853
Total Zone of Interest	***244,118***	***5,631***	***14,345***	***97,041***	***34,524***	***20,146***	***42,027***	***30,404***

Source: U.S. Census Bureau, American Community Survey (2018 Estimate)

Table 8. 2018 Population Employment by Sector

Occupation	Geographical Area					Zone of Interest
	Pennsylvania	Blair County	Centre County	Clinton County	Huntingdon County	
Civilian Employed Population 16 years and older	**6,151,988**	**56,627**	**76,741**	**17,867**	**18,486**	**169,721**
Management, business, science, and arts occupations	2,349,748	17,667	36,713	4,848	5,469	**64,697**
Service Occupations	1,071,092	10,148	13,866	3,696	3,738	**31,448**
Sales and Office Occupations	1,336,980	14,075	14,383	3,637	3,594	**35,689**
Natural Resources, Construction and Maintenance Occupations	503,095	5,395	4,695	2,157	2,438	**14,685**
Production, Transportation, and Material Moving Occupations	891,083	9,342	7,084	3,529	3,247	**23,202**
Industry	**Geographical Area**					**Zone of Interest**
	Pennsylvania	**Blair County**	**Centre County**	**Clinton County**	**Huntingdon County**	
Agriculture, Forestry, Fishing and Hunting, and Mining	83,646	864	1,086	412	6428	**2,990**
Construction	357,563	3,756	3,179	1,231	1,724	**9,890**
Manufacturing	727,961	5,993	5,425	2,967	2,491	**16,876**
Wholesale Trade	169,187	2,222	1,240	371	327	**4,160**
Retail Trade	697,501	8,537	7,353	2,370	1,872	**20,132**
Transportation and Warehousing and Utilities	336,972	3,930	2,384	857	902	**8,073**
Information	102,804	945	800	234	245	**2,224**
Finance and Insurance and Real Estate and Rental and Leasing	397,588	2,055	2,924	606	558	**6,143**
Professional, Scientific, and Management, and Administrative and Waste Management	363,276	3,917	6,597	1,093	1,041	**12,648**
Educational services, and health care and social assistance	1,590,166	14,198	31,521	4,287	5,294	**55,300**
Arts, entertainment, and recreation, and accommodation and food services	516,476	5,058	8,703	1,620	1,234	**16,315**
Other services, except public administration	288,748	2,780	2,791	978	766	**7,315**
Public Administration	247,110	2,372	2,738	841	1,404	**7,355**

Source U.S. Census Bureau, American Community Survey (2018 Estimate)

Table 9. 2018 Population Labor Force, Employment, and Unemployed

Geographical Area	Civilian Labor Force	Employed	Unemployed	Unemployment Rates
Pennsylvania	6,531,763	6,151,998	379,765	*5.8*
Blair County	59,583	56,627	2,956	5.0
Centre County	80,150	76,741	3,409	4.3
Clinton County	18,936	17,867	1,069	5.6
Huntingdon County	19,729	18,486	1,243	6.3
Zone of Interest Average	***178,612***	***169,721***	***11,196***	***5.4***

Source: U.S. Census Bureau, American Community Survey (2018 Estimate)

3.10.5 Households and Income

There are approximately 141,085 households in the zone of interest. As shown in Table 10, the median household income and per capita income within the zone of interest is less than the state overall. In the counties within the zone of interest, the median household income is nearly $51,000, compared to the state median household income of $59,454 in Pennsylvania. Similarly, the zone of interest has a lower per capita income ($26,005) compared to that of Pennsylvania ($32,889). Within the zone of interest, Centre County has the highest median household income ($58,055) and the highest per capita income ($29,432).

Table 10. 2018 Median Household and Per Capita Income

Geographical Area	Median Household Income ($)	Per Capita Income ($)
Pennsyvlania	59,454	32,889
Blair County	47,969	26,648
Centre County	58,055	29,432
Clinton County	49,234	23,780
Huntingdon County	48,597	24,159
Zone of Interest Total/Average	***50,964***	***26,005***

Source: U.S. Census Bureau, American Community Survey (2018 Estimate)

Impacts: The proposed project could have a minor long-term, indirect, impact on the socioeconomics of the project area due to increased tourism. The increased campground capacity is expected to generate increased tourism and associated revenue for the park and local communities.

