Appendix G Programmatic Environmental Assessment

REPORT

U.S. Army Corps of Engineers
Wilmington District
September 2021

PROGRAMMATIC ENVIRONMENTAL ASSESSMENT

Implementation of Master Plan Update for Philpott Lake Roanoke River Basin Commonwealth of Virginia

Programmatic Environmental Assessment

Implementation of Master Plan Update
for Philpott Lake Roanoke River Basin
Commonwealth of Virginia

:

U.S. Army Corps of Engineers
Wilmington District

US Army Corps
of Engineers ®
Wilmington District

Document Verification

Client	U.S. Army Corps of Engineers, Wilmington District
Project Name	Update Philpott Lake Master Plan
Document Title	Programmatic Environmental Assessment
Document Subtitle	Implementation of Master Plan Update for Philpott Lake Roanoke River Basin, Commonwealth of Virginia
Status	Draft Final Report
Date	9/30/2021
Contract No.	W912PM-16-D-0003
Client Contract No.	220925-1

PROGRAMMATIC ENVIRONMENTAL ASSESSMENT

IMPLEMENTATION OF MASTER PLAN UPDATE
FOR PHILPOTT LAKE ROANOKE RIVER BASIN
COMMONWEALTH OF VIRGINIA

The US Army Corps of Engineers, Wilmington District (USACE) is proposing to adopt a new Master Plan as the strategic land use planning document to guide comprehensive management and development of project recreational, natural, and cultural resources at Philpott Lake in Virginia. The original Master Plan (MP) was completed in 1953 and last updated in 1982. Changes in USACE regulations and community needs necessitate a revision to these Master Plans. Adoption of this Master Plan Update would include the reclassification of project lands to meet newer USACE land management directives and management policies. It would also shift the land management focus from a construction-based master plan to a more policy-based plan. In general, the proposed land classifications associated with this Master Plan Update would reduce the amount of project land available to support intensive land use, instead, much of the project lands would be reclassified as Multiple Resource Management Lands to support low-density recreation and permanent wildlife habitat. The updated MP will provide a balanced management plan that follows current Federal laws and USACE regulations while sustaining natural resources and providing outdoor recreational experiences.

In compliance with the National Environmental Policy Act, the USACE prepared a Programmatic Environmental Assessment (PEA), that analyzed the potential impact that implementing the Master Plan Update would have on the human environment. The PEA examines two alternatives: No Action and the preferred alternative of adopting an updated MP with a balanced conservation and recreation mix of land use. There are two primary changes proposed by the Preferred Alternative. One change is the redefining of land classifications to meet newer USACE land management directives and management policies. The other change is a project's management shift away from a construction-based activity guidance document to a more policy-based document.

The MP and PEA will be circulated for a 30-day review period.

DATE

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COLONEL, CORPS OF ENGINEERS

COMMANDING

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Acronyms and Abbreviations

Abbreviation	Term
BMP	Best Management Practice
CEQ	Council on Environmental Quality
Commonwealth	Commonwealth of Virginia
CWA	Clean Water Act
DBH	Diameter at Breast Height
DHR	Department of Historic Resources
EC	Engineer Circular
ECOS	Environmental Conservation Online System
EOP	Environmental Operating Principles
EP	Engineer Pamphlet
ER	Engineer Regulation
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
FONSI	Finding of No Significant Impact
GIS	Geographic Information Systems
GPD	Gallons Per Day
HUC	Hydrologic Unit Code(s)
IPaC	Information for Planning and Consultation
JPA	Joint Permit Application
Master Plan Update	Philpott Lake Master Plan Update
MRML	Multiple Resource Management Lands
MSL	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NCWRC	North Carolina Wildlife Resources Commission

Abbreviation	Term
NEPA	National Environmental Policy Act of 1969, as amended
NHPA	National Historic Preservation Act of 1966, as amended
NLEB	Northern Longed-Eared Bat
NRRS	National Recreation Reservation System
PEA	Programmatic Environmental Assessment
PL	Public Law
RCRA	Resource Conservation and Recovery Act (regarding hazardous waste sites)
The project	Philpott Lake
TMDL	Total Maximum Daily Load
SHPO	State Historic Preservation Office
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USDA-NRCS	U.S. Department of Agriculture Natural Resources Conservation Service
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VADCR	Virginia Department of Conservation and Recreation
VADEQ	Virginia Department of Environmental Quality
VAWRP	Virginia Water Resources Plan
VDWR	Virginia Department of Wildlife Resources
VDH-ODW	Virginia Department of Health Office of Drinking Water

Executive Summary

Philpott Lake (or the project) is a flood control and hydroelectric generating impoundment operated by the U.S. Army Corps of Engineers, Wilmington District (USACE) since 1952 and includes approximately 2,830 acres of open water at normal pool elevation in the counties of Henry, Patrick, and Franklin, Virginia (USACE, 2020a). Philpott Lake has approximately 100 miles of pristine, undeveloped shoreline. The lake is surrounded by approximately 6,500 acres of forested land owned and managed by the USACE, with Fairy Stone State Park adjoining to the southwest (USACE, 2019). Fairy Stone State Park consists of approximately 5,000 acres of predominately forested land and another 5,500 acres of Virginia Department of Wildlife Resources (VDWR) forest. The USACE is the federal agency responsible for maintaining and operating the project. To facilitate the management and utilization of these lands, USACE has maintained a master plan for the project since 1982. The USACE's land management directives have been updated since the adoption of the Master Plan. To meet these new directives and comply with USACE policies, USACE proposes to adopt a master plan update at Philpott Lake. The project area for the proposed Philpott Lake Master Plan Update (Master Plan Update) includes the lands within the USACE project border surrounding Philpott Lake (see Appendix B, Plate B3 Vicinity Map).

The proposed Master Plan Update is needed to provide the USACE with an improved management tool at Philpott Lake. The 1982 Master Plan included long-term management objectives to obtain the master plan goals and provide details about specific land classification objectives, recreations, easements, operations, and wildlife management. The proposed Master Plan Update provides a policy approach to managing project land through the utilization of updated land use classifications. The management tool includes a geographic information systems (GIS) database. The database can be continually updated throughout the life cycle of the plan to allow the USACE to take proactive management actions and adapt existing strategies.

The primary elements of the Preferred Alternative are that the new USACE land classifications will be applied to project lands. The proposed USACE land classifications will be accompanied by updated resource objectives. Resource objectives will be applied on three levels: project-wide, by Classifications, and by individual sites. At each level, the resource objectives will provide goals and objectives related to the management of natural, cultural, and recreational resources. On the individual site level, resource objectives could be accompanied by development needs. Development needs will include specific actions to implement the resource objectives. The policy-based nature of the Preferred Alternative will allow USACE to update the master plan as it implements resource objectives and development needs. Updates will document completed actions and refocus the management of the given site. These updates could be made by Philpott Lake staff, as they are most involved in the day-to-day management of a project.

This programmatic environmental assessment (PEA) evaluated resources in the project area for potential effects by the proposed adoption of the Master Plan Update. The following resource and policy issues were considered during the preparation of this PEA: geology, topography, and soils; floodplains; water resources; air quality; noise; cultural resources; hazardous materials; recreation and aesthetic resources; vegetation; invasive species; fish and wildlife; threatened and endangered species; bald eagle habitat; wetlands; socioeconomic characteristics; transportation; utilities; conservation potential; and safety, as well as applicable executive orders. This PEA determined that, while minor impacts will be imposed on several resource/policy areas, there will be no significant or adverse impacts from the proposed action, and no mitigating actions will be required. Additionally, no permits will be immediately required.

1 Introduction

Philpott Lake or “the project” is a flood control and hydroelectric generating impoundment operated by the U.S. Army Corps of Engineers (USACE) since 1952 and includes approximately 2,830 acres of open water at normal pool elevation in the counties of Henry, Patrick, and Franklin (USACE, 2020a). Philpott Lake has approximately 100 miles of pristine undeveloped shoreline (USACE, 2020a). No residential developments are located along its shoreline, but numerous facilities are scattered throughout the lake’s shoreline to afford outdoor enthusiasts the opportunity for various recreational activities including, boating, camping, picnicking, hiking, fishing, and beach lounging. Philpott Lake is surrounded by approximately 6,500 acres of forested land owned and managed by the USACE, with Fairy Stone State Park adjoining to the southwest. Fairy Stone State Park consists of approximately 5,500 acres of Virginia Department of Wildlife Resources (VDWR) forest. The USACE is the federal agency responsible for maintaining and operating the lake.

To facilitate the management and use of these lands, the USACE maintains a master plan for the project that has been used since 1982. The project area for the proposed Master Plan Update includes the total amount of the lands within the USACE project border. Master plan maintenance includes updating the categories of land classifications used to define project lands, as well as shifting from a development-based document to a policy-based document. Updated master plans must comply with the National Environmental Policy Act (NEPA) of 1969.

The Philpott Lake Dam is located off River Brook Road, approximately 2.5 miles northwest of Bassett, Virginia. The area is accessible via the principal highways in the region, including U.S. Highway 220 and Virginia Highway 904. The dam was constructed in response to flooding in 1944 and subsequently completed by 1952 (USACE, 2020a). The dam began generating electricity in 1953 (USACE, 2020a).

Along portions of the reservoir, the USACE manages considerable amounts of the land surrounding the impoundment (see Appendix B, Plates B1 & B2 Project Area Maps). In other locations, federal lands are confined to a ribbon of land surrounding the water. The larger land holdings are located on the eastern, western, and northern sides of the reservoir. The USACE maintains recreational and wildlife areas in these locations. The USACE built and maintains the structures located in these recreational and wildlife areas. The Master Plan provides a programmatic approach to the management of land occurring within the Philpott Lake Reservoir Project. Since this PEA must cover environmental features that could be affected by the adoption of the proposed Master Plan Update, the project area, for purposes of this PEA, includes land area within the reservoir boundary.

This PEA evaluates the implementation of the Philpott Lake Master Plan Update. The PEA further analyzes the potential impact that implementing the Master Plan Update would have on the human environment. This document has been prepared in accordance with NEPA; regulations of the Council on Environmental Quality (CEQ) (40 Code of Federal regulations (CFR) parts 1500-1508, 1515-1518), updated in 2020, and USACE regulations, including Engineer Regulation (ER) 200-2-2: Procedures for Implementing NEPA.

The typical focus of NEPA compliance consists of environmental impact assessments for individual projects rather than for long-range plans. However, application of the NEPA to earlier and more strategic decisions not only meets CEQ NEPA regulations and USACE regulations for implementing NEPA (ER 200-2-2) but allows the USACE to begin considering the environmental consequences of its actions long before physical activity (i.e., construction) is planned. Multiple benefits can be derived from such early consideration. Effective and early NEPA integration with the master planning process can significantly increase the usefulness of the plan to the decision-maker, if environmental information can be provided to the correct individuals, at the right time, and in the right form. If such utility can be realized, organizational outcomes, such as support for the project mission and NEPA compliance, can be improved. Environmental documents prepared concurrently with the master plan can influence and modify strategic land use decisions, whereas environmental documents prepared after the master plan will have minimal influence on strategic decisions already determined.

The intention of the master plan is to develop land classifications that will guide the sustainable development of resources within the Philpott Lake Reservoir. Since details regarding future projects are unknown currently, the PEA programmatically addresses the impacts of implementing this master plan update but does not address the specific impacts of any future projects. All environmental requirements will be met prior to the construction of new projects.

2 Purpose and Need for the Master Plan

The purpose of this Master Plan Update is to provide a strategic land use management tool throughout the life of the USACE at Philpott Lake that guides the comprehensive management and development of the project's recreational, natural, and cultural resources in an efficient, cost-effective yet sustainable manner. This PEA evaluated resources in the project area for potential effects by the proposed adoption of the Master Plan Update, providing the supporting environmental documentation for the Master Plan Update. An approved master plan should be consistent with current policies and laws and is required prior to the pursuit of civil works projects and other fee-owned lands, for which the USACE has administrative responsibility for the management of natural and manmade resources. The Master Plan provides a programmatic approach to the management of lands defined by various land classifications located within the project boundary. Periodic updates of the master plan allow for the flexibility to adapt to changing conditions over the life of the plan.

The primary goals of this Master Plan Update are to prescribe an overall land use management plan, resource objectives, and associated management concepts, which are to:

1. Provide best management practices that are responsive to local and regional needs, resource capabilities, and expressed public interests consistent with authorized project purposes.
2. Protect and manage project natural and cultural resources through sustainable environmental stewardship programs.
3. Provide public outdoor recreation opportunities that support project purposes and public demands created by the project itself while sustaining project natural resources.
4. Present an integrated plan for recreation and other project purposes that is consistent and compatible with national objectives and regional goals and programs.
5. Recognize the particular qualities, characteristics, and potential of the project.
6. Provide consistency and compatibility with national objectives and other Commonwealth of Virginia (Commonwealth) and regional goals and programs.

These goals express the overall desired result of the Master Plan Update. In addition to the above goals, the USACE management activities are guided by environmental operating principles (EOPs) in accordance with Engineer Regulation (ER) 200-1-5, Policy for Implementation and Integrated Application of the U.S. Army Corps of Engineers Environmental Operating Principles and Doctrine.

By implementing these principles, the USACE will continue its efforts to develop the scientific, economic, and sociological measures to judge the effects of its project on the environment and to seek better ways of achieving environmentally sustainable solutions. The principles will be integrated into project management processes throughout the USACE.

The principles are consistent with the NEPA, the U.S. Army Corps of Engineers Environmental Operating Principles, and the Water Resources Development Acts that govern USACE activities that require the USACE to:

- Foster sustainability as a way of life throughout the organization.
- Proactively consider environmental consequences of USACE activities and act accordingly.
- Create mutually supporting economic and environmentally sustainable solutions.
- Continue to meet the corporate responsibility and accountability under the law for activities undertaken by the USACE, which may impact human and natural environments.
- Consider the environment in employing a risk management and systematic approach throughout the life cycles of projects and programs.
- Leverage scientific, economic, and social knowledge to understand the environmental context and effects of the USACE's actions in a collaborative manner.

- Employ an open, transparent process that respects the views of individuals and groups interested in USACE activities.

The master plan currently in use was approved in 1982. It provides information regarding the previous goals of project lands, waters (i.e., groundwater and surface), forests, and other managed resources. Its scope covers an analysis of base data collected in the early 1980s, which was used to develop a framework upon which future management development and policies and actions were to be based (USACE, 1982).

Since the publication of the 1982 Master Plan, the USACE has updated its policies directing the development and implementation of master plans and best practices in land management. Specific master plan requirements are contained in Engineer Pamphlet (EP) 1130-2-550, dated 30 January 2013, ER 1130-2-550, dated 30 January 2013, and interim clarifications to the ER /EP 1130-2-550, Chapter 3 Master Plans, dated 30 November 2015. All master plan updates must follow Engineer Circular (EC)-1165-2-214 as part of the review process.

These USACE guidance documents include revised categories of land classifications used to define, and in some instances, further clarify classifications of project lands. They also include requirements for the development of a NEPA document to be developed using an interdisciplinary team approach. A similar team-oriented approach is to be used for the update of master plans. The approach emphasizes the value of coordination with agencies, local representatives, and non-profit organizations, which in this instance is an integral part of the master plan update process.

The revision of the existing master plan is intended to bring the master plan up to date to reflect current ecological, socio-economic, and outdoor recreational trends that are affecting Philpott Lake, as well as those anticipated to occur within a long-term planning period of approximately 20 years.

This Master Plan Update is accompanied by a geographic information systems (GIS) database. This database can be continually updated throughout the life-cycle of the master plan to allow the USACE and other management partners the ability to process, analyze, and develop various forms of geographically referenced information to better visualize data in ways that reveal relationships, patterns, and trends relevant to land management strategies over time.

The legislation that initially authorized Philpott Lake provided for flood control for the surrounding region. This initial authorization also included provisions for public recreation and hydroelectric power production in support of the surrounding region and flow augmentation. These provisions were supplemented by additional legislation passed during the development and operation of the lake and dam and included additional flood control measures, additional recreational areas, and an increase in water supply, fish and wildlife habitats, and land and water conservation (Table 1). Adoption of the proposed Master Plan Update is consistent with the authorized purposes of Philpott Lake.

Table 1: Philpott Lake Authorized Purposes

Authorized Purpose	Authorizing Law	Date	Statute	Common Name
Flood Control, Recreation, Low Augmentation, Hydroelectric Power	(Public Law) PL 78-534	12/22/1944	58 Stat 887	Flood Control Act of 1944
Flood Control	PL 79-526	07/24/1946	60 Stat 641	Flood Control Act of 1946
Recreation	PL 83-780	09/03/1954	68 Stat 1267	Rivers and Harbors Act of 1954

Authorized Purpose	Authorizing Law	Date	Statute	Common Name
Water Supply	PL 85-500	07/03/1958	72 Stat 297	Rivers and Harbors Act of 1958
Water Supply	PL 85-500	07/03/1958	72 Stat 297	Flood Control Act of 1958
Water Supply	PL 85-500	07/03/1958	72 Stat 297	Water Supply Act of 1958

An important purpose of the Master Plan Update is to allow Philpott Lake to meet updated USACE regulations. Specifically, the updated master plan complies with EP 1130-2-550 Project Operations – Recreation Operations and Maintenance Guidance and Procedures, which was last updated on January 30, 2013. The EP included new land classification categories that are different from the ones used in the 1982 Philpott Lake Master Plan and reflect the USACE's new direction in master planning.

3 Alternatives

This chapter describes alternatives for updating the Philpott Lake Master Plan. The range of alternatives includes the No-Action Alternative, the Preferred Alternative, and a variety of alternative options based on varying land classifications, resource objectives, and park site development needs identified during the project scoping process.

The Preferred Alternative is designed to provide a policy-based document based on a programmatic approach to the future management of the reservoir. Alternative options that were considered consisted of future land use change that would expand campsites, add parking at popular park sites, and potential improvements to the existing 21 boat docks within the project area. Those options and the reason for excluding those options are further explained in Section 3.4.

3.1 Development of Alternatives

Development of the alternatives to update the Philpott Lake Master Plan began in 2020. The USACE and its partners embarked upon an extensive data collection effort that included coordination with federal, Commonwealth, and local agencies, as well as institutions and groups with knowledge of the project resources. In December 2020, the USACE hosted a virtual agency scoping meeting and subsequent virtual public scoping meeting to solicit input on the planning process. The comments received during these meetings and the subsequent 30-day comment period were used to inform the master planning process and are included in Appendix B of the proposed Master Plan Update.

The USACE and its consultants worked to develop options for updating the classification of project lands and to identify resource objectives and development needs for these lands. The data collection, public comments, and findings of the planning team revealed that one action alternative would meet the purpose, need, and objectives of the master planning process. This alternative is the Preferred Alternative and is discussed in detail in Section 3.2 of this PEA.

The Preferred Alternative was selected as it will meet the need for sustainable management and conservation of natural resources within Philpott Lake while providing for the current and future quality outdoor recreational needs of the public.

3.2 Preferred Alternative: Adoption of the Master Plan

Preferred Alternative: The USACE will adopt the proposed Master Plan for Philpott Lake. This will allow the project to comply with USACE regulations that require maintaining an up-to-date master plan that includes the most recent USACE land classifications and management policies. It also presents the USACE with a programmatic tool for the management of the project's lands.

There are two primary changes proposed by the Preferred Alternative. One change is the redefining of land classifications to meet newer USACE land management directives and management policies. The other change is a project's management shift away from a construction-based activity guidance document to a more policy-based document.

Updated land classifications redefine the land allocation designations used in the 1982 Master Plan. Land classification would be updated to meet current USACE standards and management policies with the implementation of the Preferred Alternative.