3.10.6 Environmental Justice

EO 12898 directs Federal agencies to determine whether the recommended plan would have a disproportionate adverse impact on minority or low-income population groups within the project area. The EPA Environmental Justice Screening and Mapping Tool (EJ Screen) provides information to evaluate environmental justice concerns. Demographic information compiled for the area surrounding the reservoir (Howard, PA with 1 mile buffer) identifies that 1% of the population is of a minority origin, and 20% of the population is categorized as low income; both are below state, regional, and national levels. Further, the study area is to be near or below the national median percentile for environmental justice indicators such as air quality, cancer risk, exposure to lead paint, traffic, hazardous waste, etc., (Figure 12). Percentiles climb as the reference areas become smaller, i.e., regional and state comparisons. Environmental Justice Indices for the area surrounding the reservoir exceed the median state percentiles for all parameters except wastewater discharge and lead paint.

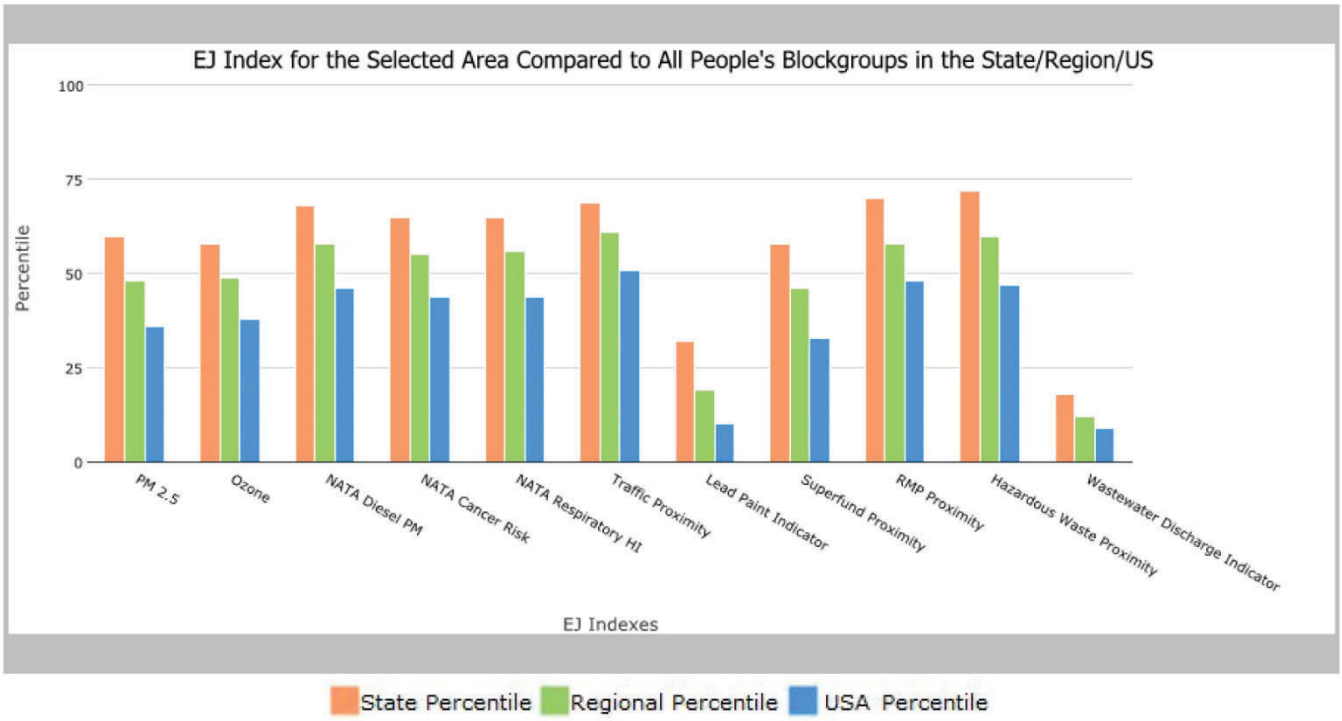

Figure 12. Comparison of local, state and national Environmental Justice Indices for the area surrounding Foster Joseph Sayers Reservoir (Howard, PA) (EPA 2019)

Impacts: No impacts are expected from the proposed project to minority or low-income communities.

3.10.7 Recreation Facilities, Activities, and Needs

DCNR leases 5,900 acres from USACE as Bald Eagle State Park. DCNR has numerous obligations under the lease, including maintenance, health standards, and visitor safety. Approximately 985 acres of the park are highly developed while the remainder exists in a natural state. The park is a multiple use park with overnight facilities, providing various year-round recreational opportunities, including Nature Inn lodge. The purpose of the state park is to conserve natural, aesthetic, cultural, and historic resources; provide opportunities for enjoying healthful outdoor recreation; and to serve as outdoor classrooms for environmental, cultural, and historic resources education; and to conserve these areas for future generations (DCNR 2011). A full list of recreation facilities in Bald Eagle State Park is compiled in Table 11. See Figure 3 for a map of Bald Eagle State Park's recreation facilities.

Recreational opportunities include swimming, picnicking, boating, fishing, water skiing, hiking, tent and trailer camping, ice fishing, ice skating, snowmobiling, sled and tobogganing, and cross-country skiing. Hiking trails are being developed in the park. Near the camping area the Lake Side Trail follows the southeast shore for 3.5 mi (5.63 km).

Table 11. Recreation Facilities at Bald Eagle State Park

Facility	Number
Sanitary	
Bath Change House	1
Restroom, Chemical	4
Restroom, Vault	2
Restroom, Waterborne	8
Shower House	2
Overnight	
Building, Entrance Station	1
Campsites Total	189
Gate/Park Attendant Site (pad)	2
Water Based	
Boat Ramp	7
Marina	1
Dry Storage Slips	175
Wet Slips	425
Swimming Beach	1
Other	
Building, Activity Center	1
Building, Admin. or Maintenance	1
Snack bar	1
Traffic Counters	1
Land Based	
Amphitheater	1
Field, baseball	8
Picnic site	339
Playground equipment	339
Trail, cross country skiing	5
Miles	12
Trail, hiking	5
Miles	13

Source: FJS 2017 Recreation Facilities Annual Report

The 1,730-acre FJS Reservoir is a key feature of Bald Eagle State Park, and offers boating opportunities. The nearly eight-mile long reservoir has 23 miles of shoreline. Unlimited horsepower motors are permitted and the speed limit on the reservoir is 45 mph. Six boat launch ramps are available for use in the park. Two of these, the Bald Eagle Launch Area and the Lower Greens Run Launch, are open all night to provide continuous fishing access. Three hundred and sixty marina slips are available for rent on a seasonal basis. This area also provides winter boat and trailer storage. The marina also provides boat rental, boating and fishing supply sales, gasoline sales, and boat and motor sales and service.

The PFBC manages the reservoir's fisheries, enforces fishing regulations, and stocks fish. The entire reservoir (except for the beach area) and tributary streams are open for fishing. Crappies, bass, and northern pike are the dominant game fish; the reservoir also includes muskies, chain pickerel, catfish and sunfish.

The swimming area at the park is a 1,200 ft (366 m) sand and turf beach, providing two children's play areas, a concession stand, men's and women's change rooms, a lifeguard station, and a first aid station. Adjacent to the beach is the Schencks Grove Picnic Area. This wooded area has 200 picnic tables, two public restrooms, and two play fields. Northeast of Schencks Grove is the Skyline Drive Picnic Area. This location features 115 picnic tables, four public restrooms and two play fields. Picnicking is also available at tables located at most of the day-use areas.

Bald Eagle State Park provides 189 campsites. There are full-hookup sites, camping cottages, deluxe cottages, modern electric sites, modern non-electric sites, pavilions, rustic non-electric sites, rustic tent sites, and yurts. The existing Modern Campground provides 35 tent sites and 35 camp vehicle sites. The tent sites are approximately 150 ft (46 m) from the road and 250 ft (76 m) apart. Two restrooms and a sanitary dump station are provided at the campground.

According to the 2014-2019 Pennsylvania's Statewide Comprehensive Recreation Plan, maintenance of existing park and recreation areas continues to be the top concern and priority for both citizens and recreation providers. This is further presented in the 2013 Pennsylvania State Park Visitor Use Monitoring Survey Study. As part of the multi-year study, visitors were provided with a survey that allowed them to provide open ended suggestions for improving park management. For Bald Eagle State Park, many recommendations were for improvement of road conditions, campground and beach enhancements, and other various facility repairs/improvements.