The 1982 Master Plan focused on site development recommendations and guidance for future recreational needs at both proposed and established recreation sites, resource management, and facility operations. The proposed Master Plan Update would shift the land management focus more towards the implementation of maintenance and operational activities in a sustainable manner, yet it would also provide guidance on project implementation. Future actions identified by USACE may include minor facility additions at Philpott Park such as an amphitheater at the overlook and possible expansion of the hiking trails. At Salthouse Branch Park future actions may include a new picnic shelter and relocation of the main swim beach. Additional future projects that may be accomplished are those projects which carry

out the authorized project purposes. Examples include routine operation and maintenance actions, general administration, equipment purchases, custodial actions, erosion control, painting, repair, rehabilitation, replacement of existing structures and facilities such as buildings, roads, levees, utilities, and installation of new buildings.

utilities, or roadways in developed areas. Details regarding future projects are unknown; however, all future actions will be evaluated on a case-by-case basis to ensure they are consistent with the Master Plan Update and comply with all environmental requirements, including NEPA. Recommendations for facility improvements provided in the 1982 Master Plan have been implemented by USACE to the greatest extent practicable and are not being carried forward into the updated Master Plan.

The land allocations identified in the 1982 Master Plan and the proposed land classifications for this master plan update are listed in Table 2. This table shows how the 1982 allocations translate into the proposed land classifications that meet newer USACE land management directives and management policies. The changes in land classification between the allocations of the 1982 Master Plan and proposed 2021 land classification updates are illustrated in Plate B7 in Appendix B. Plate B5 and B6, also found in Appendix B, provide land use allocation from the 1982 Master Plan and proposed land classifications as part of this master plan update respectively. The net acreage of land actively managed within the project area remains unchanged. The reclassification of land from intensive recreational uses to other land classifications that support lower-density recreational development is noteworthy.

Approximately, 54 percent of land previously allocated for Operations in the 1982 Master Plan would be reclassified to High Density Recreation use. Additionally, another 30 percent of land previously allocated to Operations would be reclassified as Multiple Resource Management Lands (MRML): Low Density Recreation or MRML Wildlife Management. All land that had been allocated as Existing and Future Intensive Use land in the 1992 Master Plan would to be reclassified as High Density Recreation. This reclassification reflects changes stemming from the recreational development activities that have occurred since the adoption of the 1982 Master Plan to today.

Land designated previously in the 1982 Master Plan to support Existing and Future Intensive Use would be reclassified because this land classification is no longer used by USACE. These lands would be reclassified to High Density Recreation and MRML uses. Approximately 29 percent of intensive use lands would be reclassified as High Density uses and 71 percent to various MRML uses. This reclassification implies that there would be less emphasis on the development of lands for intense recreational activities and more emphasis on resource conservation and stewardship.

The definition of and use of Project Operations remains the same between the two documents. The Low-Density Recreation definitions used in the 1982 Master Plan are incorporated into the MRML classification presented in the Preferred Alternative. The MRML classification is separated into categories, representing lands designated for stewardship of fish or wildlife resources, low density recreation and low density recreation-no hunting, thus replacing the 1982 Master Plan land classification of Wildlife Management and Forest Reserves and Licensed Lands. The Intensive Use classification used in the 1982 Master Plan is incorporated into the High-Density Recreation classification presented in the Preferred Alternative. The Preferred Alternative also includes an Environmentally Sensitive Area land classification and Water Surface land classification. The Water Surface is separated into four categories, including Designated No Wake, Open Recreation, Surface Designated No Towing, and Restricted. Definitions for the primary land classifications included in the Preferred Alternative are provided below:

- Project Operations: This classification of land includes those lands required for the dam, spillway, switchyard, levees, dikes, offices, maintenance facilities, and other areas that are used primarily for the operation of the project and lands below elevation 998 feet mean sea level (MSL).
- High Density Recreation: This classification of land is developed for intensive recreational activities for the visiting public, including day use areas and/or campgrounds. High density recreational lands include areas for commercial concessions (marinas, comprehensive resorts, etc.) and quasi-public development.

- Multiple Resource Management Lands (MRML): This classification of land allows for the designation of a predominant use as described in the categories below, with the understanding that other compatible uses described below may occur on these lands.
    - Wildlife Management Lands are designated for stewardship of fish or wildlife resources.
    - Low Density Recreation: Lands with minimal development or infrastructure that support passive public recreational use (i.e., primitive camping, fishing, hunting, trails, wildlife viewing, etc.).
    - Low Density Recreation, No Hunting: - Lands with low density recreation where hunting is not permitted.
- Environmentally Sensitive Areas: These areas are designated to be where scientific, ecological, cultural, or aesthetic features have been identified. Designation of these lands is not limited to just lands that are otherwise protected by laws such as the Endangered Species Act, the National Historic Preservation Act, or other applicable state/Commonwealth statutes. These areas should be considered by management to ensure they are not adversely impacted by development. The only Environmentally Sensitive Area within the project are habitat for Roanoke Logperch habitat.
- Water Surface: The water use plan is designed to protect public boating, minimize conflicts between water and land activities, and protect sensitive environmental resources. Four water use categories are proposed for Philpott Lake, including Designated No Wake; Open Recreation; Designated No Towing; and Restricted.
    - Designated No Wake: Speeds of craft navigating water allocated to this category are restricted to levels that will not create damaging waves, safety hazards, or undue disturbance to fragile ecosystems.
    - Open Recreation: Waters allocated to the unrestricted boating category are available for all water-oriented recreation activities. Most of the Philpott Lake area has been allocated to this category. These waters may be used for activities such as skiing, boating, sailing, and fishing.
    - Surface Designated No Towing: Waters allocated to the restricted no towing category are available for all water-oriented recreation activities but are restricted for skiing due to congested boating areas where safety is a factor, or the area is designated as a fishery area with no towing traffic. Designated No Towing does not fall under designated classifications in USACE Pamphlet No. 1130-2-550, Project Operations and Maintenance Guidance and Procedures, and is noted separately.
    - Restricted: The restricted area applies to water areas that are buoyed off, prohibiting watercraft beyond a designated point. These areas are located around operational structures, such as the dam and water intake structures.

Table 2: Current Land Classifications and Proposed Land Allocations

Previous Land Allocation (1982)	Acreage ('82)	Master Plan Update Classification (2021)	Acreage ('21)
Project Operations	160.4	Project Operations	63.0
		High Density Recreation	49.9
		MRML: Low Density Recreation	47.6
Recreation: Existing Intensive Use	866.3	High Density Recreation	459.0
		Project Operations	6.9

Previous Land Allocation (1982)	Acreage ('82)	Master Plan Update Classification (2021)	Acreage ('21)
Recreation: Existing Intensive Use (Continued)		MRML: Wildlife Management	18.2
		MRML: Low Density Recreation	251.7
		MRML: Low Density Recreation, No Hunting*	130.5
Recreation: Future Intensive Use	750.0	High Density Recreation	8.4
		MRML: Wildlife Management	419.8
		MRML: Low Density Recreation	137.4
		MRML: Low Density Recreation, No Hunting*	184.4
Recreation: Existing Low Density Use	375.3	MRML: Low Density Recreation	311.3
		MRML: Low Density Recreation, No Hunting*	31.6
		High Density Recreation	28.2
		MRML: Wildlife Management	4.1
Recreation: Future Low Density Use	25.6	MRML: Low Density Recreation	25.6
Licensed Lands	256.2	MRML: Wildlife Management	256.2
Wildlife Management and Forest Reserve	4097.00	MRML: Wildlife Management l	3571.9
		Environmentally Sensitive Area	106.3
		High Density Recreation	25.7
		MRML: Low Density Recreation	321.6
		MRML: Low Density Recreation, No Hunting*	71.5
Easement Lands	243.3	Flowage Easement	243.3
Water**	2741.5	Water Surface: Designated No Wake	41.8
		Water Surface: Designated No Towing***	308.2
		Water Surface: Open Recreation	2382.7
		Water Surface: Restricted	8.8
Total Acreage	**9515.6**		**9515.6**

*Designated No Hunting does not fall under traditional classifications and is noted separately.

**Water areas were not given secondary allocation values in the 1982 MP.

***Designated No Towing does not fall under traditional classifications, and is noted separately

The inconsistency in total acreage listed in Table 2 is based on the technology used for each plan. In either case, acreages presented in a master plan are for planning purposes only (official acreages are

maintained by USACE Real Estate Division). The different land classifications used in the two master plans make a direct comparison difficult; however, some similarities do exist. Table 3 shows how the 1982 Master Plan land classifications have translated into the proposed Master Plan Update.

Table 3: Conversion of Land Classifications Between 1982 Master Plan and Proposed Master Plan Update

Facility Site	Land Allocation (1982)	Land Classification (2021)
Bowens Creek Park	Recreation: Intensive Existing	High Density Recreation
Deer Island	Recreation: Intensive Existing	MRML: Low Density Recreation
Goose Point Park	Recreation: Intensive Existing	High Density Recreation
	Wildlife Management and Forest Reserve	
Horseshoe Point Park	Recreation: Intensive Existing	High Density Recreation
Jamison Mill Park	Recreation: Intensive Existing	High Density Recreation
	Recreation: Low Density Existing	
Philpott Park	Project Operations	Project Operations
	Recreation: Intensive Existing	High Density Recreation
	Wildlife Management and Forest Reserve	
Runnett Bag Park	Recreation: Low Density Existing	MRML: Low Density Recreation
Ryan's Branch	Recreation: Intensive Existing	MRML: Low Density Recreation
		MRML: Wildlife Management
Salthouse Branch Park	Recreation: Intensive Existing	High Density Recreation
	Recreation: Intensive Future	
Turkey Island	Recreation: Low Density Existing	Low Density Recreation
Twin Ridge Park	Recreation: Intensive Existing	High Density Recreation

The proposed land classifications will be accompanied by resource objectives. Resource objectives will be applied on three levels: project-wide, land classifications, and individual sites. At each level, the resource objectives will provide goals and objectives related to the management of natural, cultural, and recreational resources. On the individual site level, resource objectives could be accompanied by development needs. Development needs will include specific actions to implement the resource objectives.

The policy-based nature of the Preferred Alternative will allow the USACE to update the master plan as it implements the resource objectives and development needs. Updates will document completed actions and refocus the management of the given site. These updates could be made by the Philpott Lake staff, as they are most involved in the day-to-day management of the project. Updates could also include changes in land classifications. This level of the update will involve coordination with the USACE Wilmington District Office.

3.3 No-Action Alternative

Inclusion of the No-Action Alternative is prescribed by CEQ regulations and serves as the benchmark against which federal actions can be evaluated. Under the No-Action Alternative, an updated master plan will not be approved for Philpott Lake, and the project will fail to comply with USACE regulations. The 1982 Master Plan will continue to provide the only source of comprehensive management guidance and philosophy. Information provided in the current plan is out of date and no longer adequately addresses the needs of the USACE, its partners, or visitors to Philpott Lake. Furthermore, the 1982 Master Plan does not include revised land classifications.

Under the direction of the 1982 Master Plan, USACE and its partners will continue to implement the outdated land management strategies and policies it prescribed. Management of the project will lack the support of an up-to-date guidance document. The original development-focused document will prevent the USACE from taking a proactive approach to managing Philpott Lake. Future major developments or resource management policies will require approval on a case-by-case basis without the benefit of evaluation in the context of an overall plan.

3.4 Alternative Options Considered but Eliminated

During the project scoping process, a variety of different land classifications, resource objectives, and development needs were considered. Project scoping activities with resource agencies, local officials, and the public identified land use options that would expand campsites that are frequently at their maximum carrying capacity during summer months, including Goose Point Park, Salthouse Branch and Horseshoe Point. The need for additional parking was also noted, especially for the Philpott Marina and Goose Point Park. Other infrastructure improvements requested during project scoping included improvements to the existing 21 boat docks within the project area. Although the request for additional campsites and other infrastructure improvements would meet the overall project purpose of providing recreational resources, these options were not carried forward for detailed environmental review due to the funding level of current budget appropriations for these improvements.

4 Affected Environment

This section describes the human environments in and around the project area. Resources are described below in context with Philpott Lake. Section 1508.1 of the updated CEQ NEPA regulations defines the human environment comprehensively as the natural and physical environment and the relationship of present and future generations of Americans with that environment.

4.1 Physical Environment

4.1.1 Geology, Topography, and Soils

Philpott Lake is situated within two physiographic provinces: the Piedmont and the Blue Ridge Mountains. According to the Virginia Department of Environmental Quality (VADEQ, 2020a), the Piedmont Province is the largest physiographic province in Virginia, which extends from the fall line on the east to the Blue Ridge Mountains to the center of the Commonwealth. The area is described as having hard, crystalline igneous and metamorphic formations with some areas of sedimentary rocks. Most significant water supplies are found within a few hundred feet of the surface (VADEQ, 2020a). Larger concentrations of water withdrawal can be obtained along the Western Piedmont along the base of the Blue Ridge Mountains (VADEQ, 2020a).

The Blue Ridge Province is a relatively narrow zone to the west of the Piedmont, approximately four to 25 miles wide (VADEQ, 2020a). Underlying geology includes a thin layer of soil above bedrock. The eastern flank of the Blue Ridge Mountains includes igneous and metamorphic rocks, while sedimentary rocks are more common along the western flank. However, the steep terrain and thin soil coverings result in rapid surface run-off and low groundwater recharge (VADEQ, 2020a).

The topography within the Philpott Lake area varies from approximately 800 to 1,100 feet above MSL, with 300 to 500 feet of local relief from the reservoir (see Appendix B, Plate B2 Project Area Topography). In the northern reaches of the watershed, elevations reach approximately 1,500 feet relative to MSL. Elevations then drop to approximately 981 feet above MSL at Philpott Dam (USGS, 2020a). The terrain in the immediate vicinity of the lake ranges from steep hills and wooded slopes to sheer rock cliffs above the main body of the reservoir. Because of Philpott Lake's proximity to the Blue Ridge Mountains, the topography is more rugged than what is commonly associated with the Piedmont physiographic province. This area is characterized more predominantly by steep ridges and cliffs, with narrow valleys, and rolling hills (Belden, 2001). Typical slopes are between 30-35 degrees, and some slopes are greater than 80 degrees. Elevations typically range between 800 feet to over 1500 feet in the general area (Belden, 2001). Since the publication of the 1982 Master Plan, little to no development has occurred that may have impacted geologic resources.

Numerous soil types are located within the Philpott Lake study area (USDA-NRCS, 2020) (see Appendix B, Plate B11 Soil Type Map). Current soil surveys are published for each county and can be accessed from the U.S. Department of Agriculture Natural Resources Conservation Service (USDA-NRCS) web soil survey (USDA, 2020). Henry County was last surveyed in 1994, Patrick County was last surveyed in 1999, and Franklin County was last surveyed in 2000 (USDA-NRCS, 2020). Because Philpott Lake is situated in three different counties (Franklin, Henry, and Patrick), this report summarizes the most commonly occurring soil series in each county. In Franklin County, Bluemount gravelly silt loam (3E) is the dominant soil series. This soil series occurs on hillslopes, is well drained with slopes ranging between 25 to 45 percent and is typically a gravelly silt loam (USDA-NRCS, 2020). In Henry County, the largest soil series is Buffstat-Bugley complex (3E). This soil series occurs on mountain slopes, is well drained with slopes ranging between 23 to 60 percent and has a silt loam profile (USDA-NRCS, 2020). Lastly, in Patrick County, the predominant soil series is Bluemount-Spriggs complex (4E). Bluemount-Spriggs soils typically occur on hillslopes with 25 to 45 percent slopes, are well drained, and have a gravelly silt loam profile (USDA-NRCS, 2020). These soil conditions support most types of development. The primary constraint has been and continues to be the slope at which these soils exist.

The U.S. Department of Agriculture (USDA), Web Soil Survey (WSS) uses specific criteria for assessing recreational soil suitability and a rating process implemented to map the soil suitability for recreation within the project. The ratings of 'Somewhat Limited' or 'Very Limited' were obtained from the USDA's web soil survey suitability and limitations for use guidelines. The USDA WSS maps (see Appendix B, Plates B9 Camp Areas Map and B10 Path and Trail Map) rate both recreational development camp areas and recreational development paths and trails based on the USDA WSS rating criteria. The rating criteria for camping areas is slope, stoniness, depth of bedrock or the commented pan. For paths, hiking and horseback riding trails its stoniness, depth of water table, ponding, flooding and the texture of the surface.

Specific agency consultation for physical resources is discussed in Chapter 7 of the Master Plan Update. Soils and topography are regulated by standards and laws included in the Virginia Erosion and Sediment Control Planning program (VADEQ, 2020b). The VADEQ provides guidance on designing, implementing, and monitoring erosion and sediment controls and stormwater management measures. The Virginia Department of Environmental Quality Erosion and Sediment Control Program and the USACE are responsible for approving these measures.

4.1.2 Floodplains

Areas to the western half of Philpott Lake are primarily classified as Flood Zone Hazard A, whereas areas along the eastern half of the lake are most often designated as Zone D. Zone A has a 1 percent annual chance of flood (i.e., 100-year floodplain), also known as the base flood area, which has a 1 percent chance of being equaled or exceeded in a given year. The Special Flood Hazards area is subject to flow in the 1 percent annual chance of flood areas. Zone D is the area in which flood hazards are undetermined, but possible (FEMA FIRM, 2008). Additionally, other areas are considered in Zone X, which are areas determined to be outside the 0.2 percent annual chance floodplain (i.e., 500-year floodplain) (FEMA FIRM, 2008). The 100-year floodplain elevation within the project boundary is at 985 feet above MSL (USACE, 1982). Floodplain classifications can be seen in Appendix B, Plate B11 Water Resources Map.

The 100-year floodplain elevation is determined by the different pool levels that are maintained by the USACE to meet its mission of controlling floodwaters and generating power. Philpott Lake has many structures, campsites, trails, and beaches within the floodplain. It is understood that these structures and areas are designed to withstand flood events and not hinder flood control operations.

Other structures in the floodplain include shoreline stabilization features (i.e., rock piles). These features were constructed primarily to protect the shoreline from erosion. Although these features alter wave action along select portions of the shoreline, they are not considered to have a major impact on floodwater conveyance.

Specific agency consultation for physical resources is discussed in Chapter 7 of the Master Plan Update. Floodplains are defined and regulated by the Federal Emergency Management Agency (FEMA) and mapped on Flood Insurance Rate Maps (FIRM) and Virginia Department of Conservation and Recreation (VADCR). Local municipalities' planning offices may also play a role in defining floodplains and regulating their use. Development occurring within floodplains must be consistent with Executive Order 11988: Floodplain Management and related USACE policy.

4.1.3 Water Resources

Located within the Roanoke River Basin, Philpott Lake (see Appendix B, Plate B4 Roanoke River Basin Map) is designed to maintain a normal pool elevation of approximately 985 feet above MSL (USACE, 1982). At this elevation, the reservoir is nearly 10 miles long with approximately 110 miles of shoreline. This equates to approximately 2,800 acres of open water surface area.

The Roanoke River Basin covers approximately 6,393 square miles or approximately 15 percent of the Commonwealth of Virginia's total area (VAWRP, 2015). It includes portions of four independent cities and 17 counties. The four cities are Danville, Martinsville, Roanoke, and Salem. The Virginian counties

include Appomattox, Bedford, Botetourt, Brunswick, Campbell, Carroll, Charlotte, Craig, Floyd, Franklin, Halifax, Henry, Mecklenburg, Montgomery, Patrick, Pittsylvania, Prince Edward, and Roanoke.

According to the Virginia Water Resources Plan (VAWRP, 2015), over 62 percent of the Roanoke River Basin is forested, approximately 25 percent is cropland or pasture, and approximately 10 percent is urban land. The Roanoke River Basin is divided into seven United States Geological Survey (USGS) hydrologic unit codes (HUC), which include HUC 03010101 (Upper Roanoke), HUC 03010102 (Middle Roanoke), HUC 03010103 (Upper Dan), HUC 03010104 (Lower Dan), HUC 03010105 (Banister), HUC 03010106 (Roanoke Rapids), and HUC 03040101 (Upper Yadkin) (VAWRP, 2015).

Several surface water inputs are located around the reservoir. The various other surface water inputs include, but are not limited to, the Smith River, Small Creek, Buttermilk Branch, Rennet Bag Creek, Otter Creek, Ryan's Branch, Beard's Creek, Nicholas Creek, Mill Creek, Green Branch, Puppy Creek, and Bowens Creek. Smith River is the primary source of freshwater to Philpott Lake. In addition to the named surface waters, additional tributaries, wetlands, and other surface waters contribute to Philpott Lake water levels.