3.10.7.1 Visitation Profile

In a recent report compiled of a survey of state park visitation among six state parks, Bald Eagle State Park visitors reported the most frequent visitation with an average of 10.9 trips over the last 12 months (n=207) (Pennsylvania State University (PSU) 2013). Among those visitors surveyed, approximately 53 percent were male, 95 percent were Pennsylvania residents, the majority (approximately 66 percent) were between the ages of 36 and64, and traveled an average distance of 58 miles (35 percent traveled a distance greater than 50 miles) (PSU 2013). The park hosted over 500,000 visitors in 2016.

3.10.7.2 Economic Benefits

FJS is beneficial to the local economy through indirect job creation and local spending by visitors. The 1,730 acre Sayers Reservoir and surrounding Bald Eagle State Park host many recreational activities including fishing, ice fishing, wildlife watching, unlimited horsepower boating including 5 boat launches, 14 miles of hiking trails, a 1,200 foot long beach, 7 miles of cross country skiing trails, 4,910 acres open to hunting, and a five acre hillside for sledding. Additionally, the project uses innovative maintenance and planning programs to minimize usage fees. Annual recreational benefits to the area are $10.5 million (DCNR 2012). A summary of park revenues from 2015 – 2017 are provided in Table 12.

Table 12. Bald Eagle State Park Revenue

Revenue				
Year		**2015**	**2016**	**2017**
Nature Inn		**$ 728,267.22**	**$ 764,535.89**	**$ 837,307.28**
Total Other		**$ 636,063.72**	**$ 768,531.60**	**$ 795,923.62**
Other	*Reimburse, Restitute and Park Donations*	*$ 92,865.30*	*$ 112,205.61*	*$ 116,204.85*
	Concessions	*$ 26,078.61*	*$ 31,509.80*	*$ 32,632.87*
	Campsites	*$ 281,776.23*	*$ 340,459.50*	*$ 352,594.16*
	Other Overnight	*$ 66,150.63*	*$ 79,927.29*	*$ 82,776.06*
	Pavilions	*$ 16,537.66*	*$ 19,981.82*	*$ 20,694.01*
	Boat Slips	*$ 103,678.39*	*$ 125,270.65*	*$ 129,735.55*
	Boat Storage	*$ 17,173.72*	*$ 20,750.35*	*$ 21,489.94*
	Misc.	*$ 31,803.19*	*$ 38,426.58*	*$ 39,796.18*
bTotal Revenue		**$ 1,364,330.94**	**$ 1,533,067.49**	**$ 1,633,230.90**

3.17.7.3 Recreation Carrying Capacity

Carrying capacity is the maximum potential level of use, which avoids overuse or overcrowding. Recreational carrying capacity generally relates to social capacity and resource capacity. Social capacity is the level of use beyond which the user does not achieve a reasonable level of satisfaction in their recreational experience. Resource capacity considers usage of natural resources for human activity in balance with resource degradation and restoration.

When evaluating the recreational carrying capacity of water-based recreation, social capacity factors (overcrowding) are generally more pertinent than resource capacity factors (overuse). Carrying capacity at a reservoir or lake is difficult to quantify merely by statistics on numbers of visitors or boats, types of uses or users, trends of adjacent development, changing demographics, or other selected social or environmental factors. Much of the determination of overcrowding, in particular, tends to be subjective. Some user groups prefer to congregate in large social groups, while others prefer more spacing and smaller groups at picnic areas, swim areas, or campgrounds. At heavily used boat ramps or large marinas, congestion at the point of access may be a serious problem during heavy use periods, but overcrowding quickly is relieved a short distance from these facilities as users have a large area (the navigable extent of the reservoir) in which to disperse.

Overcrowding tends to exert a self-regulating force. As one area becomes increasingly crowded so that it impacts users' comfort levels, the user is likely to go elsewhere. There are times and places that are exceptions, such as the busiest holiday seasons; these are often best addressed operationally on a case by case basis. At this time, and into the foreseeable future, there are no plans of actively limiting uses. There is no evidence that any of the natural resources are being negatively impacted.

Impacts: The proposed project would have a long-term, direct, and beneficial impact on the recreational resources at FJS by providing additional recreational capacity of 22 camp sites, a parking area, and associated roads and infrastructure. The proposed project would provide economic benefits from increased tourism. In addition to adding capacity, the campground extensions would provide a shaded campground as has been requested and more pull-through camper sites. There could be minor disruptions to recreational users during construction. Trees would be felled during the winter when use is diminished. Construction is projected to last three months. The construction site would be accessed using an existing road and the Maintenance Hill area would be used for staging.

3.11 Air Quality

Section 118 of the Clean Air Act (CAA) states that any Federal action that may result in discharge of air pollutants must comply with Federal, State, interstate and local requirements respecting control and abatement of air pollution. Section 176(c) of the CAA requires that Federal actions conform to an implementation plan after it has been approved or promulgated under Section 110 of the CAA.

According to EPA, Centre County is in attainment for all National Ambient Air Quality Standards: particulate matter (2.5 and 10 micrometers), sulfur dioxide, carbon monoxide, nitrogen dioxide, ozone (1-hour and 8-hour) and lead (EPA 2008).

Impact: During construction, there could be a temporary, local, negative impact to air quality due to emissions resulting from the operation of construction vehicles. This impact would end with the conclusion of construction efforts. As the county is in attainment, a Clean Air Act conformity determination is not required. The contractor is responsible for obtaining any relevant permits.

3.12 Climate Change

The report titled "*Pennsylvania Climate Impacts Assessment Update*" prepared by Penn State University indicates that annual mean temperatures in Pennsylvania may increase between 2.5°F and 6.5°F by mid-century (2041-2070), depending on the climate scenario and model employed. These increases are not projected to vary significantly by season (PSU 2015). The climate models also project increases in average annual precipitation in Pennsylvania on the order of 10% by mid-century. Increases in precipitation are projected to occur throughout the year, with somewhat larger increases in the winter (around 15%) than the summer (around 5%). There are some indications that rain events will become more intense, increasing flood risks. Climate impacts to Pennsylvania's forests are expected to include shifts in species (tree and faunal) composition and tree regeneration rates, life-cycle changes, increased stress to trees, changes in tree chemistry and growth rates, and greater insect, disease, and invasive species activity. Human health impacts from climate change are uncertain. With respect to recreation and tourism, the greatest impact is expected to winter recreation as snowfall is expected to decline and winter temperatures are expected to rise. Thus, by the middle of the century, the climate of Pennsylvania is projected to be significantly different and pose challenges for hydrologic systems, aquatic ecosystems, forest management, and economic markets for agricultural production.

Impacts: No impacts to the local climate are anticipated to occur as a result of the proposed project.

3.13 Hazardous, Toxic, and Radioactive Waste (HTRW)

A screening for known hazardous waste issues was conducted using the EPA's Envirofacts database. According to Envirofacts, there are no superfund or brownfields in the immediate vicinity. There are two Superfund sites in the region on the National Priorities List (NPL): Drake Chemical in Lock Haven and Centre County Kepone in State College Borough. All physical construction is complete at both sites and they are undergoing long-term operations and maintenance, including monitoring. Bald Eagle State Park holds a NPDES permit for discharges from the sewerage systems.

Impacts: No impacts are anticipated from the proposed project. Good housekeeping practices will be utilized throughout construction. If a hazardous spill would occur during construction, it would be the contractor's responsibility to report and mediate the spill in accordance with federal, state, and local regulations. It will be the contractor's responsibility to dispose of all waste generated from the proposed project appropriately. The contractor will also remove any bituminous millings from the site.

3.14 Cumulative Impacts

No other projects have been identified within the vicinity of the proposed project that would affect or be affected by the proposed campground expansion.

The campground expansion would increase the use of the campground facilities at Bald Eagle State Park and likely increase use of other park facilities such as the beach and boat launch. Increased visitations would likely have positive socio-economic benefits for the surrounding communities. Use and related traffic is not expected to be increased to a point where negative impacts would be experienced.

4. APPLICABLE FEDERAL LAWS

Pertinent public laws applicable to FJS are presented below. In some situations, the laws have been previously discussed and prior section references are provided. The status of compliance with environmental laws is provided in Table 13.