The VADEQ manages water quality standards by its capacity to support different uses. Based on VADEQ water quality data, most creeks and tributaries that flow into Philpott Lake range from Class III to Class V waters. Class III, IV, and V waters are defined VADEQ water quality standards that are implemented based on usage or consumption (VADEQ, 2020c). The VADEQ designated six uses for surface waters in Virginia, which include aquatic life habitat, fish consumption, public water supplies, recreation, shellfishing, and wildlife. Philpott Lake (listed as Philpott Reservoir) is classified as a Category 5 impaired waterbody, requiring a Total maximum Daily Load Study. (VADEQ 2020f).

Most of the streams and tributaries that flow into Philpott Lake, and the lake waters, are categorized as supporting primary recreation (swimming and boating) and trout waters while also being a water supply. Some select areas of the Roanoke River immediately north and south of the reservoir do not support primary recreation but still support healthy aquatic life and secondary recreation.

The VADEQ publishes data on water quality throughout the Commonwealth in its Impaired Waters – 303(d) list. The most current 303(d) list available for Virginia was published in 2020. Waters listed on the 303(d) list fail to meet national water quality criteria established in the Clean Water Act (CWA). Based on the VADEQ 2020 Final Impaired Waters – 303(d) list, Philpott Lake is listed for Fish Consumption (Impaired Use Code: L51L-01-HG) (VADEQ, 2020e), Dissolved Oxygen (Impaired Use Code: L51L-01_DO), and temperature (Impaired Use Code: L51L-01-TEMP).

Philpott Lake was initially listed for Fish Consumption in 2010 as a Category 5 (i.e., waters needing Total Maximum Daily Load (TMDL) Studies). The Lake continued to be classified as a Category 5 waterbody in 2020.No Fish Consumption or Drinking Water Advisories are issued for mercury for these waters since the levels of mercury reported in fish tissue was under Virginia's Department of Health's level of concern (VADEQ 2020f). Philpott Lake was listed on the 303(d) list in 2020 for both dissolved oxygen and temperature. The dissolved oxygen and temperature levels reported led to the impairment of aquatic life (VADEQ 2020f).

The Smith River is also listed as a Category 5 since 2002 and again in 2018 for temperature (Impaired Used Code: L50R-01-Temp). Aquatic life has potential to be impacted due to temperature variance. Rennet Bag Creek, which drains to Philpott Lake, also has been listed for temperature on the 303(d) list since 2002 (VADEQ 2020f).

The Virginia Department of Health Office of Drinking Water (VDH-ODW) maintains a regulated, public water systems or waterworks database known as Drink Water Watch (VDH-ORW, 2020). For Franklin County, there are eight sites where the VDH-ODW collects water data. These eight sites are located around Philpott Lake in specified recreation areas, where potable water can be accessed. These eight sites include the Deer Island Foot Bridge, Horseshoe Point Utility, Jamison Mill Building, Salthouse Branch Utility, Deer Island West, Salthouse Branch Beach, Salthouse Branch Picnic, and Tailrace. For Patrick County, there is one site where the VDH-ODW collects water data. It is the Ryans Branch Picnic

area, where potable water is accessed. There are no water data collection sites for Henry County around Philpott Lake.

VADEQ's Virginia Climate Response Network, in conjunction with the USGS, has one groundwater monitoring well in close proximity to Philpott Lake. The well is located in Fairy Stone State Park, just west of Virginia Route VA-623. The site is USGS 364732080070301 30C 1 SOW 010. According to the Groundwater Watch web mapping dated November 19, 2020, at 12:09 p.m., this well exhibited high levels of groundwater (USGS, 2020b). The USGS began collecting data in the field at this site on May 6, 1966. The most recent data collection occurred on October 23, 2020. There have been 262 data collections in this 54-year time frame. As technology is now available to do so, daily data collection (depth to water level, feet below land surface) has been occurring remotely from August 26, 2016, through November 19, 2020 (USGS, 2020b). There have been 3,070 total data collections in this 4-year time frame. This well measured consistent groundwater levels ranging from 1,030 to 1,050 feet. Changes within this range followed a fairly regular pattern of drawdowns and recharges.

Several Flowage Easements exist around Philpott Lake (Appendix B, Plate B3 Vicinity Map). These areas may retain natural characteristics which allow those areas to absorb stormwater before it reaches surrounding water resources. While the easement areas may help water quality if the land is not cleared, the easements were not acquired to protect water quality. The flowage easements can be cleared of vegetation by property owners if they choose to and some structures may be constructed. Only habitable structures are prohibited. USACE's only interest in easements is to allow water to be impounded as the lake rises.

Water resources should remain in compliance with Sections 401 and 404 of the Clean Water Act. Water resources include, but are not limited to, streams, wetlands, and other surface waters. In addition, water resources should also be in compliance with VADEQ standards, specifically water quality standards, monitoring, and authorization of future impacts to waters of the United States.

4.1.4 Air Quality

As stated above, Philpott Lake is in Franklin, Henry, and Patrick Counties, Virginia. Franklin, Henry, and Patrick Counties are in attainment areas for all federal air quality standards (USEPA 2020a). Air quality in this area is primarily influenced by regional climate patterns.

Air quality within the project boundary is influenced by exhaust from motor vehicles and boats, the use of grills and fire pits, and other regional activities. The large open area that is created by the lake allows for strong breezes to blow through the park. These breezes can rapidly reduce and/or eliminate localized air quality concerns caused by air-borne pollutants.

Lands currently classified for Intensive Use or Operations have the greatest potential to produce actions that may influence air quality. More specifically, the developed lands within these classifications include the heaviest concentrations of motor vehicle exhaust and building emissions. The undeveloped areas within these classifications, as well as lands classified as Flowage Easements or Low-Density Use, have limited impacts on air quality. Impacts in these areas are confined to short-term effects from forestry or construction actions. Lands surrounding Philpott Lake are not heavily developed nor used for intense uses or operations. Instead, the lands surrounding Philpott Lake are primarily rural or Virginia park lands with various recreation areas, which are protected from heavy development. The closest centers of development (cities) are a significant distance away from Philpott Lake. Martinsville is the closest city at approximately 10 miles away.

Air quality is regulated by the Clean Air Act and implemented by the United States Environmental Protection Agency (USEPA) and the Virginia Air Pollution Control Board of the VADEQ. Air quality standards are defined in the National Ambient Air Quality Standards (NAAQS). Actions that result in increased emissions may require a permit issued by the Virginia Air Quality Pollution Control Board, Virginia DEQ. Executive Order 13514: Federal Leadership in Environmental, Energy, and Economic Performance provides further guidance on implementing these regulations.

4.1.5 Noise

Philpott Lake is in Henry, Patrick, and Franklin Counties in Virginia, which are relatively rural counties in nature. As such, obtrusive noise sources are generally confined to heavy traffic road corridors or in close proximity to agricultural or industrial activities. Within the Philpott Lake area there are few obtrusive sources of noise. Vehicles traveling local roads and boat engines on the water are the primary sources of noise. Occasional public events including fishing tournaments and weekend music events that may include amplified voices or music also occur. Sensitive noise receptors adjacent to and within the project area include areas occupied by park visitors and wildlife communities throughout the project.

Lands currently classified for Intensive Use or Operations have the greatest potential to create noise. More specifically, the developed lands within these classifications include the heaviest concentrations of motor vehicles and recreational activities that produce varying levels of noise. The undeveloped areas within these classifications, as well as lands classified as Flowage Easements or Low-Density Use, have limited noise sources. Impacts in these areas are confined to short-term effects from forestry or construction actions. As stated above, the lands surrounding Philpott Lake are not heavily developed nor used for intense uses or operations. Instead, the lands surrounding Philpott Lake are primarily rural, or Commonwealth parklands with various recreation areas that are protected from heavy development. The closest center of development is Martinsville, at approximately 10 miles distance.

Noise ordinances and regulations are developed and enforced by individual municipalities. These ordinances restrict the level of noise that can exist in certain areas and/or the time of day that they can exist.

4.1.6 Cultural Resources

The National Register of Historic Places lists one site in the Philpott Lake area (see Appendix B, Plate B12 Historic Properties Locations Map), which is the Fairy Stone State Park Historic District (National Register Information: 07000338). This district is listed for its architecture/engineering as well as entertainment/recreation value and landscape architecture. The architectural style is late 19th to early 20th century American movements (modern movement). (U.S. Department of the Interior, National Park Service, 2020)

The Virginia Department of Historic Resources (DHR) identifies five historic architecture sites also within the project area. The first is DHR ID 070-0057. This site was of notable importance during the World War I to World War II-era (1917-1945) due to commerce/trade, domestic, government/law/political, landscape, recreation/arts, and transportation/communication values. The second is DHR ID 070-0057-0041. It is the historic Bridge 6252 on Route 754 over Hale Creek. Again, it was a significant site during the World War I to World War II-era (1917-1945) due to recreation/arts and transportation/communication. (Virginia Cultural Resource Information System, 2020)

The third is DHR ID 033-0146. It is a log cabin on Copper Creek of the Philpott Lake reservoir. It is a single, domestic dwelling made of stone and wood. The fourth is DHR ID 033-0123. It, too, is a single, domestic dwelling made of stone, wood, and unknown material. The fifth is DHR ID 033-0168. It is known as the Meadows Store, a commercial building important for commerce/trade. (Virginia Cultural Resource Information System, 2020)

There is one DHR site that is an archaeological data recovery site. It is DHR ID 070-5043 and is known as the Upper Smith River Rockshelter Archaeological District. This resource dates back to the 1600s and earlier. Its primary historic context includes being a part of Virginia settlement patterns in the Late Woodland time period (1000 to 1606). (Virginia Cultural Resource Information System, 2020)

No specific sensitive areas analysis has been developed for Philpott Lake. Additional discussion of cultural resources is included in Section 2.15 of the Master Plan Update. Specific agency consultation for cultural resources is discussed in Chapter 7 of the Master Plan Update. The National Historic Preservation Act, the Antiquities Act, and the Reservoir Salvage Act regulate how cultural resources must be documented and preserved. Section 106 of the National Historic Preservation Act provides specific

direction to federal agencies on protecting these resources. The Virginia DHR is responsible for documenting and managing cultural resources within the Commonwealth and determining compliance with Section 106. Executive Order 11593: Protection and Enhancement of the Cultural Environment provides additional direction.

4.1.7 Hazardous Materials

According to the USEPA EnviroAtlas Database (USEPA, 2020c), there is one Hazardous Waste Site (RCRA) that is active in the Philpott Lake Reservoir known as the Philpott Powerhouse. It is located at 810 Dam Spillway Road, Bassett, Henry County, Virginia, 24055 (USEPA, 2015a). The primary reason for its inclusion as a hazardous waste site is due to the waste produced during hydroelectric power generation at the facility (USEPA, 2015a).

Also, according to the USEPA EnviroAtlas Database (USEPA, 2020c), there is one Superfund site in the Philpott Lake Reservoir known as the Philpott Training Facility. It is located at Route 789 and Philpott Training Street, Endicott, Franklin County, Virginia, 24088 (USEPA, 2015b). This facility is currently not on the USEPA Superfund National Priority List (USEPA, 2015b).

The towns of Bassett and Philpott have toxic release inventory sites, but all are located downstream of Philpott Lake (USEPA, 2020c). Fairy Stone State Park also has a Hazardous Waste Site (RCRA) that is active. It is located at 967 Fairystone Lake Drive, Stuart, Patrick County, Virginia, 24171. It is an entrance point of a facility or station for the park (USEPA, 2015c).

Hazardous materials are regulated by the Resource Conservation and Recovery Act, the Comprehensive Environmental Response, Compensation, and Liability Act, Oil Pollution Act, Toxic Substances Control Act, and related USACE guidelines. Any change in the storage or use of hazardous materials must comply with these regulations. The USEPA and Virginia Waste Management Board of the Virginia DEQ are responsible for ensuring compliance with these regulations.

4.1.8 Recreation and Aesthetic Resources

The USACE has developed and maintains approximately 14 recreation areas at Philpott Lake (see Appendix B, Plate B3 Vicinity Map). The recreation areas include Philpott Park, Bowens Creek Park, Goose Point Park, Runnett Bag, Ryans Branch Park, Jamison Mill Park, Jamison Mill Picnic Area, Horseshoe Point Park, Salthouse Branch Park, Deer Island, Turkey Island, Franklin County Tailrace, and Twin Ridge Park. Several small, privately owned docks and a USACE (employee only) dock are located on the lake. Recreation opportunities include boating, camping, fishing, hiking, picnicking, and swimming. A complete listing of the recreational sites and facilities is available in the Master Plan Update, Chapter 2.

Philpott Lake also includes a dedicated visitor center located on Philpott Dam Road, east of Philpott Marina. The visitor center includes history displays, environmental education materials, local and natural history exhibits, cultural events, and other local topics important to the community around Philpott Lake. An environmental education center provides visitors with exhibits targeting environmental topics, threatened and endangered species, trail maps, and an environmental learning classroom.

Philpott Lake provides a variety of scenic vistas, undeveloped shorelines, mature pine and hardwood forests, steep slopes, and deep water that attracts visitors year-round. With the distant Blue Ridge Mountains and foothills in view from the lake, Philpott Lake provides picturesque panoramic landscape views. Additionally, because future development is not expected, low-intensity recreation will not diminish the beauty around the lake. Maintaining existing development around the lake coupled with no planned and expected future development, Philpott Lake will remain aesthetically appealing for future generations.

4.2 Natural Resources

4.2.1 Vegetation

As noted, Philpott Lake is located in the Piedmont and Blue Ridge Mountain regions of Virginia. Four major vegetation coverage types have been identified in the current project area: upland hardwood, pine, mixed woodland, and open land. In the upland hardwood sections, tree cover is dominated by northern red oak (*Quercus rubra*), southern red oak (*Quercus falcata*), white oak (*Quercus alba*), water oak (*Quercus nigra*), pignut hickory (*Carya glabra*), shagbark hickory (*Carya ovata*), bitternut hickory (*Carya cordiformis*), and mockernut hickory (*Carya tomentosa),* with intermittent pine trees associated. In the pine sections, the canopy is dominated by Virginia pine (*Pinus virginiana*), loblolly (*Pinus taedus*), white (*Pinus strobus*), and shortleaf (*Pinus echinata*). Mixed woodlands contain mixed pine species (*Pinus spp.*) and hardwoods. The Open land category covers lands with less than 10 percent canopy closure, which can include agricultural lands, lawn areas, and open areas associated with recreational use. The Philpott Lake Forest Resource Management Plan provides an analysis of the project's vegetation productivity and inventory.

Within project lands, there are areas with predominant coverage of hardwoods and others with pines. The predominant forest type is mixed forest. The understory of these forests is populated with sourwood (*Oxydendrum arboreum*), dogwood (*Cornus florida*), rhododendron (*Rhododendron* spp.), mountain laurel (*Kalmia latifolia*), chinquapin (*Castanea pumila*), witch hazel (*Hamamelis virginiana*), red maple (*Acer rubrum*), sweetgum (*Liquidambar styraciflua*), and sassafras (*Sassafras albidum*).

Wetland areas within the project limits exhibited a mix of bottomland hardwood species. Typical species included: sweetgum (*Liquidambar styraciflua*), green ash (*Fraxinus pennsylvanica*), black gum (*Nyssa sylvatica*), swamp black gum (*Nyssa biflora*), sycamore (*Platinus occidentalis*), and river birch (*Betula nigra*).

Specific agency consultation for natural resources is discussed in Chapter 7 of the Master Plan Update. The clearing of vegetation is regulated by many of the same laws and regulations that apply to soil and topography. These laws are included in the Virginia Erosion and Sediment Control Handbook. The manual provides guidance on designing, implementing, and monitoring erosion and sediment controls and stormwater management measures. The Virginia Bureau of Land Management and the USACE are responsible for approving these measures. Management of rare, threatened, and endangered species is discussed in Section 4.2.3.

4.2.2 Fish and Wildlife

Common wildlife species found at Philpott Lake include white-tailed deer (*Odocoileus virginianus*), gray squirrel (*Sciurus carolinensis*), red fox (*Vulpes vulpes*), gray fox (*Urocyon cineroargenteus*), raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), and cottontail rabbit *(Sylvilagus spp.*).

Birds found in the area include bobwhite quail (*Colinus virgianus*), wild turkey (*Meleagris gallopavo*), woodpeckers (*Melanerpes* spp.), Carolina chickadee (*Poecile carolinensis*), red-eyed vireo (*Vireo olivaceus)*, ovenbird (*Seiurus aurocapilla*), mallard (*Anas platyrhyochos*), and wood duck (*Aix sponsa*).

Many angler species of fish can be found within Philpott Lake. The primary species include largemouth bass (*Micropterus salmoides*) and smallmouth bass (*Micropterus dolomieui*), bluegill (*Lepomis macrochirus*), sunfish (*Centrachus*), brown trout (*Salmo trutta*), brook trout (*Salvelinus fontinalis*), rainbow trout (*Oncorhynchus mykiss*), crappie (*Pomoxis* spp.), walleye (*Sander vitreus*), and catfish (*Siluriformes spp*.).

Specific agency consultation for natural resources is discussed in Chapter 7 of the Master Plan. The U.S. Fish and Wildlife Service (USFWS) is one agency responsible for fish and wildlife protection and has management authority under the U.S. Fish and Wildlife Coordination Act and subsequent regulations. Hunting and fishing of game species at Philpott Lake are managed by the Division of Wildlife Resources

(DWR) and the USACE. Permits and/or licenses are issued to manage populations of different species. Management of rare, threatened, and endangered species is discussed in Section 4.2.3.

4.2.3 Threatened and Endangered Species

Within Virginia counties (Patrick, Henry, and Franklin), five federally listed threatened species are known to exist. According to the USFWS Information for Planning and Consultation (IPaC), and Environmental Conservation Online System (ECOS), northern long-eared bat (*Myotis septentrionalis*), Roanoke logperch (*Percina rex*), small-anthered bittercress (*Cardamine micranthera*), smooth coneflower (*Echinacea laevigata*) and James spinymussel (*Pleurobema collina*) occur on the county listing and IPaC report within the study area.