4.1 National Environmental Policy Act of 1970, As Amended, 42 U.S.C. 4321, et seq.

NEPA requires that all federal agencies use a systematic, interdisciplinary approach to protect the human environment. NEPA requires the preparation of an EIS for any major federal action that could have a significant impact on quality of the human environment and the preparation of an EA for those federal actions that do not cause a significant impact but do not qualify for a categorical exclusion. Section 102 authorized and directed that, to the fullest extent possible, the policies,

regulations and public law of the United States shall be interpreted and administered in accordance with the policies of the Act. The NEPA regulations issued by CEQ (40 CFR Part 1500 – 1508) and the USACE's regulation ER 200-2-2 – Environmental Quality: Policy and Procedures for Implementing NEPA, 33 CFR 230 provide for a scoping process to identify the scope and significance of environmental issues associated with a project. The process identifies and eliminates from further detailed study issues that are not significant. USACE has used this process to comply with NEPA and focus this EA on the issues most relevant to the environment and the decision making process.

4.2 Clean Water Act, 33 U.S.C. 1251, et seq.

See Section 3.5.5 for a discussion of the Clean Water Act (CWA).

4.3 Clean Air Act, As Amended, 42 U.S.C. 7401, et seq.

See Section 3.11 for a discussion of the CAA.

4.4 Rivers and Harbors Act, 33 U.S.C. 401, et seq.

Section 9 of this law and its implementing regulations prohibit the construction of any bridge, dam, dike, or causeway over or in navigable waters of the U.S. without Congressional approval. The U.S. Coast Guard administers Section 9 and issues bridge crossing permits over navigable waters. Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the Secretary of the Army, acting through the Corps of Engineers, for the construction of any structure in or over any navigable water of the United States. There are no waters subject to the Rivers and Harbor Act within the project area.

4.5 Endangered Species Act, As Amended 16 U.S.C. 1531, et seq.

The Endangered Species Act (ESA) protects threatened and endangered species, and their designated critical habitat, from unauthorized take. Section 9 of the Act prohibits such take, and defines take as to harm, harass, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in any such conduct. Section 7 of the ESA requires Federal agencies to insure that any action authorized, funded or carried out by such agency is not likely to jeopardize the continued existence of any listed species or destroy or adversely modify any designated critical habitat. Consultation with the USFWS or National Marine Fisheries Service is required if the Federal action may affect a Federally-listed species or designated critical habitat. Given the potential for impacts to Federally-listed species, informal Section 7 consultation was completed with USFWS (See Section 3.8 and Appendix B).

4.6 Fish and Wildlife Coordination Act, 16 U.S.C. 661, et seq.

The Fish and Wildlife Coordination Act (FWCA) requires Federal agencies to consult with the USFWS and the fish and wildlife agencies of States where the "waters of any stream or other body of water are proposed or authorized, permitted or licensed to be impounded, diverted or otherwise

controlled or modified" by any agency under a Federal permit or license. Consultation is to be undertaken for the purpose of "preventing loss of and damage to wildlife resources." The intent is to give fish and wildlife conservation equal consideration with other purposes of water resources development projects. Coordination with USFWS has been completed.

4.7 Migratory Bird Treaty Act, 16 U.S.C. 715-715s, and Executive Order 13186 Responsibilities of Federal Agencies to Protect Migratory Birds

The Migratory Bird Treaty Act (MBTA) prohibits the taking or harming of any migratory bird, its eggs, nests, or young without an appropriate Federal permit. Almost all native birds are covered by this Act and any bird listed in wildlife treaties between the United States and several other countries. A "migratory bird" includes the living bird, any parts of the bird, its nest, or eggs. The take of all migratory birds is governed by the MBTA's regulation of taking migratory birds for educational, scientific, and recreation purposes and requiring harvest to be limited to levels that prevent over-utilization. Section 704 of the MBTA states that the Secretary of the Interior is authorized and directed to determine if, and by what means, the take of migratory birds should be allowed and to adopt suitable regulations permitting and governing take. Disturbance of the nest of a migratory bird requires a permit issued by the USFWS pursuant to Title 50 of the CFR.

4.8 National Historic Preservation Act of 1966, 16 U.S.C. 6901, et seq.

The National Historic Preservation Act (NHPA) of 1966, as amended (54 U.S.C. § 306108), and its implementing regulations require USACE, in consultation with the PA SHPO, to take into account the effects of the undertaking on historic properties in the project area. If any historic properties listed on or eligible for inclusion in the National Register of Historic Places will be adversely affected, USACE must develop mitigation measures in coordination with the PA SHPO and the Advisory Council on Historic Preservation. USACE has completed Section 106 consultation. See Section 3.9 for a full discussion of cultural resources coordination.

4.9 Wild and Scenic Rivers Act of 1968 (Public Law 90-542; 16 U.S.C. 1271, et seq.

The National Wild and Scenic Rivers System was created by Congress in 1968 to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. The Act is notable for safeguarding the special character of these rivers, while also recognizing the potential for their appropriate use and development. It encourages river management that crosses political boundaries and promotes public participation in developing goals for river protection. See Section 3.5.3.

4.10 Resource Conservation and Recovery Act, As Amended, 42 U.S.C. 6901, et seq.

The Resource Conservation and Recovery Act (RCRA) RCRA controls the management and disposal of hazardous waste. "Hazardous and/or toxic wastes", classified by the RCRA, are materials that may pose a potential hazard to human health or the environment due to quantity,

concentration, chemical characteristics, or physical characteristics. This applies to discarded or spent materials that are listed in 40 CFR 261.31-.34 and/or that exhibit one of the following characteristics: ignitable, corrosive, reactive, or toxic. Radioactive wastes are materials contaminated with radioactive isotopes from anthropogenic sources (e.g., generated by fission reactions) or naturally occurring radioactive materials (e.g., radon gas, uranium ore). HTRW is discussed in Section 3.13.

4.11 Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9601, et seq.

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund) governs the liability, compensation, cleanup, and emergency response for hazardous substances released into the environment and the cleanup of inactive hazardous substance disposal sites. See Section 3.13.

4.12 Farmland Protection Policy Act of 1981 and the CEQ Memorandum on 3.5.2Prime and Unique Farmlands

In 1980, the CEQ issued an Environmental Statement Memorandum "Prime and Unique Agricultural Lands" as a supplement to the NEPA procedures. Additionally, the Farmland Protection Policy Act, passed in 1981, requires Federal agencies to evaluate the impacts of federally funded projects that may convert farmlands to nonagricultural uses and to consider alternative actions that would reduce adverse effects of the conversion. See Section 3.4.2 for a discussion of soils and farmland.

4.13 Executive Order 11990, Protection of Wetlands

This EO directs Federal agencies to avoid undertaking or assisting in new construction located in wetlands, unless no practicable alternative is available. See Section 3.5.2.

4.14 Executive Order 11988, Floodplain Management

This EO directs Federal agencies to evaluate the potential effects of proposed actions on floodplains. Actions should not be undertaken that directly or indirectly induce growth in the floodplain unless there is no practicable alternative. Section 3.6 discusses floodplains.

4.15 Executive Order 12898, Environmental Justice

This EO directs Federal agencies to determine whether the recommended plan would have a disproportionate adverse impact on minority or low-income population groups within the project area. See Section 3.10.4.

4.16 Executive Order 13045, Protection of Children from Environmental and Safety Risks

This EO requires Federal agencies to make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children and to ensure that policies, programs, activities, and standards address these risks. No risks to children are expected. Construction is planned for winter months when tourism is reduced. No children should be in the vicinity during construction. The completed project would provide additional recreational opportunities for families, and is not anticipated to increase environmental health or safety risks.

Table 13. Compliance with Federal Environmental Protection Statutes and Executive Orders

Federal Statutes and Executive Orders	Level of Compliance*
Archaeological and Historic Preservation Act	Full
Bald and Golden Eagle Protection Act	Full
Clean Air Act	Full
Clean Water Act	Full
Coastal Barrier Resources Act	N/A
Coastal Zone Management Act	N/A
Comprehensive Environmental Response, Compensation and Liability Act	N/A
Endangered Species Act	Full
Estuary Protection Act	N/A
Farmland Protection Policy Act	Full
Federal Water Project Recreation Act	Full
Fish and Wildlife Coordination Act	Full
Flood Control Act of 1944	Full
Land and Water Conservation Fund Act	N/A
Magnuson-Stevens Fishery Conservation and Management Act	N/A
Marine Mammal Protection Act	N/A
National Environmental Policy Act	Full