Table 4: Threatened and Endangered Species in Patrick, Henry, and Franklin Counties

Species Name	Scientific Name	Status	Counties Listed
Vertebrates			
Northern long-eared bat	Myotis septentrionalis	Threatened	Patrick, Henry, and Franklin
Roanoke logperch	Percina rex	Endangered	Patrick, Henry, and Franklin
Small-anthered bittercress	Cardamine micranthera	Endangered	Patrick and Henry
Vascular Flora			
Smooth coneflower	Echinacea laevigata	Endangered	Franklin
Invertebrates			
James River spinymussel	Pleurobema collina	Endangered	Patrick, Henry, and Franklin

The northern long-eared bat is a medium-sized bat about 3 to 3.7 inches in length but with a wingspan of 9 to 10 inches. As its name suggests, this bat is distinguished by its long ears, particularly as compared to other bats in its genus, Myotis, which are actually bats noted for their small ears (Myotis means mouse-eared). The northern long-eared bat is found across much of the eastern and north-central United States and all Canadian provinces from the Atlantic coast west to the southern Northwest Territories and eastern British Columbia. The species range includes 37 states. In Virginia, the Northern long-eared bat (NLEB) spends winter hibernating in caves and mines. During the summer, NLEB roost singly or in colonies underneath bark, in cavities, or in crevices of both live and dead trees (typically ≥3 inches diameter at breast height [DBH]). Males and non-reproductive females may also roost in cooler places, like caves and mines. This bat has also been found, rarely, roosting in structures like barns and sheds, under eaves of buildings, behind window shutters, in bridges, and in bat houses. Foraging occurs on forested hillsides and ridges, and occasionally over forest clearings, over water, and along tree-lined corridors. Mature forests may be an important habitat type for foraging. (NatureServe, 2015)

The Roanoke logperch is a large darter, growing to about 6 inches long. It has a bulbous snout, lateral blotches, its back is scrawled, and most fins are strongly patterned. The first dorsal fin has an orange band, which is particularly vivid in mature males. The Roanoke logperch is known in the Roanoke River basin. The fish typically inhabits warm, usually clear, small to medium-sized rivers. These waterways have a moderate to low gradient, and the fish usually inhabit riffles and runs, with silt-free sandy to boulder-strewn bottoms. Young are usually found in slow runs and pools with clean sandy bottoms. In winter, logperch may be more tolerant of silty substrates and may also inhabit pools. Spawning occurs in April or May in deep runs over gravel and small cobble. Males are associated with shallow riffles during

the reproductive period. Females are common in deep runs over gravel and small cobble, where they spawn (NatureServe, 2010). (USFWS, 1991a)

Small-anthered bittercress is endemic to the Dan River watershed of the Roanoke River. This biennial or perennial herb occurs in moist, wet woods along small to intermittent sized streams, stream bank edges and seepages above the actual stream channel, wet rock crevices, and sand and gravel bars of small streams. This species prefers areas that are fully or partially shaded by shrubs and trees but can occasionally be found in full sun. Poorly viable occurrences may be found in disturbed areas subject to livestock trampling, silviculture, or encroachment by exotic, invasive species such as Japanese honeysuckle (NatureServe, 2010). (USFWS, 1991b)

The smooth coneflower, *Echinacea laevigata*, one of nine species of Echinacea native to North America, is an herbaceous perennial of the Asteraceae, the aster family. It is closely related to the more common purple coneflower, *Echinacea purpurea*. The flower heads contain 13 to 21 pale pink or lavender drooping ray flowers surrounding tubular disk flowers that form a hemisphere or cone. The ray flowers emerge rolled, appearing stringlike, and open gradually. Populations in Virginia show considerable differences in the amount of purple in leaves, petioles, and flowers. The plant grows in open sunny areas in which it receives little competition from other plants. It requires neutral to alkaline soils rich in calcium and magnesium with good drainage. Before the arrival of Europeans, it thrived in oak savanna openings where its growth conditions were maintained by fire or grazing. It is ironic that today the plant's most available habitat often happens to be in places, such as power line rights-of-way and roadsides, where it is subject to harm by frequent mowing or the use of herbicides. (Virginia Natural Heritage Fact Sheet)

The James spinymussel mussel is found in the James River drainage and the and Dan/Mayo River systems within the Roanoke River drainage in Virginia, North Carolina, and West Virginia. The James spinymussel is a small freshwater mussel slightly less than three inches in length. Adults have a dark brown shell with prominent growth rings and, occasionally, short spines on each valve. Young mussels have a shiny yellow shell with or without one to three short spines. The James spinymussel was once found throughout the main stem of the James River and all of its major tributaries upstream of Richmond, Virginia. The species has experienced a precipitous decline over the past two decades and now exists only in small, headwater tributaries of the upper James River basin in Virginia and West Virginia and the upper Roanoke River drainage of Virginia and North Carolina. The James spinymussel is found in waters with slow to moderate current and relatively hard water on sand and mixed sand-gravel substrates that are free from silt. (NatureServe 2010)

Based on the habitat descriptions of the above-listed species, it is expected that habitat could exist for the Northern long-eared bat, Roanoke logperch, small-anthered bittercress, smooth coneflower, and James spinymussel. Roanoke Logperch is known to occur in Smith River upstream of Philpott Lake within the boundary of government property. Surveys to assess Roanoke Logperch habitat and population are conducted periodically. Based on the current state of Philpott Lake, no disturbance to threatened and endangered species is expected as a result of this project.

Specific agency consultation for natural resources is discussed in Chapter 7 of the Master Plan. Rare, threatened, and endangered species are defined and protected under the federal and state/Commonwealth Endangered Species Acts. Additional protection is provided by specific legislation, such as the Bald Eagle Protection Act. These laws set limits on the types of actions that can occur within the habitat that support these species. The laws and regulations also define the permitting or mitigation process that must occur to offset impacts to rare, threatened, or endangered species. The Virginia Natural Heritage Program and the USFWS are responsible for implementing these laws and ensuring appropriate compliance.

4.2.4 Bald Eagle

The bald eagle is protected under the Bald and Golden Eagle Protection Act and enforced by the USFWS. Habitat for the bald eagle primarily consists of mature forests in proximity to large bodies of

open water for foraging. Large dominant trees are used for nesting sites, typically within 1 mile of open water.

A desktop-GIS assessment of the project study area, as well as the area within a 1-mile-radius of the project limits, was performed on October 23, 2020, using color aerials. Additionally, a site reconnaissance was performed on foot and by boat on October 14, 2020. Trees large enough to support bald eagle nesting habitat were observed in the project vicinity, as were bald eagles themselves.

A bald eagle nest has been observed for several years on USACE property near Fairy Stone Cove. The tree where the nest is located recently died. It is unknown if the eagles will continue to use the site. If future construction activities occur along the lake perimeter the area would be assessed for bald eagle use and coordination with the USFWS, if required, would be completed prior to the start of construction activities.

4.2.5 Wetlands

Wetlands are lands that are wet at least part of the year due to either saturated soils or standing water. Inland wetlands include marshes and wet meadows dominated by herbaceous plants, swamps dominated by shrubs, and wooded swamps dominated by trees (USEPA, 2018). Available mapping of wetlands is very generalized; therefore, proposed development requires wetland determination for potential permitting on a site-by-site basis.

The Philpott Lake Master Plan study area contains freshwater emergent wetland (palustrine emergent), freshwater forested/shrub wetland (palustrine forested, palustrine shrub scrub), freshwater pond (palustrine unconsolidated bottom), littoral and limnetic lacustrine (lake unconsolidated bottom and lake unconsolidated shoreline), and perennial and intermittent riverine (riverine unconsolidated bottom, riverine streambed).

Specific agency consultation for wetland resources is discussed in Chapters 7 and 8 of the Master Plan Update. Wetlands are regulated under Section 401 and 404 of the Clean Water Act. A Section 401 Water Quality Certification ensures compliance with water quality standards. Section 404 regulates activities within U.S. waters, which includes Philpott Lake and its surrounding tributaries. Further direction is provided by Executive Order 11990: Protection of Wetlands and related USACE regulations. The Virginia Division of Water Resources, the Virginia Department of Environmental Quality, the USFWS, and the USACE are responsible for these regulations.

4.2.6 Invasive Species

The USACE Invasive Species Policy was developed to ensure agency compliance with Executive Order 13112 Invasive Species. The policy required operating projects to include invasive species management planning, which details and recommends performance-oriented goals, objectives, and specific measures of success in their project operations and maintenance responsibilities and that planning be coordinated with other federal, state/Commonwealth, or local agencies. Executive Order 13112 Invasive Species defines an invasive species as an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health. The order defines “control” of invasive species as appropriate eradication, suppression, reduction, or management of invasive species populations, prevention of spreading the invasive species from areas where they are present, and implementation of steps such as restoration of native species and habitats to reduce the effects of invasive species and to prevent further invasion.

Under 16 USC Chapter 67 Aquatic Nuisance Prevention and Control Act, an aquatic nuisance species means a non-indigenous species that threatens the diversity or abundance of native species or the ecological stability of infested waters, or commercial, agriculture, aquaculture, or recreational activities dependent on such waters.

Recently, the Virginia Department of Wildlife Resources (DWR) reported the detection of Alabama bass in Philpott Lake. Alabama bass can threaten both largemouth and smallmouth bass through competition and

hybridization. Hydrilla (*Hydrilla verticillata*) is a highly destructive, non-native aquatic plant found on the Federal Noxious Weed List with Philpott Lake containing the northernmost-known population of it in an Atlantic state (NCWRC, 2021; K. Foley, 2021). There are two types of hydrilla, monoecious and dioecious. Both types of hydrilla are found to occur at Philpott Lake (Brian Stewart, USACE, personal communication on August 17, 2020). Hydrilla impacts boating paths and limits water sport recreation but provides habitat and foraging areas for some aquatic species located in Philpott Lake.(NCWRC, 2021)

4.3 Socioeconomic Characteristics

4.3.1 Population and Economy

Philpott Lake is located in three Virginia counties, Franklin, Henry, and Patrick, just northwest of Martinsville, Virginia. In 2019, Franklin County had a population of 56,042; Henry County had a population of 50,557; and Patrick County had a population of 17,608 (Census, 2019). At the time of the last Census (2019), children under five years of age made up approximately 4.5 percent of the Franklin County population; approximately 4.5 percent of the Henry County population; and approximately 4 percent of the Patrick County population, as compared to the national average of nearly 7 percent.

The median household income (in 2019 dollars) for Franklin County was $56,254; in Henry County was $37,952; in Patrick County was $43,073; while the national average was $62,843. The per capita income in Franklin County was $30,487; in Henry County was $22,372; in Patrick County was $24,292; the national average was $34,103. Approximately 12 percent of Franklin County's population, approximately 15 percent of Henry County's population, and approximately 16 percent of Patrick County's population were below the poverty level, compared to the national average of approximately 11 percent. (Census, 2019)

Within the general vicinity of Philpott Lake, land use patterns represent a mixture of agricultural and forest uses interspersed with residences and business activity. Within Philpott Lake, land allocations are designated through the Master Plan Update. Allocations are focused on recreational facilities and wildlife management areas. Along the shoreline, land use is controlled by the USACE's shoreline management plan. The plan establishes different zones along the shoreline that identify where private development is allowed, where lands are to be used to support public recreation, and where no shoreline development is allowed.

Specific agency consultation for socioeconomic resources is discussed in Chapter 7 of the Master Plan Update. Laws and regulations that apply to these resources include Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks, Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations, and related USACE regulations. The USEPA and the USACE are responsible for ensuring compliance with these regulations, respectively.

4.3.2 Transportation

Vehicular access to the region surrounding Philpott Lake is provided primarily by Virginia State Route 57 (SR 57). SR 57 provides direct access to a number of Virginia Routes that then directly lead to Philpott Lake on the southern and western portion of Philpott Lake. Additional local roads and USACE maintained roads provide connections between SR 57 and other locations around the entirety of the lake.

Within the individual locations included in the project boundary, a mix of paved and unpaved roads, parking lots, and trails provide access to the site. Internal access also is provided by regional trails and USACE-developed trails. Transportation within the project also is facilitated by the existing marina and numerous boat ramps.

Access to recreation areas is provided by a network of Commonwealth and county roads. The condition of these roads vary, but most are adequate to handle recreational traffic. The developed roads and parking lots exist on lands currently classified as Operations and High Density Recreation. On the High Density Recreation lands, these roads and parking lots are confined to areas that support the developed

recreational sites. The undeveloped portions of the High Density Lands, along with the MRML have limited transportation infrastructure. Trails run throughout the project and provide access to certain portions of these lands. Access to Flowage Easements is controlled by the individual property owner, with the USACE retaining the right to enter these lands for inspection purposes.

Specific agency consultation for physical resources is discussed in Chapter 7 of the Master Plan Update. The transportation system is managed and regulated by the Virginia Department of Transportation. Improvements on project lands fall under the jurisdiction of the USACE and Federal Highway Administration. Further guidance is provided by Executive Order 13148: Greening the Government Through Leadership in Environmental Management, and related USACE regulations.

4.3.3 Utilities and Conservation Potential

Utilities in Franklin, Henry, and Patrick Counties are provided by public and private sources. Areas in each county that are not served by the utility systems noted below must rely on private wells and septic systems for water and wastewater.

For Franklin County, electricity is provided by American Electric Power – Appalachian. Sewer is provided by three separate systems, with one located in Boones Mill, another in Ferrum, and the last in the Town of Rocky Mount. Solid waste at a central sanitary landfill is owned and operated by Franklin County. Water is provided by four separate systems. The first is the Ferrum Water and Sewage Authority, which obtains water from three wells. The second is the Franklin County Public Works Department, with water being sourced from the Bedford County Public Service Authority. The third is the Town of Boones Mill, which receives water from two wells and a spring. The last is the Town of Rocky Mount, with its water being sourced from the Blackwater River. Telephone service is provided by Century Link. (Franklin County, Virginia, 2020)

The Henry County Public Service Authority provides water and sewer services in Henry County, Virginia. There are more than 800 miles of utility lines for the Public Service Authority in Henry County, making it one of the largest water and sewer authorities in Virginia. Appalachian Power (a division of American Electric Power) is the major provider of electric service to the Henry County Area. Southwestern Virginia Gas Company is the Natural Gas Provider for Henry County. (Henry County, Virginia, 2020)

For Patrick County, the Town of Stuart operates a public water distribution facility with a maximum daily capacity of 777,700 gallons per day (GPD). Currently, operations are at approximately 50 percent of its capacity. The Town of Stuart also operates a wastewater treatment plant with a maximum daily capacity of 600,000 GPD. Currently, operations are also at approximately 50 percent of capacity. Electricity for Patrick County is provided by American Electric Power Company. Patrick County operates a solid waste transfer station that transports area refuse to Waste Management Services out of the Commonwealth. (Patrick County, Virginia, 2020)

Only Franklin County provides public utilities to the Philpott Lake area. Areas of Philpott Lake within Henry and Patrick Counties rely solely on private sources for utilities. Drinking water to the recreation sites is delivered by a combination of wells and community sources. Community sewer service is not available to parks located on the north side of the lake. All parks have electric and telephone lines running to them, as well. The closure of a number of recreation sites around the lake during the late fall and winter months reduces the project's utility demand.

Utility use within Philpott Lake is confined to Operations-classified lands and the developed portions of the High Density Recreation lands. Utilities either do not exist or do not service project lands that are currently undeveloped or classified as Flowage Easement or MRML.

Specific agency consultation for physical resources is discussed in Chapter 7 of the Master Plan Update.

Utility developments within the region are the responsibility of local municipalities. The USACE works with these municipalities to coordinate improvements on project lands. These actions are guided by federal

directives, such as Executive Order 13148: Greening the Government Through Leadership in Environmental Management and related USACE regulations.

4.3.4 Safety

The USACE staff works to ensure a safe and enjoyable experience for all visitors at Philpott Lake. Safety at Philpott Lake is maintained through a variety of different mechanisms. The project's Safety Plan, included in the Operations Management Plan, identifies safety concerns, responsibilities, and management techniques for different environments at the project.

Swimming, wading, snorkeling, scuba diving, and water skiing are allowed at Philpott Lake. The exceptions to these activities are areas at the launching sites, public docks, or other areas restricted by the USACE District Commander. All swimmers should use designated swimming areas to ensure safety. Currently, Philpott Lake contains six designated swimming areas with beaches to serve lake visitors. (USACE, 2020b)

Around the lake, there are 10 public boat ramps. These ramps are located in convenient locations to best serve visitors from any direction. Just below the dam on Smith River is a canoe launch for white water rafting. Many different vessels are allowed on the lake, including, but not limited to, manually powered or motored boats, kayaks, canoes, and personal watercraft. All of these vessels must be operated in accordance with Commonwealth and federal laws. There is a waterway marking system on the lake, which includes mileage markers on the shore and on buoys in the water. Boating rules and regulations are enforced by the USACE Rangers, Conservation Police Officers with the VDWR, and local sheriff's deputies. The Philpott Lake Visitor Center has copies of the rules and regulations for boating, or a person may call the VDWR or search online at the VDWR website for boating. (USACE, 2020b)

Philpott Lake has various areas for camping, whether in a tent, camper, or full-size RV. There are four park areas with campgrounds containing water and electricity hook-ups and hot showers. Another park, Deer Island (only accessible by the water), offers primitive camping. Most of Philpott Lake's campgrounds are operated on a seasonal basis, so contacting the Philpott Lake Visitor Center is key to those planning camping trips on the site. The typical camping season occurs from April 1 through October 31, and campsites at Goose Point and Salthouse Branch may be reserved via contacting the National Recreation Reservation Service (NRRS) hotline or by visiting the website. Horseshoe Point campsites may be reserved from May 1 through September 30. There are a few picnic shelters that may also be reserved. Henry County Parks and Recreation also provide group camping areas around Philpott Lake that include full hook-ups to water, electricity, showers, and sewer. These campsites may be reserved by calling the Henry County Parks and Recreation Department. (USACE, 2020b)

Hunting and fishing are also popular recreational activities occurring at Philpott Lake. Due to regulations, licensing requirements, and seasonal variations, contacting the VDWR at its Richmond, Virginia office is important for those planning a hunt at Philpott Lake. The USACE has also developed a Firearms Safety Information Map dated August 2018, which includes 12 areas of firearm safety zones. This map is available at https://www.saw.usace.army.mil/Portals/59/docs/recreation/philpottLake/final%20-%20Philpott%20FSI%20Map%202020.pdf (USACE, 2020c).

Fishing regulations also vary (i.e., those governing special regulations and stocked trout water regulations), so contacting the VDWR when planning a fishing excursion is also key. Any person fishing on the Smith River must check the tentative power generation schedule by calling the recording at 276-629-2432 before going fishing because the fishing location is below the dam. When power generation occurs, the Smith River waters rise and become swift and turbulent, creating a dangerous environment for fishing. (USACE, 2020c)

The USACE also provides a widespread trail system at Philpott Lake to promote outdoor recreational experiences by connecting to other local and regional trails. Some trails traverse through a forested corridor connecting the Philpott Park Tailrace at Philpott Dam to Salthouse Branch Park along the Franklin County side of Philpott Lake. Some trails also are open to hikers, bicyclists, and equestrians and

are moderate-to-strenuous in difficulty. Trail users are encouraged to use the trails responsibly, not only for their own safety but also for the protection of the natural resources. The USACE has developed trail etiquette and safety guidelines to help make trail use a safe occasion at Philpott Lake. (USACE, 2020d)

Specific agency consultation for physical resources is discussed in Chapter 7 of the Master Plan Update. Safety within project lands is the responsibility of the USACE, with the assistance of local emergency services. The Philpott Lake Operations Management Plan provides direction in developing and implementing safety measures.

5 Environmental Consequences

This section describes the environmental consequences associated with the alternatives presented in Section 3 of this PEA. The NEPA requires consideration of context, intensity, and duration of adverse and beneficial impacts and measures to mitigate those impacts. These elements are considered in the following impact analysis.

Use of the proposed Master Plan Update will streamline the approval process for future actions affecting project lands, depending on whether the actions are 1) specifically included in the Master Plan, 2) not included in the Master Plan, but consistent with the Plan, or 3) not included and not consistent with the recommendations, objectives, and policies stated in the Plan (see Figure 1). For actions that are identified in the Master Plan, the approval process will still require adequate NEPA consideration prior to initiating construction.

This PEA assesses the impacts of adopting the land classifications included in the proposed Master Plan. The proposed Master Plan Update consists of the land classifications, resource objectives, development needs, or other specifically stated policies. Because of the wide variety of possible land uses that could be proposed, an additional evaluation to determine consistency with the stated site objectives will be required. Therefore, changes of land classifications to accommodate the Master Plan Update will require an additional NEPA analysis to evaluate the expected impacts of the specific proposed change in use.

For actions that are not included in this Master Plan, such as specific future development proposals, the USACE must determine if they are consistent with the Master Plan's policies. The first step in determining consistency will be to evaluate if the land classification for the location of the Preferred Alternative is appropriate (Figure 1). For example, a proposal to develop a new marina in lands classified as Multiple Resource Management will not be consistent with this Master Plan, but a proposal for new trail development on the same land would be consistent.

If the actions are consistent with the Master Plan, then the USACE review of a outgrant application will require appropriate NEPA review and other environmental compliance and consultation with appropriate agencies, but no additional administrative review and approval. Once a project is approved and compliance is complete, it will be ready for implementation. These actions are not fully assessed in this PEA and will require additional NEPA compliance.

If the Preferred Alternative is determined to be not consistent with the Master Plan, then the USACE review of a outgrant application will require administrative consideration of the Preferred Alternative to determine if it is an appropriate use of project lands and appropriate use of the proposed site. If the action is determined to be an inappropriate use of project lands or the proposed site, no further action on the proposal will be considered. If, however, the proposed land use was determined to be an appropriate use of both project lands and the proposed project site, then subsequent NEPA review and other environmental compliance and consultation with appropriate agencies will be undertaken.

A comparison of alternatives took into consideration the potential intensity of an impact in terms of change or degree of change in a resource condition. Common characterizations used include the degree of change from existing conditions or effects to managed or scarce resources, often expressed as the relative area of impact, measured units of change, differences in levels of use, etc.

Terminology used for depicting the overall magnitude of impacts includes:

- No Effect—The proposed action would not cause a detectable change.
- Negligible—The impact would be at the lowest level of detection; the impact would not be significant.
- Minor—The impact would be slight but detectable; the impact would not be significant.
- Moderate—The impact would be readily apparent; the impact would not be significant.

- Major—The impact would be clearly adverse or beneficial; the impact has the potential to be significant.

These levels of potential effect may consider duration, geographic extent, and the potential likelihood to occur, as indicated below:

- Duration—How long the impact would be expected to occur or last, measured in length of time. Common characterizations are short-term, long-term, permanent, etc.
- Geographic extent—Where the impact would be expected to occur geographically in the project area.
- Potential to occur (likelihood)—How probable the impact would be. Common characterizations are unlikely, possible, probable, or certain to occur.

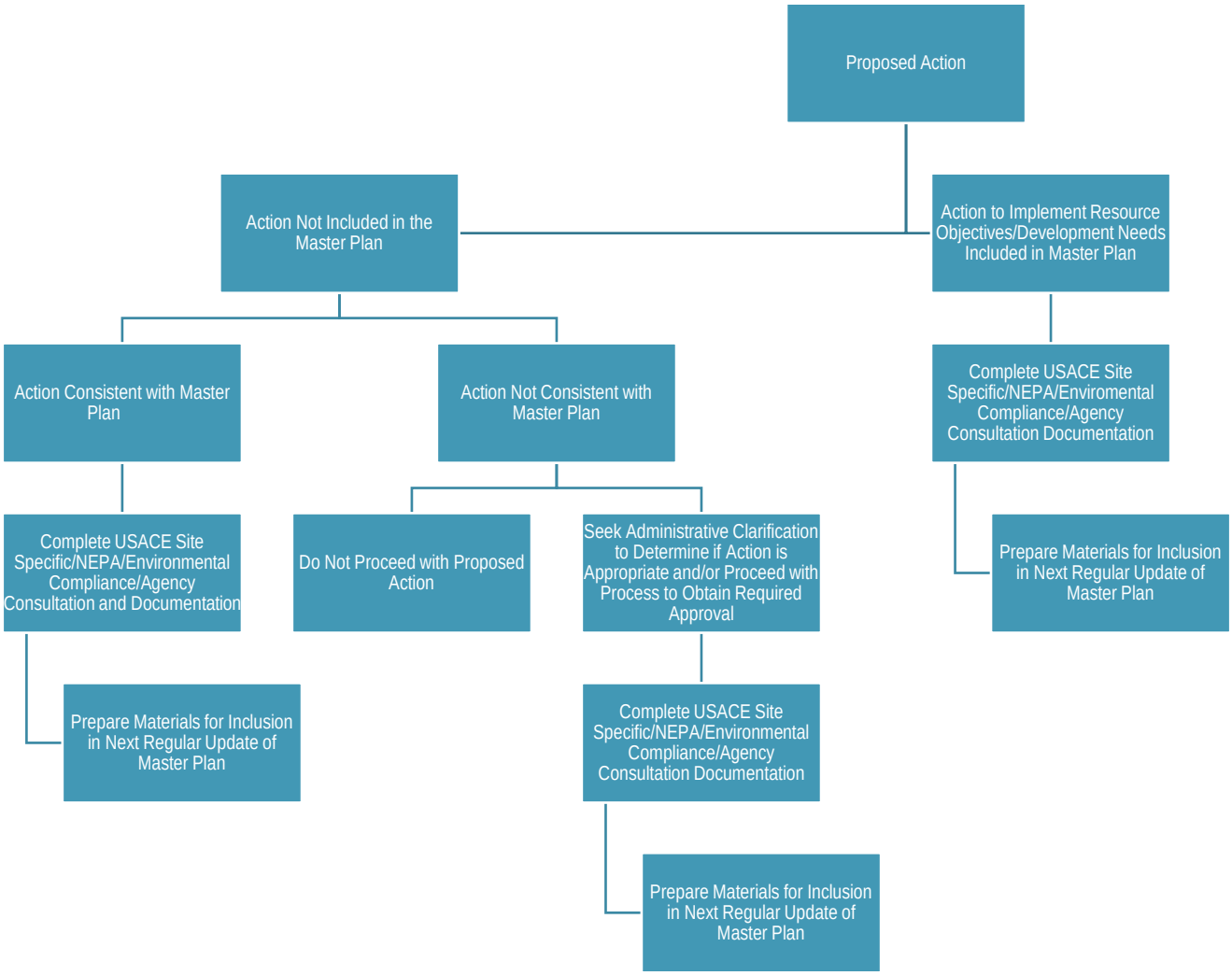

Figure 1: How the Master Plan Update will be Used

5.1 Impacts of the Preferred Alternative

Under the Preferred Alternative, the USACE would adopt a Master Plan Update for Philpott Lake. Along with adopting the policies and direction included in the Plan, the USACE would approve the land classifications. In general, the proposed land classifications reduce the amount of project land available to support intensive land use. Approximately 400 acres of land previously classified for Intensive Use would be reclassified as MRML use, supporting low-density recreation and permanent wildlife habitat. Future actions may include minor recreational improvements such as an amphitheater in Philpott Park at the overlook, possible expansion of the hiking trails at this site and a new picnic shelter and relocation of the main swim beach at Salthouse Branch Park. These potential actions were only in the preliminary stages of consideration and allocations had yet to be issued.

The preferred alternative would have the following effects on the subsequent resource topics (also see Table 5):

5.1.1 Geology, Topography, and Soils

The Preferred Alternative would have no permanent effect on geology, topography, and soils. Changes in the Master Plan would reduce the availability of land for Intensive Use while increasing the availability of land supporting various MRML uses. It is probable that the changes in the Master Plan would lessen ground disturbing activities overall at Philpott Lake thus minimizing effects on geology, topography and soils.

Future actions may include minor recreational improvements such as an amphitheater in Philpott Park at the overlook, possible expansion of the hiking trails at this site and a new picnic shelter and relocation of the main swim beach at Salthouse Branch Park. The possibility exists for negligible short-term construction impacts in those areas where actions may occur. Ground disturbing activities would likely include soil grading and leveling and the deposit and removal of fill materials.

5.1.2 Floodplains

The Preferred Alternative would have no long-term effect on floodplains. The Master Plan Update would be expected to lessen the exposure of floodplain areas to future actions involving additions to recreational resources due to the reclassification of land that supports intensive uses to lower density recreational uses.

Future actions may include minor recreational improvements such as an amphitheater in Philpott Park at the overlook, possible expansion of the hiking trails at this site and a new picnic shelter and relocation of the main swim beach at Salthouse Branch Park. Any future actions requiring construction would balance removal and depositing of fill in floodplain areas so as not to impede or reduce the flood storage capacity of the project.

5.1.3 Water Resources

The Preferred Alternative would be expected to have minor, long-term beneficial effects on water resources through the preservation of water quality. The preservation of water quality would be supported by lower-density recreational development made possible through changes in the Master Plan that reclassify Intensive Use lands to various MRML uses.

It is possible that negligible, short-term impacts to water quality will occur in the instance that future planned projects are constructed at Philpott Park and/or Salthouse Branch Park. Future planned projects may include construction of an amphitheater and extensions of existing trails at Philpott Park as well as a new picnic shelter and relocation of the beach at Salthouse Branch Park. Construction activities associate with these potential actions include soil grading and leveling and the deposit and removal of fill materials. Any permit required pursuant Section 401 of the Clean Water Act will be obtained prior to start of construction and all conditions of the applicable permit will be met.

5.1.4 Air Quality

Implementation of the Preferred Alternative would likely have a minor, long-term, beneficial effect on air quality. Changes in the Master Plan reclassifies land previously designated for Intensive Use to lower-density recreational uses. The lower-density recreational uses support lower visitor carrying capacities at the various parks in Philpott Lake, thus constraining vehicle access to parking in an effort to limit the number of exhaust producing vehicles at these sites at any given time.

The reclassification of Intensive Use lands to MRML classifications will reduce the frequency of actions associated with the future construction. Possible future actions would likely include land disturbing activities. Localized air quality may be temporarily affected at a negligible level during any future construction activities due to emissions from construction vehicles or equipment and/or the suspension of particulates from the disturbance of soils.

5.1.5 Noise

Changes to the Master Plan would have negligible, long-term beneficial effects on overall noise levels at Philpott Lake. The Preferred Alternative would generally lessen the availability of land that supports Intensive Use to lower density recreational uses. Environments supporting intensive use of land typically experience higher levels of noise. It is probable that the Master Plan's land classification changes would result in lower levels of noise than what would be experiences with Intensive Use.

The reclassification of Intensive Use lands to MRML classifications will reduce the frequency of actions associated with the future construction. Localized, temporary noise increases may be experienced in areas with active construction projects due to the use of heavy-duty vehicles and other construction equipment required for activities such as soil grading and leveling and the deposit and removal of fill materials Overall, the impacts to floodplains with the implementation of the Preferred Alternative would be negligible.

5.1.6 Cultural Resources

The Preferred Alternative will reduce the availability of land supporting Intensive Use through reclassification to MRML uses. This would likely preserve more undeveloped land which may have negligible, long-term, beneficial effects in the protection of cultural resources.

Implementation of the Preferred Alternative would be expected to lessen the frequency of actions associated with the development of intensive land use. Future actions that may include minor recreational improvements such as an amphitheater in Philpott Park at the overlook, possible expansion of the hiking trails at this site and a new picnic shelter and relocation of the main swim beach at Salthouse Branch Park. Section 106 of the National Historic Preservation Act and USACE policies requires an assessment of the possible effects that any future action or other undertaking may have on historic and archeological resources. Any future planned projects will avoid identified cultural resources sites.

5.1.7 Hazardous Materials

The changes in the Master Plan would lessen the availability of land uses that support Intensive Use to lower-density recreational uses. This change in development density is not expected to change how hazardous materials are managed at Philpott Lake.

Implementation of the Preferred Alternative would be expected to lessen the frequency of actions that increase hazard material accident probabilities. Overall, the probability of hazardous material accidents is negligible and would be of short duration.

5.1.8 Recreation Resources

The Preferred Alternative would have long-term beneficial effects on recreational development density at certain sites in Philpott Lake. The effect is associated with the reclassifying of lands supporting intensive use to other land classifications including MRML. Approximately 400 acres of land previously classified for Intensive Use would be reclassified as MRML use, supporting low-density recreation and permanent

wildlife habitat. The reclassification of lands from intensive use to MRML would likely reduce the magnitude of site build-out for recreational and foster land use and maintenance that is more supportive of low-density recreation and habitat preservation.

Future planned projects relating to recreational activities may include construction of an amphitheater and extensions of existing trails at Philpott Park as well as a new picnic shelter and relocation of the beach at Salthouse Branch Park. Overall, these actions if implemented would have minor, long term beneficial effects on recreational resources at Philpott Lake.

5.1.9 Aesthetic Resources

Aesthetic resources vary at Philpott Lake with natural settings consisting of either water, forested areas and open views, cultural resources, and developed park settings. The Preferred Alternative would preserve more of the natural settings at Philpott Lake and thus be expected to have a long-term minor beneficial impact on aesthetic resources.

Actions under consideration by the USACE including construction of an amphitheater and extensions of existing trails at Philpott Park as well as a new picnic shelter and relocation of the beach at Salthouse Branch Park are considered minor improvements. Smaller developed park resources would experience minor, short term aesthetic impacts associated with construction activities that may include activities such as soil grading and leveling and the deposit and removal of fill materials.

5.1.10 Vegetation

The Preferred Alternative would have long-term, minor beneficial effects to the vegetative habitats within the project. Approximately 400 acres of land previously classified for Intensive Use would be reclassified as MRML use, supporting low-density recreation and permanent wildlife habitat. The reclassification of lands from Intensive Use to MRML would foster sustainable land uses that are more supportive of low-density recreation and habitat preservation.

Minor actions under consideration by the USACE including construction of an amphitheater and extensions of existing trails at Philpott Park as well as a new picnic shelter and relocation of the beach at Salthouse Branch Park. Future actions involving construction may require clearing of vegetation but overall long-term impacts to vegetation would be negligible. Smaller developed park resources in which future actions may occur are likely to experience short-term, negligible impacts associated with vegetation clearing as part of construction related activities. Areas where vegetation is cleared would be reseeded with native vegetation. Best Management Practices (BMPs) include planting of native species as appropriate in the instance that vegetative clearing occurs.

5.1.11 Invasive Species

The Preferred Alternative would have a negligible, long-term beneficial effect on land management practices that support lower-density recreational development. The reclassification of land from Intensive Use to lower density uses reduces the need for vegetative clearing and opportunities for the unintentional establishment of an invasive species.

Actions under consideration are minor recreational improvements and include construction of an amphitheater and extensions of existing trails at Philpott Park as well as a new picnic shelter and relocation of the beach at Salthouse Branch Park. Overall, the long-term impacts on the control of invasive species would be negligible with the proposed changes of the Philpott Lake Master Plan. BMPs include planting of native species as appropriate in the instance that vegetative clearing occurs.

5.1.12 Fish and Wildlife

The Preferred Alternative would support lower density recreational land uses by reducing the availability of land classified for Intensive Use. This reclassification of land use would be expected to preserve natural settings and overall have a minor, long-term beneficial effects on fish and wildlife at Philpott Lake.

Minor actions to improve recreational activities at Philpott Lake that under consideration by the USACE include construction of an amphitheater and extensions of existing trails at Philpott Park as well as a new picnic shelter and relocation of the beach at Salthouse Branch Park. These smaller developed park resources may experience temporary displacement of wildlife during construction activities, but they would be expected to return to the areas upon completion of construction.

5.1.13 Threatened or Endangered Species

The Preferred Alternative would support lower density recreational land uses by lessen the availability of land classified for Intensive Use. This reclassification of land use would be expected to preserve natural settings which may include habitat for threatened and endangered species. The reclassification of land uses would have no effect on threatened or endangered species at Philpott Lake.

Minor actions to improve recreational activities at Philpott Lake that under consideration by the USACE include construction of an amphitheater and extensions of existing trails at Philpott Park as well as a new picnic shelter and relocation of the beach at Salthouse Branch Park. It is possible that construction activities may result in negligible short-term impacts to threatened or endangered species. A USFWS Information for Planning and Coordination (Ipac) assessment will be completed prior to any planned construction to help minimize any adverse effects to critical habitat within the action area and any required coordination/consultation with USFWS will be completed prior to construction.

5.1.14 Bald Eagle

The Preferred Alternative would support lower density recreational land uses by lessen the availability of land classified for Intensive Use. This reclassification of land use would be expected to preserve natural settings which include the lake shorelines and mature trees that provide vital habitat. The reclassification of land uses would have a minor, long-term beneficial impact on Bald Eagles.

Minor actions to improve recreational activities at Philpott Lake that under consideration by the USACE include construction of an amphitheater and extensions of existing trails at Philpott Park as well as a new picnic shelter and relocation of the beach at Salthouse Branch Park. Construction activities would be avoided in known eagle nesting sites.

5.1.15 Wetlands

The Preferred Alternative would be expected to have minor, long-term beneficial effects on wetlands through the preservation of regional water quality, supported by lower-density recreational development through land use reclassification from Intensive Use to MRML uses.

Future planned projects may include construction of an amphitheater and extensions of existing trails at Philpott Park as well as a new picnic shelter and relocation of the beach at Salthouse Branch Park. It is possible that potential actions would have negligible long-term, impacts on wetland area. Any permit required pursuant Section 404 of the Clean Water Act will be obtained prior to start of construction and all conditions of the applicable permit will be met.

5.1.16 Population and Economy

Changes to the Master Plan through the Preferred Alternative would be limited to the project and thus would not have an effect on regional socioeconomic trends, such as population and economy.

Possible future actions requiring construction activities including construction of an amphitheater and extensions of existing trails at Philpott Park as well as a new picnic shelter and relocation of the beach at Salthouse Branch Park may have negligible, short-term beneficial effects associated with short term employment and supplies of construction materials.

5.1.17 Transportation

The Preferred Alternative would have no effect on the regional or local transportation network. Trends in traffic would remain unchanged.

There may be negligible short-term impacts due to construction activities including construction of an amphitheater and extensions of existing trails at Philpott Park as well as a new picnic shelter and relocation of the beach at Salthouse Park, should any future planned projects at Philpott Park be executed requiring construction equipment and work crews.

5.1.18 Utilities

The proposed changes to land classification in the Master Plan overall would have negligible long-term impacts on utilities at the project. Existing utility services would continue to be sufficient, and future low-intensity recreation would place limited demand on these systems.

Possible future actions requiring construction activities including construction of an amphitheater and extensions of existing trails at Philpott Park as well as a new picnic shelter and relocation of the beach at Salthouse Branch Park would require accessibility to utilities both during construction and as part of operations at Philpott Lake. The demand on existing utility networks would be negligible both during construction and operations.

5.1.19 Conservation Potential

The Preferred Alternative would have minor, long-term beneficial effects on conservation at Philpott Lake. The reclassification of lands from Intensive Use to MRML would likely reduce the amount of land available for intensive recreational use, thus fostering recreational land use that is more supportive of low-density recreation and habitat preservation.

Possible future actions requiring construction activities including construction of an amphitheater and extensions of existing trails at Philpott Park as well as a new picnic shelter and relocation of the beach at Salthouse Branch Park would have long-term negligible impacts on resources otherwise included in conservation initiatives.

5.1.20 Safety

The Preferred Alternative is anticipated to have overall negligible, long-term beneficial effects to on safety at Philpott Lake by limiting intensive uses and the draw of visitors to the Lake. Those Park areas that are experiencing issues with carrying capacity exceedances have potential for moderate adverse impacts causes by public safety issues due to a high concentration of visitors and vehicles in areas with limited parking or recreational facilities.

Possible future actions requiring construction activities including construction of an amphitheater and extensions of existing trails at Philpott Park as well as a new picnic shelter and relocation of the beach at Salthouse Branch Park would be negligible in terms of safety impacts as short-term construction work sites would be restricted to workers.

5.2 No-Action Alternative

Under the No-Action Alternative, the USACE would not adopt a Master Plan Update for Philpott Lake. The USACE would make no change from current management direction or level of management intensity. This would result in the USACE failing to comply with its own regulations related to updating land use classifications in its master plans. The laws and policies that address the USACE's jurisdiction over this land would remain in effect.

The No-Action Alternative would continue support for Intense Use recreational development at Philpott Lake. Previously allocated Intensive Use areas for recreation would not be reclassified to MRML uses that afford greater natural resource conservation potential. It is possible that any increase in magnitude or density of recreational facilities and infrastructure could result in negligible, long-term adverse impacts to naturally occurring vegetation due to construction related clearing and grubbing of areas to make way for new development.

The No-Action Alternative would likely result in minor, long-term beneficial effect in the accessibility of recreational resources but may also reduce safety and aesthetics in areas that are experiencing visitor capacity levels that are at capacity levels or exceed them. The effects to both aesthetic resources and safety are likely to be park sites that typically experience high volumes of visitors include Goose Point Park, Salthouse Branch Park and Horseshoe Point.

At the time of this study, the USACE was considering future actions that may include minor recreational improvements such as an amphitheater in Philpott Park at the overlook, possible expansion of the hiking trails at this site and a new picnic shelter and relocation of the main swim beach at Salthouse Branch Park. These potential actions were only in the preliminary stages of consideration and allocations had yet to be issued. Negligible short-term impacts to resources are likely to occur should any of those actions be carried forward for implementation. The overall magnitude of possible construction impacts to resource topics would be the same as those describes for the Preferred Alternative.

The No-Action Alternative would be a continuation of the present course of land management at Philpott Lake. The present course of action would have no effects on the subject topics of geology, topography, soils, floodplain, air quality, noise, cultural resources, hazardous materials, aesthetics, invasive species, fish and wildlife, threatened and endangered species, bald eagle, wetlands, population and economy, and utilities.