Federal Statutes and Executive Orders	Level of Compliance*
National Historic Preservation Act	Full
Resource Conservation and Recovery Act	N/A
Rivers and Harbors Act	N/A
Wild and Scenic Rivers Act	Full
Executive Orders (EO), Memoranda, etc.	
Migratory Bird (EO 13186)	Full
Protection and Enhancement of Environmental Quality (EO 11514)	Full
Protection and Enhancement of Cultural Environment (EO 11593)	Full
Exotic Organisms (EO 11987)	N/A
Floodplain Management (EO 11988)	Full
Protection of Wetlands (EO 11990)	Full
Environmental Justice in Minority and Low-Income Populations (EO 12898)	Full
Invasive Species (EO 13112)	Full
Protection of Children from Health Risks and Safety Risks (EO 13045)	Full
Prime and Unique Farmlands (CEQ Memorandum, 11 August 1980)	Full

*Level of Compliance:
Full Compliance (Full): Having met all requirements of the statute, E.O., or other environmental requirements.
Partial Compliance (Partial): Not having met some of the requirements at current stage of planning. Compliance with these requirements is ongoing.
Non-Compliance (NC): Violation of a requirement of the statute, E.O., or other environmental requirement.
Not Applicable (NA): No requirements for the statute, E.O, or other environmental requirement for the current stage of planning.

5 FEDERAL, STATE, AND LOCAL AGENCY COORDINATION

5.1 Public and Agency Coordination

USACE issued a public notice announcing the study initiation and preparation of this EA on July 10, 2019. USACE also sent coordination letters to EPA, USFWS, PADEP, PGC, and PNHP at that time. Three public comments and one agency comment were received. Two of the public comments requested additional park improvements that are outside the scope of this EA, and the

third identified the need to add 911 addressing and location identification to the completed project. All comments are included in Appendices A (public) and B (agency). The following summarizes agency correspondence:

Table 14. Summary of Agency Correspondence

Date	Summary of Correspondence
26 April 2018	Letter received from PA SHPO communicating review of the proposed project and that no further archaeological work is necessary for the project.
10 July 2019	Public Notice published
10 July 2019	Letter sent to USFWS to initiate coordination to meet FWCA requirements and Section 7 of ESA.
10 July 2019	Letter sent to EPA providing notification of intention to prepare an EA and requesting pertinent information.
10 July 2019	Letter sent to PADEP providing notification of intention to prepare an EA and requesting pertinent information.
10 July 2019	Letter sent to PGC providing notification of intention to prepare an EA and requesting pertinent information.
10 July 2019	Letter sent to PNHP providing notification of intention to prepare an EA and requesting pertinent information.
30 July 2019	Letter received from USFWS providing recommendations for surveys and evaluations to complete for listed species relevant to the proposed project.
7 August 2019	Email received from EPA providing recommendations for consideration in the development of the EA.
22 November 2019	Email sent to USFWS regarding coordination for bald eagle.
11 December 2019	Email received from USFWS concurring with USACE's determination that the project is not likely to affect bald eagles.
13 February 2020	Letters sent to Delaware Tribe of Nations, Seneca-Cayoga Nation, and Delaware Nation requesting consultation in accordance with Section 106 of NHPA.
25 March 2020	Email sent to USFWS providing the habitat assessment for small-whorled pogonia for ESA coordination.
8 May 2020	Letter received from USFWS stating seasonal restriction on felling trees; project recommendations; and documenting concurrence that the recommended plan is not likely to adversely affect federally-listed species and concluding ESA coordination.
14 May 2020	Email received from USFWS confirming FWCA coordination for the project is complete.
5 August 2020	Letter received from USFWS clarifying the previously communicated (8 May 2020 letter) expectiation to provide a 150 ft buffer to wetlands in the study area. Upon a site visit, USFWS confirmed that this buffer is not needed, and reaffirmed the determination that the recommended plan is not likely to adversely affect northeastern bulrush.

Date	Summary of Correspondence
15 September 2020	Email received from EPA providing comments on the draft EA and FONSI. Substantial comments included a request for additional details on the time of construction and the detention basin design, and provided recommendations for tree replacement, native plantings, and avoiding the use of herbicides.

Public review of the draft EA and FONSI was conducted from August 19 to September 21, 2020. Six stakeholders submitted comments on the draft EA, including EPA. Stakeholders commented on the need for the project, asked clarifying questions, and requested to be engaged in the final plan development to ensure that road naming and site identification are completed to current standards and in coordination with Centre County 911 Addressing. These comments are provided in the Appendix; and where relevant, the Final EA and FONSI have been revised to address specific comments.

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