Table 5: Environmental Impact Comparison of Alternatives

Resource Topic	Preferred Alternative	No-Action Alternative
Geology, Topography, and Soils	No effect with the Master Plan Update / Possible short-term, negligible effects associated with construction activities	No effect with the Master Plan Update / Negligible short-term negligible effects associated with construction activities
Floodplains	No effects associated with Master Plan Update or construction activities	No effects associated with Master Plan Update or construction activities
Water Resources	Minor long-term beneficial effects / Possible negligible short-term impacts associated with construction activities	No effects associated with Master Plan Update / Negligible short-term effects associated with construction activities
Air Quality	Minor, long-term, beneficial effect / Possible short-term negligible effects associated with construction activities	No effect with the Master Plan Update / Negligible short-term effects associated with construction activities
Noise	Negligible, long-term beneficial effects with the Master Plan Update / Possible short-term negligible effects associated with construction activities	No effect with the Master Plan Update / Negligible short-term effects associated with construction activities
Cultural Resources	Negligible, long-term, beneficial effects with Master Plan Update / No Effect associated with construction activities	No effects associated with Master Plan Update or construction activities

Resource Topic	Preferred Alternative	No-Action Alternative
Hazardous Materials	No effect with the Master Plan Update / Negligible, short-term effects associated with construction	No effect with the Master Plan Update / Negligible, short-term effects associated with construction
Recreation Resources	Negligible, long-term beneficial effects with Master Plan Update / Minor, long-term beneficial effects associated with construction	Minor, long-term benefit regarding recreational activities. No Effect with the Master Plan Update on aesthetics
Aesthetic Resources	Minor, long-term beneficial impact with Master Plan Update / Minor, short term aesthetic impacts associated with construction	Minor, long-term impact with Master Plan Update / Minor, short term aesthetic impacts associated with construction
Vegetation	Minor long-term, beneficial effects with Master Plan Update / Negligible, short-term impacts associated with possible construction	Negligible, long-term effect with Master Plan Update / Negligible, short-term impacts associated with possible construction
Invasive Species	Negligible, long-term beneficial effects with Master Plan Update / Negligible, long-term impacts associated with possible construction	No effect with Master Plan Update / Negligible, long-term impacts associated with possible construction
Fish and Wildlife	Long-term beneficial effects with Master Plan Update / Minor beneficial effect / Negligible, short-term impacts associated with possible construction	No effect with Master Plan Update / Negligible, long-term impacts associated with possible construction
Threatened and Endangered Species	No Effect with Master Plan Update / Negligible short-term impacts associated with possible construction	No effect with Master Plan Update / Negligible, short-term impacts associated with possible construction
Bald Eagle	Minor, long-term beneficial impact with Master Plan Update / No effect associated with possible construction	No effect with Master Plan Update / No effect associated with possible construction
Wetlands	Minor, long-term beneficial effects with Master Plan Update / Negligible long-term, impacts associated with possible construction	No effect with Master Plan Update / Negligible long-term, impacts associated with possible construction

Resource Topic	Preferred Alternative	No-Action Alternative
Population and Economy	No effect with Master Plan Update / Negligible, short-term beneficial effects associated with possible construction	No effect with Master Plan Update / Negligible, short-term beneficial effects associated with possible construction
Transportation	No effect with the Master Plan Update / Negligible short-term impacts associated with construction activities	No effect with the Master Plan Update / Negligible short-term impacts associated with construction activities
Utilities	Negligible long-term impacts with the Master Plan Update / Negligible, long-term impacts associated with construction and operation	No effect with the Master Plan Update / Negligible long-term impacts associated with construction activities
Conservation Potential	Minor, long-term beneficial effects with Master Plan Update / Negligible, long-term effects associated with construction	No effect with the Master Plan Update / Negligible long-term impacts associated with construction activities
Safety	Negligible, long-term beneficial effects with Master Plan Update / Negligible, short-term effects associated with construction	Minor, long-term impacts to safety in conditions of site capacity exceedances with Master Plan Update / Negligible, short-term effects associated with construction

5.3 Unavoidable Adverse Impacts of the Preferred Alternative

Implementation of the Preferred Alternative should not result in unavoidable, adverse impacts to the resources analyzed in this PEA. Future anticipated impacts are considered minor and localized and will not have significant long-term adverse impacts to project resources.

6 Executive Orders

Executive Order 11988: Floodplain Management – Both the Preferred Alternative and the No-Action Alternative could involve placement of fill material in the floodplain and impact the movement of floodwaters. Neither alternative would affect the impact of floods on human safety, health, and welfare.

Executive Order 11990: Protection of Wetlands – This order requires agencies to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities. Neither the Preferred Alternative nor the No-Action Alternative would allow for the placement of fill material in wetlands or Waters of the U.S. without appropriate permitting and mitigation, if required.

Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Communities and Low-Income Populations – The USEPA defines environmental justice as the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people; including racial, ethnic, or socioeconomic groups; should bear a disproportionate share of the negative environmental consequences of industrial, municipal, or commercial operations or the execution of federal, state, local, or tribal programs and policies. Neither the Preferred Alternative nor the No-Action Alternative would have the potential for disproportionate health or environmental effects on minorities or low-income populations or communities.

Executive Order 11593: Protection and Enhancement of the Cultural Environment – All future activities would be coordinated with the USACE Wilmington District prior to initiation of ground-disturbing activities. Chapters 5 and 6 of the Master Plan Update also commits Philpott Lake to future coordination with the SHPO and other relevant local agencies before initiating a project. This could result in additional Phase I or Phase II archaeological surveys or modifications to plans and designs.

Executive Order 13045: Protection of Children from Environmental Health Risks – This order mandates that federal agencies identify and assess environmental health and safety risk that may disproportionately affect children as a result of the implementation of federal policies, programs, activities, and standards (63 Federal Register 19883 – 19888). Adoption of the proposed Master Plan would allow USACE to move forward with a programmatic approach to managing Philpott Lake that would result in improvements that would benefit all users. None of these improvements would result in short- or long-term actions that would disproportionately affect the safety or health of children. Chapters 5 and 6 of the Master Plan Update commits the USACE to evaluate any safety risk related to any proposed project at Philpott Lake.

Executive Order 13186: Protection of Migratory Birds – Adoption of the proposed Master Plan Update would not result in any significant or adverse impacts to migratory bird species or their habitat.

Executive Order 13112: Invasive Species – Adoption of the proposed Master Plan Update would not result in any significant or adverse impacts to invasive species or their habitat. The USACE at Philpott Lake is responsible for the pursuit of duties set forth in the Order in consultation with the Invasive Species Council, consistent with the Invasive Species Management Plan and in cooperation with stakeholders, as appropriate. Chapters 5 and 6 of the Master Plan Update commit USACE at Philpott to give special consideration of invasive species management during the planning of any proposed project.

7 Public Involvement

In 2020, the USACE initiated the planning process to update the Philpott Lake Master Plan. The planning process involved federal, Commonwealth, and local agencies; leaseholders on the project; and the public. Additional information on the agency and public coordination efforts of this document are included herein.

As part of the initial phase of the environmental process for the project, two separate meetings were held on December 3, 2020; the first was the agency scoping meeting, and the latter was the public scoping meeting. The purpose of these meetings was to describe the Master Plan update process and its purpose and provide an opportunity to discuss topics or issues that the agencies or public felt should be examined as part of the environmental analysis. Both meetings were held virtually, with supporting mapping and data visualization of the project site.

These public involvement activities are described in greater detail in Chapter 7 of the Master Plan Update. This information will be expanded in the Final Master Plan to document public scoping activities during the release of the document.

Agency and public review of the proposed project will continue during the 30-day public review period for this Master Plan Update and PEA. The distribution of the PEA for public review is described below in Section 8 (and Appendix A).

8 List of Recipients

The PEA will be available for a 30-day review and comment period. Notification of this comment period was mailed to numerous agencies and individuals, as listed in Appendix A of this PEA.

9 Point of Contact

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Appendix A List of Recipients

This document is being made available to the recipients listed in the table below for a 30-day review and comment period.

Philpott Scoping Email Listing				
Line No.	Organization	Name (First, Last)	Position	Email Address
001	Advisory Council on Historic Preservation	Reid Nelson	Executive Director	rnelson@achp.gov
002	American Rivers	Peter Raabe	Basin Director, Southeast	praabe@americanrivers.org
003	Blue Ridge Soil and Water District	Kathy Smith	Program Manager/Education Coordinator	ksmith@brswcd.org
004	Henry County, VA	Joe Bryant	Member of Board of Supervisors for Collinsville District	jbryant@co.henry.va.us
005	City of Danville	Alonzo Jones	Mayor	alonzo.jones@danvilleva.gov
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008	City of Martinsville	Kathy Lawson	Mayor	klawson@ci.martinsville.va.us
011	Dan River Basin Association	Tiffany Haworth	Executive Director	thaworth@danriver.org
013	Dan River Basin Association	Brian Williams	Virginia Program Manager	bwilliams@danriver.org
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016	Virginia Department of Transportation	Ken King, PE	Salem District Engineer	Ken.King@VDOT.Virginia.gov
017	Environmental Defense Fund	David Kelly	Senior Manager, North Carolina Political Affairs	dkelly@edf.org
019	Falls Lake State Recreation Area		General Inquiry	falls.lake@ncparks.gov
020	Fisheries & Wildlife Sciences - Virginia Tech.	Donald Orth, Ph.D	Professor	dorth@vt.edu
021	Franklin County of Virginia	Christopher Whitlow	County Administrator	administration@franklincountyva.gov
022	Franklin County of Virginia	David Rotenizer	Director of Tourism	david.rotenizer@franklincountyva.gov
023	Franklin County Parks and Recreation	Paul Chapman	Director of Parks and Recreation	paul.chapman@franklincountyva.gov
024	Franklin County Parks and Recreation	Matt Ross	Outdoor Recreation Manager	matt.ross@franklincountyva.gov
	Franklin County of Virginia	Tim Tatum	Blue Ridge District Supervisor	tim.tatum@franklincountyva.gov
025	Henry County of Virginia (Includes Basset and Collinsville, VA)	Tim Hall	County Administrator	thall@co.henry.va.us
026	Henry County of Virginia	Dale Wagoner	Deputy County Administrator	dwagoner@co.henry.va.us
027	Henry County of Virginia	Tim Pace, PE	Director of Engineering	tpace@co.henry.va.us
028	Henry County of Virginia	Jim Adams	Chairman, Board of Supervisors, Blackberry District	jadams@co.henry.va.us
029	Henry County Parks and Recreation	Roger Adams	Director of Henry County Parks and Recreation	radams@co.henry.va.us
030	Martinsville-Henry County Tourism	Sarah Hodges	Director of Tourism & Talent Development	shodges@yesmartinsville.com
031	Martinsville-Henry County Tourism	Beth Stinnett	Tourism & Film Office Coordinator	bstinnett@yesmartinsville.com
032	National Wildlife Federation		General Inquiry - Mid-Atlantic Regional Center	MidAtlantic@nwf.org
033	National Wildlife Federation	Tess Walter	Operations Manager	WalterT@nwf.org
034	Patrick County of Virginia	Geri Hazelwood	County Administrator	ghazelwood@co.patrick.va.us
035	Patrick County of Virginia	Crystal Harris	Smith River District Chairperson	dragonfly24185@yahoo.com
036	Patrick County of Virginia	Sandra Puckett Belcher	Director of Tourism	sbelcher@co.patrick.va.us
037	Philpott	Chris Powell	Operations Project Manager	christopher.c.powell@usace.army.mil
038	Philpott	Brian Stewart	Assistant Operations Project Manager	brian.w.stewart@usace.army.mil
039	Roanoke River Basin Association	Mike Pucci	Executive Director	Mcp10981@gmail.com
043	Smith River Trout Unlimited		General Inquiry	smithrivertu@gmail.com
044	Town of Rocky Mount, Virginia	James Ervin	Town Manager	jervin@rockymountva.org
045	Town of Stuart	Ray Weiland	Mayor	rweiland61@gmail.com
046	Town of Stuart, Virginia	Terry Tilley	Town Manager	tilley@va.net
048	U.S. House of Representative - Virginia's 5th District	Robert Good	Representative	https://good.house.gov/contact
049	U.S. House of Representative - Virginia's 9th District	Morgan Griffith	Representative	https://morgangriffith.house.gov/contact/contactform.htm
050	US EPA Region 3 NEPA POC	Stepan Nevshehirlian	NEPA Program Manager	nevshehirlian.stepan@epa.gov
051	USGS, North Carolina Office	J. Curtis Weaver	Hydrologist	jcweaver@usgs.gov
052	VA Division of Izaak Walton League of America	Ernie Padgette	President	president@va-iwla.org
054	Virginia Chapter - Sierra Club	Kate Addleson	Director	kate.addleson@sierraclub.org
055	Virginia Conservation Network	Mary Rafferty	Executive Director	mary@vcnva.org
057	Virginia Department of Conservation & Recreation	Kristal McKelvey	Environmental Manager	kristal.mckelvey@dcr.virginia.gov
058	Virginia Department of Conservation and Recreation	Adam Layman	Fairy Stone State Park Manager	adam.layman@dcr.virginia.gov
059	Virginia Department of Environmental Quality	Sharon Baxter	Environmental Enhancement Division Director	sharon.baxter@deq.virginia.gov
060	Virginia Department of Historic Resources	Julie Langan	Director & State Historic Preservation Officer	julie.langan@dhr.virginia.gov
061	Virginia Department of Historic Resources	Samantha Henderson	Project Review Archaeologist	samantha.henderson@dhr.virginia.gov
062	Virginia Department of Wildlife Resources (Virginia Department of Game & Inland Fisheries)			~~dwr.virginia.gov/contact/~~
063	Virginia Department of Wildlife Resources, Region 2 Office	Pete Schula	Region 2 Lands & Access Manager	pete.schula@dwr.virginia.gov
064	Virginia Department of Wildlife Resources, Region 2 Office	Kevin Cox	Fairy Stone Farms WMA Manager	kevin.cox@dwr.virginia.gov
065	Virginia Department of Wildlife Resources, Region 2 Office	Scott Smith	Regional Fisheries Manager	scott.smith@dwr.virginia.gov
066	Virginia Department of Wildlife Resources, Region 2 Office	George Palmer	District Fisheries Biologist	george.palmer@dwr.virginia.gov
069	Virginia Marine Resources Commission	Ellen Bolen	Deputy Commissioner	Ellen.Bolen@mrc.virginia.gov.
070	Virginia Senator	Mark Warner	Virginia Senator	https://www.warner.senate.gov/public/index.cfm/contact
071	Virginia Senator	Tim Kaine	Virginia Senator	https://www.kaine.senate.gov/contact
		Bettina Rayfield	Commonwealth of Virginia, Department of Environmental Quality	bettina.rayfield@deq.virginia.gov
		Cindy Schulz	U.S. Fish and Wildlife Service, Virginia Ecological Services	cindy_schulz@fws.gov
			Add Federal Tribes - separate file provided	
			Add any others who provided comments during scoping	

Tribal Consultation (federally recognized tribes)

Pamunkey Indian Tribe

The Honorable Robert Gray, Chief

Pamunkey Indian Tribe
191 Lay Landing Road
King William, VA 23086
(804) 339-1629
Robert.gray@pamunkey.org or pamunkeytribe@pamunkey.org

Chickahominy Indian Tribe

Wayne Adkins, First Assistant Chief
Chickahominy Indian Tribe
8200 Lott Cary Road
Providence Forge, VA 23140
(804) 829-2027 ext. 1002
Wayne.adkins@chickahominytribe.org

Chickahominy Indian Tribe-Eastern Division

Gerald A. Stewart, Chief
Chickahominy Indian Tribe-Eastern Division
2895 Mount Pleasant Road, VA 23140
(804) 966-7815
http://www.cied.org ← website currently down???

Upper Mattaponi Indian Tribe

Reggie Tupponce, Tribal Administrator
Upper Mattaponi Indian Tribe
13476 King William Road
King William, VA 23086
(804) 776-4088
admin@umitribe.org

Rappahannock Tribe, Inc.

G. Anne Richardson, Chief
Rappahannock Tribe, Inc.
5036 Indian Neck Road
Indian Neck, VA 23148
(804) 769-0260
info@rappahannocktribe.org or rappahannocktrib@aol.com

Monacan Indian Nation

Dean Branham, Chief
Monacan Indian Nation
111 Highview Drive
Madison Heights, VA 24572
(434) 363-4864
tribaloffice@monacannation.com

Send Monacan Indian Nation consultation information to:

Kaleigh Pollak, Program Manager
Monacan Indian Nation
111 Highview Drive
Madison Heights, VA 24572
(434) 363-4864
Kaleigh@MonacanNation.com

Nansemond Indian Tribe
Earl L. Bass, Chief
1001 Pembroke Lane, Suffolk VA 23434
(757) 277-4183
contact@nansemond.org

Philpott Scoping - No Email Listed		
Line No.	Organization	Mailing Address
001	Aquatic Ecology Section, VA Dept of Highways & Transportation	1221 East Broad Street, Richmond, VA 23219
002	Center for Environmental Health	528 61st Street, Suite A, Oakland CA 94609
003	Deptartment of Urban and Regional Planning	Architectural Annex, Virginia Tech, Blacksburg VA 24061
004	Dominion North Carolina Power	P.O. Box 370, Roanoke Rapids NC 27870
005	Dominion Virginia Power	P.O. Box 26666, Richmond VA 23261
006	Fairfax Audubon Society	4022 Hummer Rd, Annandale VA 22003
007	Kerr Lake Protection Association	2418 Wrightwood Avenue, Durham, NC 27705
008	Mr. Harvey Wall	P.O. Box 213, Lowgap NC 27024
009	North Carolina Botanical Garden Foundation	100 Old Mason Farm Rd, Chapel Hill, NC 27517
010	Postmaster, Town of Martinsville	Martinsville VA 24114
011	Postmaster, Town of Wentworth	P.O. Box 9998, Wentworth NC 27375-9998
012	Postmaster, Town of Williamston	121 East Main Street, Williamston NC 27892-9998
013	Roanoke Beacon	P.O. Box 726, Plymouth NC 27962-0726
014	Roanoke Region - Preservation Office	1030 Penmar Ave, SE, Roanoke, VA 24013
015	The Williamston Enterprise	P.O. Box 387, Williamston NC 27892-0387
016	Virginia Wildlife Federation	1001 E. Broad Street, #L15, Richmond VA 23219-1921

Appendix B Plates

Plate B1: Philpott Lake Master Plan Project Area

Plate B2: Philpott Lake Master Plan Project Area Topography

Plate B3: Project Area Vicinity Map

Plate B4: Roanoke River Basin Project Watersheds Map

Plate B5: Land Allocation 1982 Master Plan

Plate B6: Land Classification 2021 Master Plan

Plate B7: Differences in 1982 Allocation & 2021 Classification

Plate B8: Soil Type Map

Plate B9_USDA Web Soil Survey_Camp Area

Plate B10_USDA Web Soil Survey_Path and Trail

Plate B11: Water Resources Map

Plate B12: Historic Property Locations Map

Appendix B Plates

Plate B1: Philpott Lake Master Plan Project Area

Plate B2: Philpott Lake Master Plan Project Area Topography

Plate B3: Project Area Vicinity Map

Plate B4: Roanoke River Basin Project Watersheds Map

Plate B5: Land Allocation 1982 Master Plan

Plate B6: Land Classification 2021 Master Plan

Plate B7: Differences in 1982 Allocation & 2021 Classification

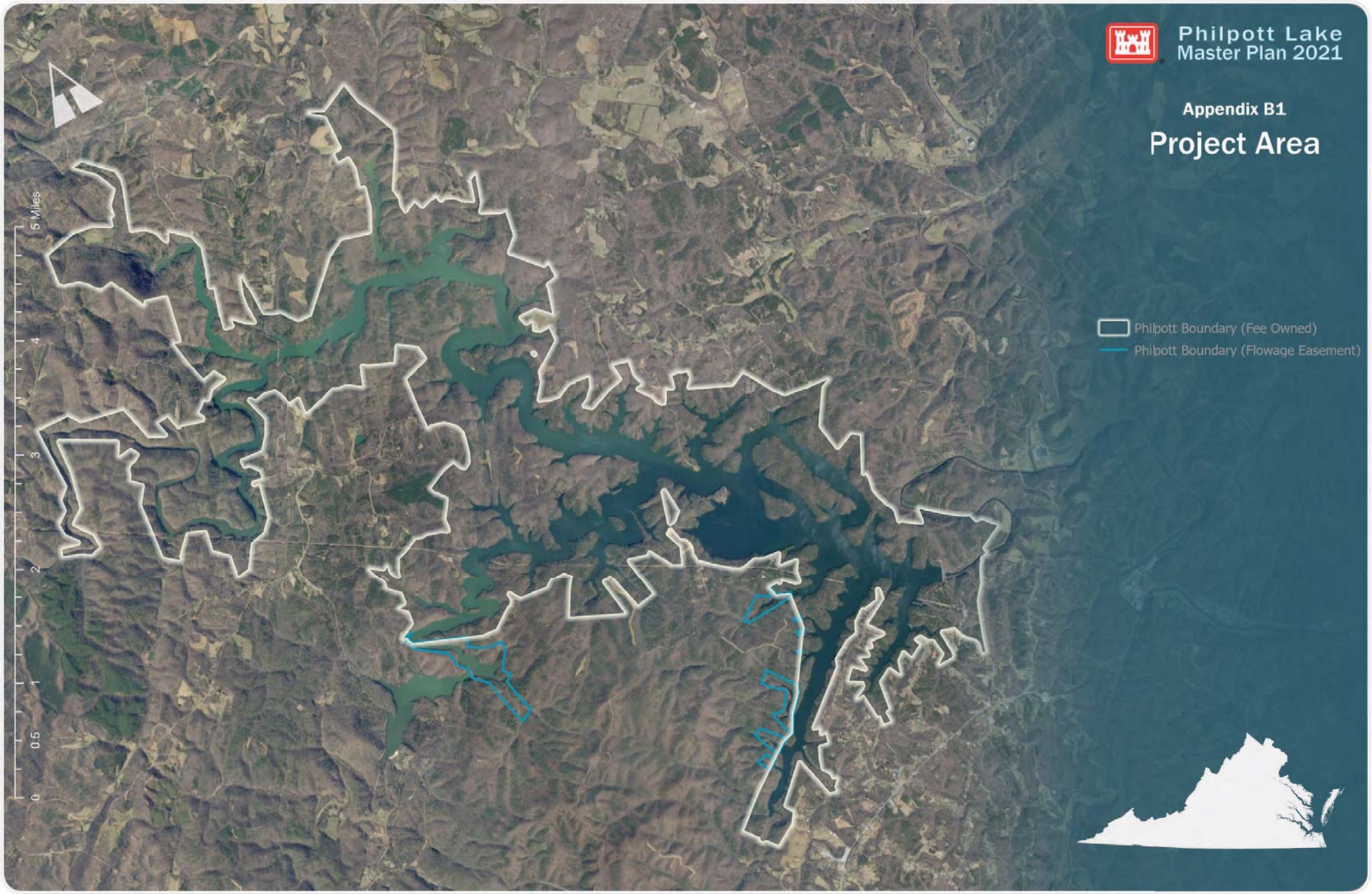
Plate B8: Soil Type Map

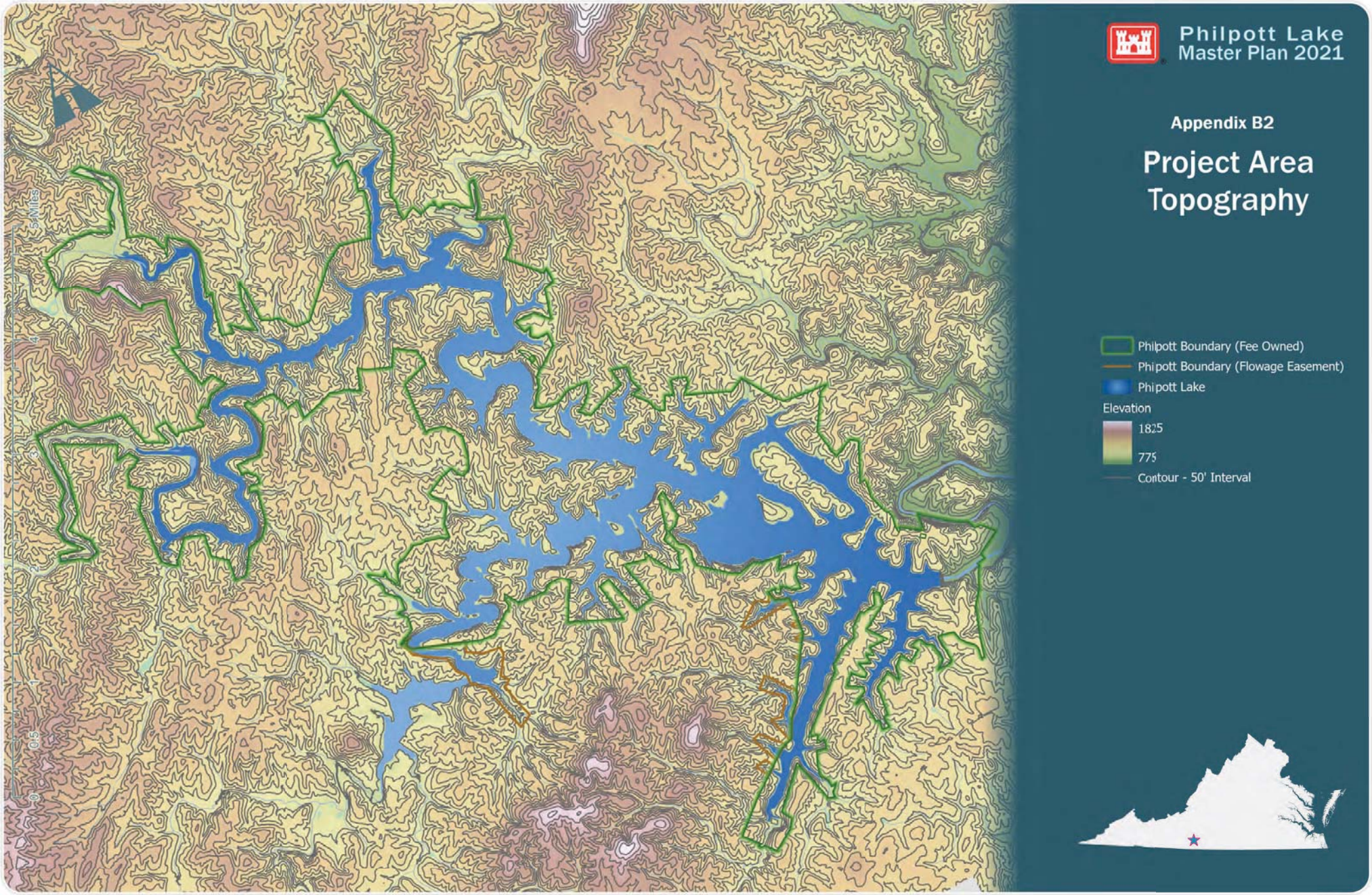
Plate B9_USDA Web Soil Survey_Camp Area

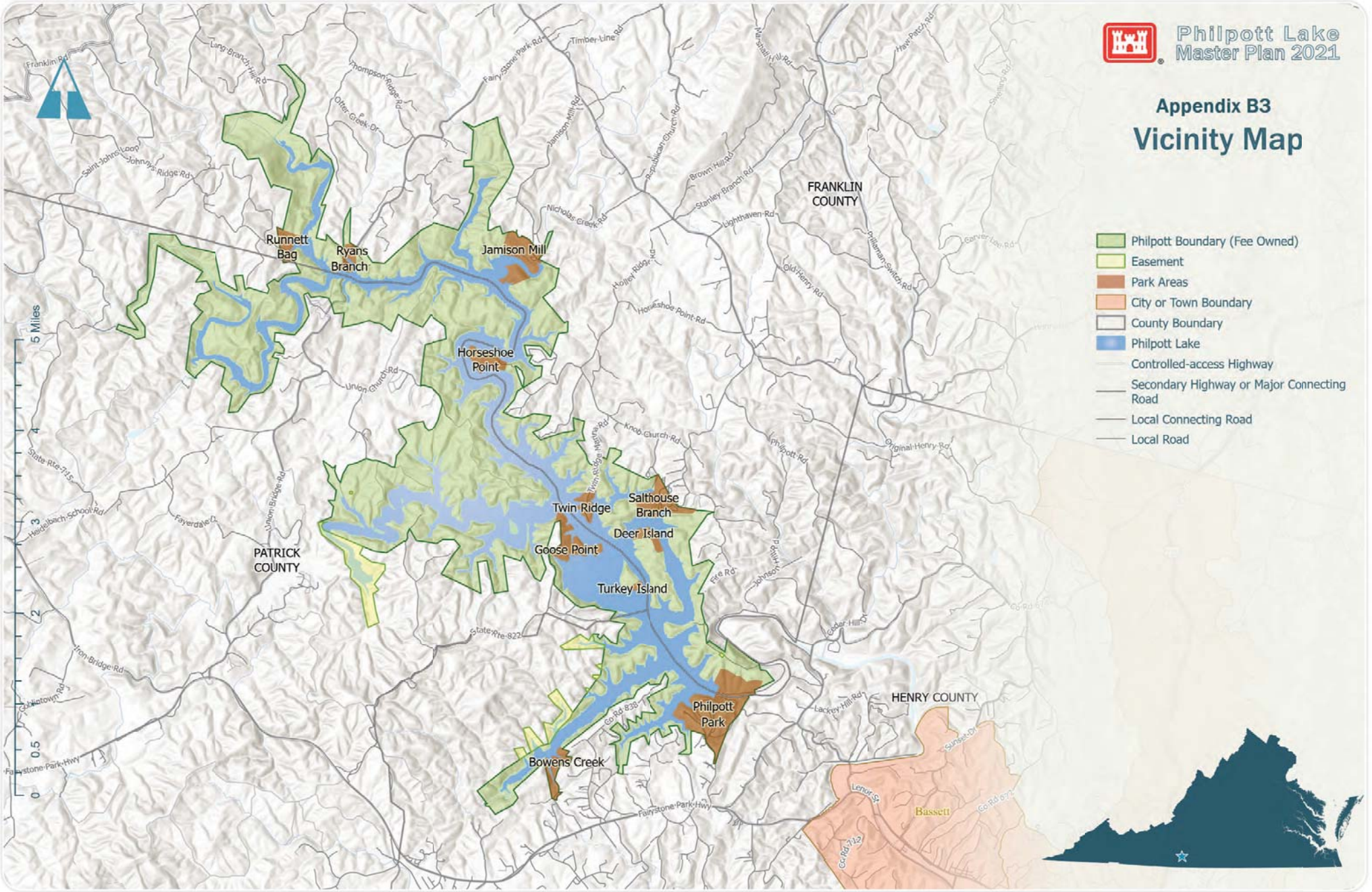
Plate B10_USDA Web Soil Survey_Path and Trail

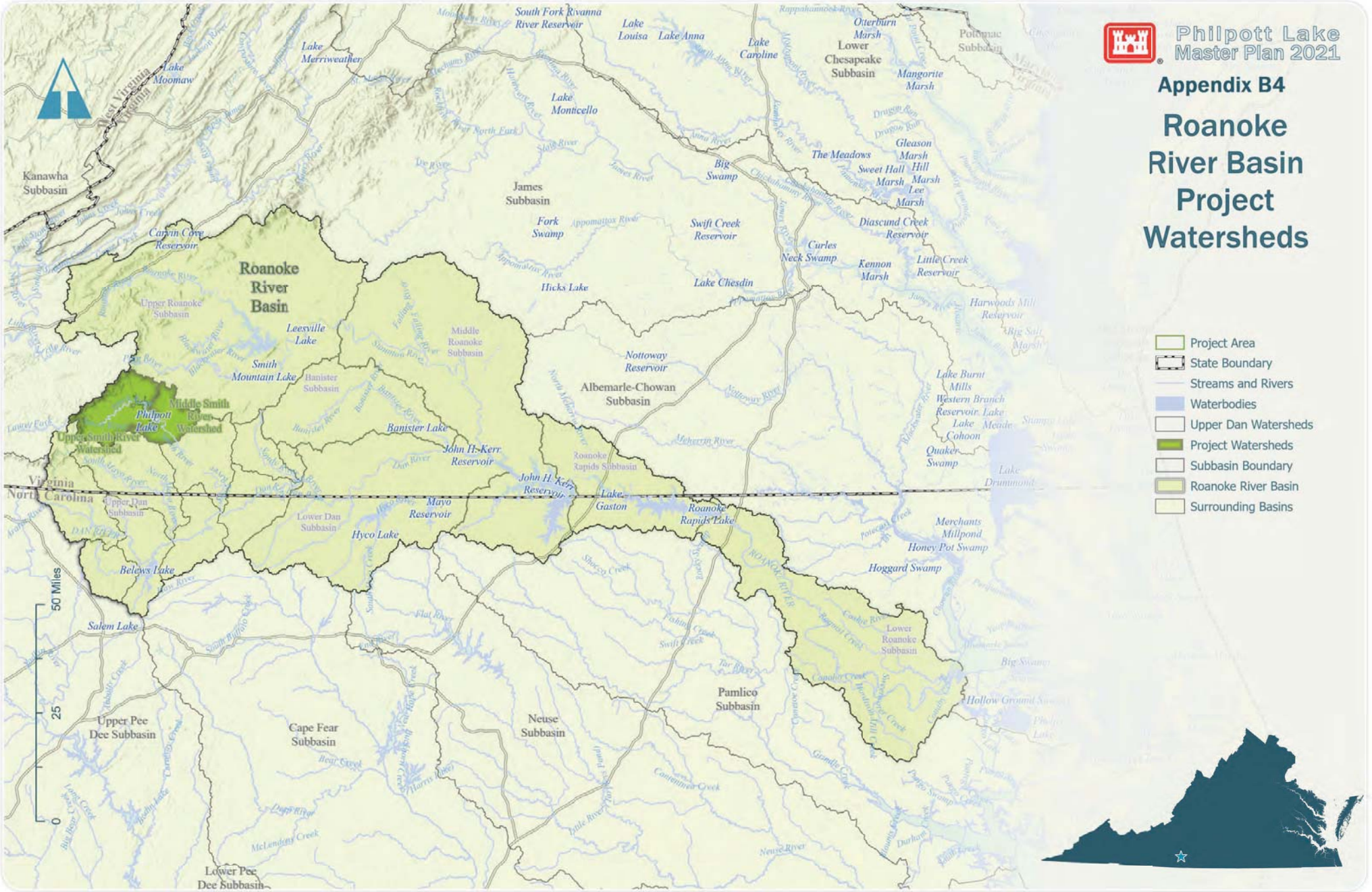
Plate B11: Water Resources Map

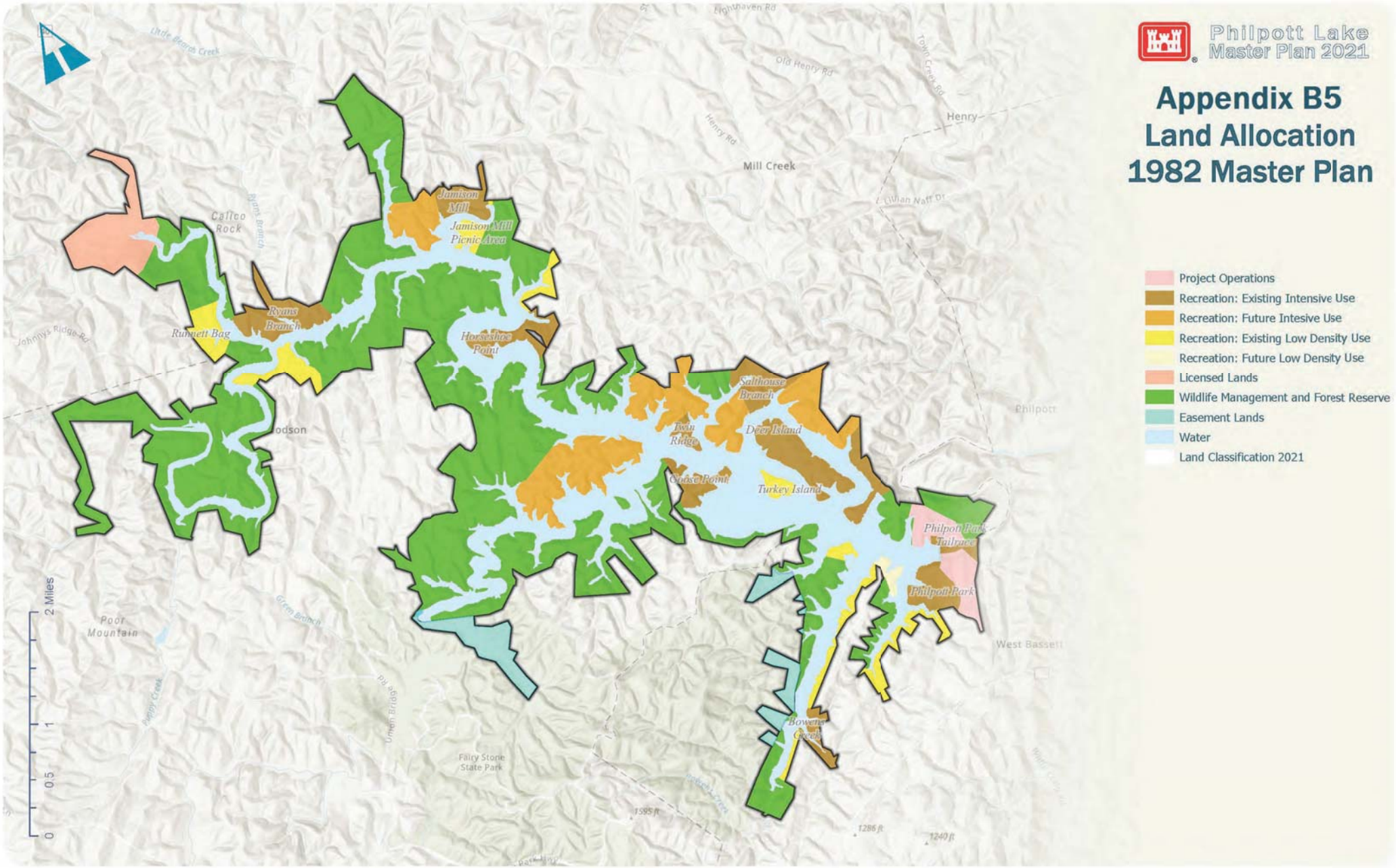
Plate B12: Historic Property Locations Map


Philpott Lake
Master Plan 2021
Appendix B1
Project Area
Philpott Boundary (Fee Owned)
Philpott Boundary (Flowage Easement)
0
0.5
1
2
3
4
5 Miles


Philpott Lake
Master Plan 2021
Appendix B2
Project Area
Topography
Philpott Boundary (Fee Owned)
Philpott Boundary (Flowage Easement)
Philpott Lake
Elevation
1825
775
Contour - 50' Interval
0 0.5 1 2 3 4 5 Miles


Philpott Lake
Master Plan 2021
Appendix B3
Vicinity Map
Philpott Boundary (Fee Owned)
Easement
Park Areas
City or Town Boundary
County Boundary
Philpott Lake
Controlled-access Highway
Secondary Highway or Major Connecting Road
Local Connecting Road
Local Road
FRANKLIN COUNTY
PATRICK COUNTY
HENRY COUNTY
Runnett Bag
Ryans Branch
Jamison Mill
Horseshoe Point
Twin Ridge
Salthouse Branch
Deer Island
Goose Point
Turkey Island
Philpott Park
Bowens Creek
Bassett
0
0.5
2
3
4
5 Miles


Philpott Lake
Master Plan 2021
Appendix B4
Roanoke River Basin Project Watersheds
Project Area
State Boundary
Streams and Rivers
Waterbodies
Upper Dan Watersheds
Project Watersheds
Subbasin Boundary
Roanoke River Basin
Surrounding Basins
Roanoke River Basin
Philpott Lake
Middle Smith River Watershed
Upper Smith River Watershed
Kanawha Subbasin
James Subbasin
Upper Roanoke Subbasin
Middle Roanoke Subbasin
Hanister Subbasin
Albemarle-Chowan Subbasin
Roanoke Rapids Subbasin
Upper Dan Subbasin
Lower Dan Subbasin
Lower Roanoke Subbasin
Lower Chesapeake Subbasin
Potomac Subbasin
Pamlico Subbasin
Neuse Subbasin
Cape Fear Subbasin
Upper Pee Dee Subbasin
Lower Pee Dee Subbasin
Virginia
North Carolina
West Virginia
Leesville Lake
Smith Mountain Lake
Banister Lake
John H. Kerr Reservoir
Mayo Reservoir
Hyco Lake
Lake Gaston
Roanoke Rapids Lake
Belews Lake
Salem Lake
Carvin Cove Reservoir
Lake Merriweather
Lake Moomaw
South Fork Rivanna River Reservoir
Lake Monticello
Lake Louisa
Lake Anna
Lake Caroline
Fork Swamp
Swift Creek Reservoir
Big Swamp
Hicks Lake
Lake Chesdin
Nottoway Reservoir
Curles Neck Swamp
Kennon Marsh
Little Creek Reservoir
Diascund Creek Reservoir
The Meadows
Sweet Hall Marsh
Gleason Marsh
Hill Marsh
Lee Marsh
Otterburn Marsh
Mangorite Marsh
Harwoods Mill Reservoir
Big Salt Marsh
Lake Burnt Mills
Western Branch Reservoir
Lake Meade
Lake Cohoon
Quaker Swamp
Merchants Millpond
Honey Pot Swamp
Hoggard Swamp
Hollow Ground Swamp
Lake Drummond
50 Miles
25
0


Philpott Lake
Master Plan 2021
Appendix B5
Land Allocation
1982 Master Plan
Project Operations
Recreation: Existing Intensive Use
Recreation: Future Intesive Use
Recreation: Existing Low Density Use
Recreation: Future Low Density Use
Licensed Lands
Wildlife Management and Forest Reserve
Easement Lands
Water
Land Classification 2021
Jamison Mill
Jamison Mill Picnic Area
Ryans Branch
Rumnett Bag
Horseshoe Point
Saltlouse Branch
Twin Ridge
Deer Island
Goose Point
Turkey Island
Philpott Park Tailrace
Philpott Park
Bowens Creek
Calico Rock
Mill Creek
Henry
Philpott
West Bassett
Poor Mountain
Fairy Stone State Park
Johnnys Ridge Rd
Old Henry Rd
Henry Rd
Town Creek Rd
Lillian Naff Dr
Union Bridge Rd
Puppy Creek
Green Branch
Little Beaver Creek
1595 ft
1286 ft
1240 ft
0
0.5
1
2 Miles

Philpott Lake
Master Plan 2021

Land Classification 2021 Master Plan

- Project Operations
- High Density Recreation
- MRML: Wildlife Management
- Environmentally Sensitive Area
- MRML: Low Density Recreation
- MRML: Low Density Recreation, No Hunting
- Flowage Easement
- Flowage Easement, Water Surface: No Towing
- Water Surface: Designated No Wake
- Water Surface: Open Recreation
- Water Surface: Open Recreation, No Tow
- Water Surface: Restricted

0 0.5 1 2 Miles

Little Beards Creek
Lighthaven Rd
Old Henry Rd
Town Creek Rd
Henry
Henry Rd
Mill Creek
Lillian Naff Dr
Calico Rock
Rians Branch
1528 ft
Dodson
Philpott
West Bassett
Poor Mountain
Green Branch
Puppy Creek
Union Bridge Rd
Fairy Stone State Park
Bowens Creek
1595 ft
1286 ft
1240 ft

Philpott Lake
Master Plan 2021

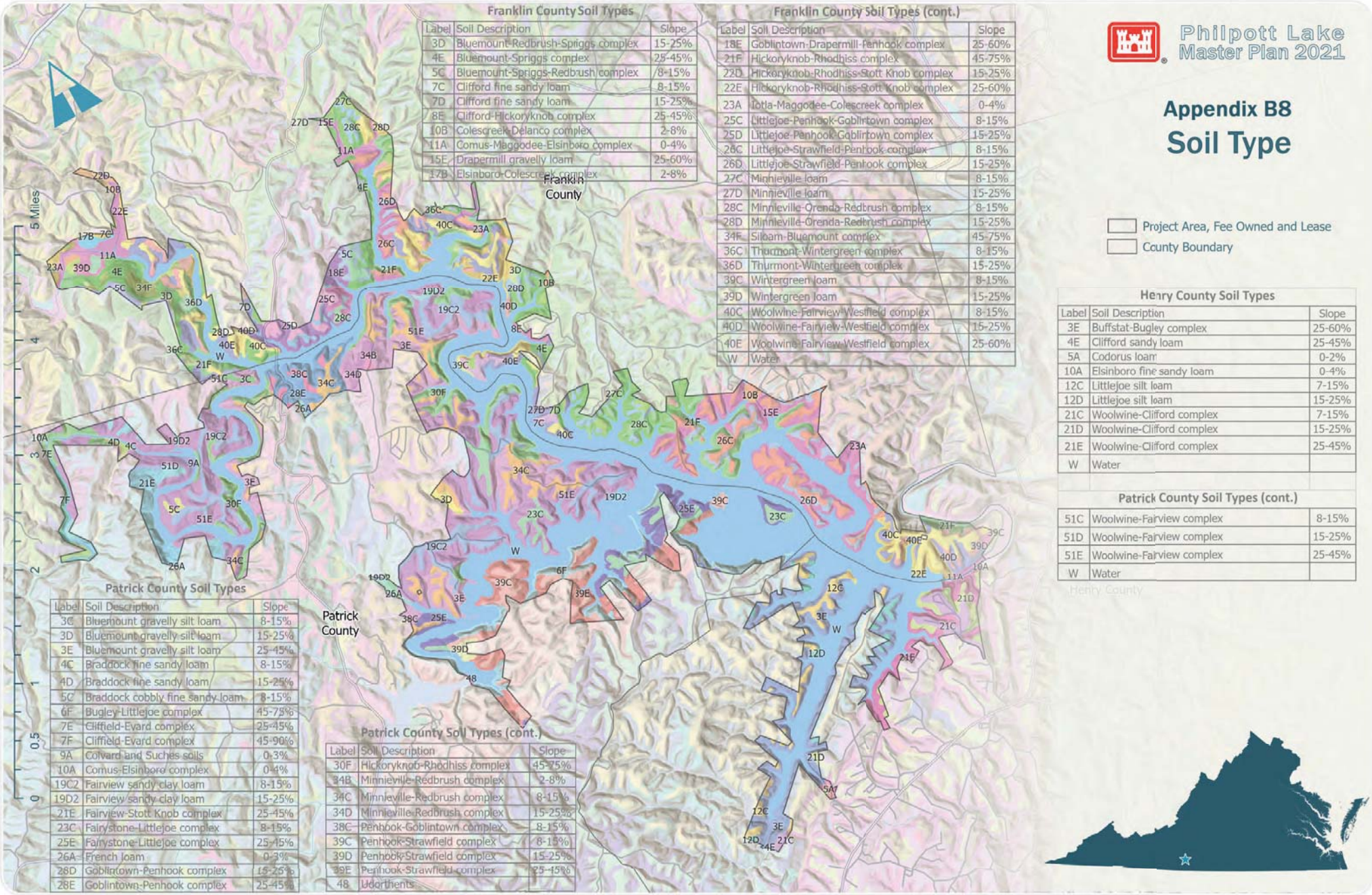
Land Classification 1982 to 2021 Difference Comparison

Land Use Changes 1982 - 2021

- Intensive Use Recreation to MRML: Low Density Recreation, No Hunting
- Intensive Use Recreation to MRML: Low Density Recreation
- Intensive Use Recreation to Project Operations
- Project Operations to High Density Recreation
- Project Operations to MRML: Low Density Recreation
- Wildlife Management / Forest Reserve to High Density Recreation
- Natural Area to High Density Recreation
- water to Water Surface: Designated No Wake
- water,Water Surface: Open Recreation, No Wake
- water,Water Surface: Restricted

No Significant Change

- Intensive Use Recreation to High Density Recreation
- Low Density Use Recreation to MRML: Low Density Recreation
- Project Operations to Project Operations
- Wildlife Management / Forest Reserve to MRML: Low Density Recreation
- Wildlife Management / Forest Reserve to MRML: Low Density Recreation, No Hunting
- Natural Area to MRML: Low Density Recreation
- Natural Area to MRML: Low Density Recreation, No Hunting
- Water to Water Surface: Open Recreation



Philpott Lake Master Plan 2021

Appendix B8
Soil Type

Project Area, Fee Owned and Lease
County Boundary

Franklin County Soil Types

Label	Soil Description	Slope
3D	Bluemount-Redbrush-Spriggs complex	15-25%
4E	Bluemount-Spriggs complex	25-45%
5C	Bluemount-Spriggs-Redbrush complex	8-15%
7C	Clifford fine sandy loam	8-15%
7D	Clifford fine sandy loam	15-25%
8E	Clifford-Hickoryknob complex	25-45%
10B	Colescreek-Delanco complex	2-8%
11A	Comus-Maggodee-Elsinboro complex	0-4%
15E	Drapermill gravelly loam	25-60%
17B	Elsinboro-Colescreek complex	2-8%

Franklin County Soil Types (cont.)

Label	Soil Description	Slope
18E	Goblintown-Drapermill-Penhook complex	25-60%
21F	Hickoryknob-Rhodhiss complex	45-75%
22D	Hickoryknob-Rhodhiss-Stott Knob complex	15-25%
22E	Hickoryknob-Rhodhiss-Stott Knob complex	25-60%
23A	Iotla-Maggodee-Colescreek complex	0-4%
25C	Littlejoe-Penhook-Goblintown complex	8-15%
25D	Littlejoe-Penhook-Goblintown complex	15-25%
26C	Littlejoe-Strawfield-Penhook complex	8-15%
26D	Littlejoe-Strawfield-Penhook complex	15-25%
27C	Minnieville loam	8-15%
27D	Minnieville loam	15-25%
28C	Minnieville-Orenda-Redbrush complex	8-15%
28D	Minnieville-Orenda-Redbrush complex	15-25%
34F	Siloam-Bluemount complex	45-75%
36C	Thurmont-Wintergreen complex	8-15%
36D	Thurmont-Wintergreen complex	15-25%
39C	Wintergreen loam	8-15%
39D	Wintergreen loam	15-25%
40C	Woolwine-Fairview-Westfield complex	8-15%
40D	Woolwine-Fairview-Westfield complex	15-25%
40E	Woolwine-Fairview-Westfield complex	25-60%
W	Water	

Henry County Soil Types

Label	Soil Description	Slope
3E	Buffstat-Bugley complex	25-60%
4E	Clifford sandy loam	25-45%
5A	Codorus loam	0-2%
10A	Elsinboro fine sandy loam	0-4%
12C	Littlejoe silt loam	7-15%
12D	Littlejoe silt loam	15-25%
21C	Woolwine-Clifford complex	7-15%
21D	Woolwine-Clifford complex	15-25%
21E	Woolwine-Clifford complex	25-45%
W	Water	

Patrick County Soil Types

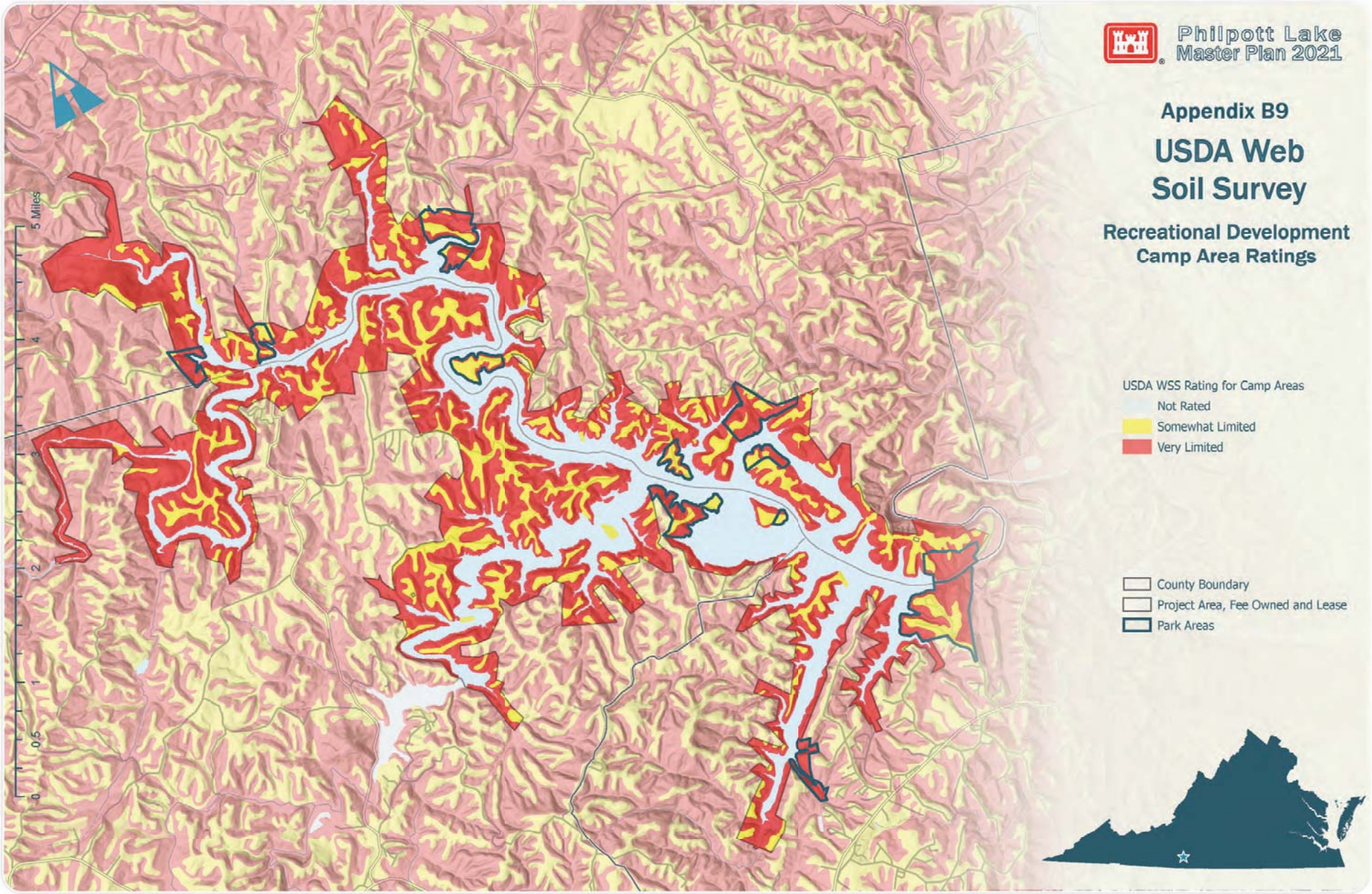
Label	Soil Description	Slope
3C	Bluemount gravelly silt loam	8-15%
3D	Bluemount gravelly silt loam	15-25%
3E	Bluemount gravelly silt loam	25-45%
4C	Braddock fine sandy loam	8-15%
4D	Braddock fine sandy loam	15-25%
5C	Braddock cobbly fine sandy loam	8-15%
6F	Bugley-Littlejoe complex	45-75%
7E	Cliffield-Evard complex	25-45%
7F	Cliffield-Evard complex	45-90%
9A	Colvard and Suches soils	0-3%
10A	Comus-Elsinboro complex	0-4%
19C2	Fairview sandy clay loam	8-15%
19D2	Fairview sandy clay loam	15-25%
21E	Fairview-Stott Knob complex	25-45%
23C	Fairystone-Littlejoe complex	8-15%
25E	Fairystone-Littlejoe complex	25-45%
26A	French loam	0-3%
28D	Goblintown-Penhook complex	15-25%
28E	Goblintown-Penhook complex	25-45%

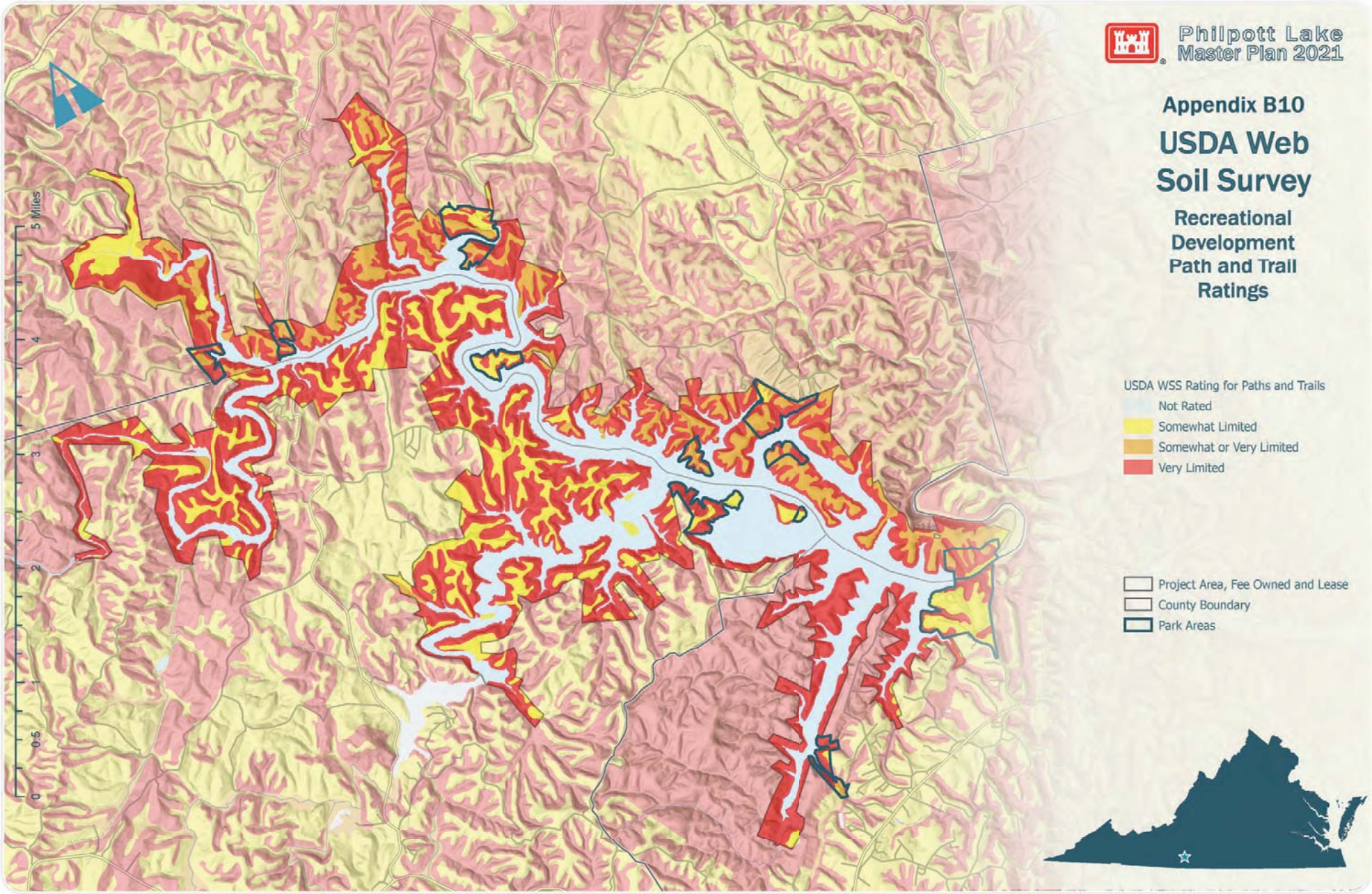
Patrick County Soil Types (cont.)

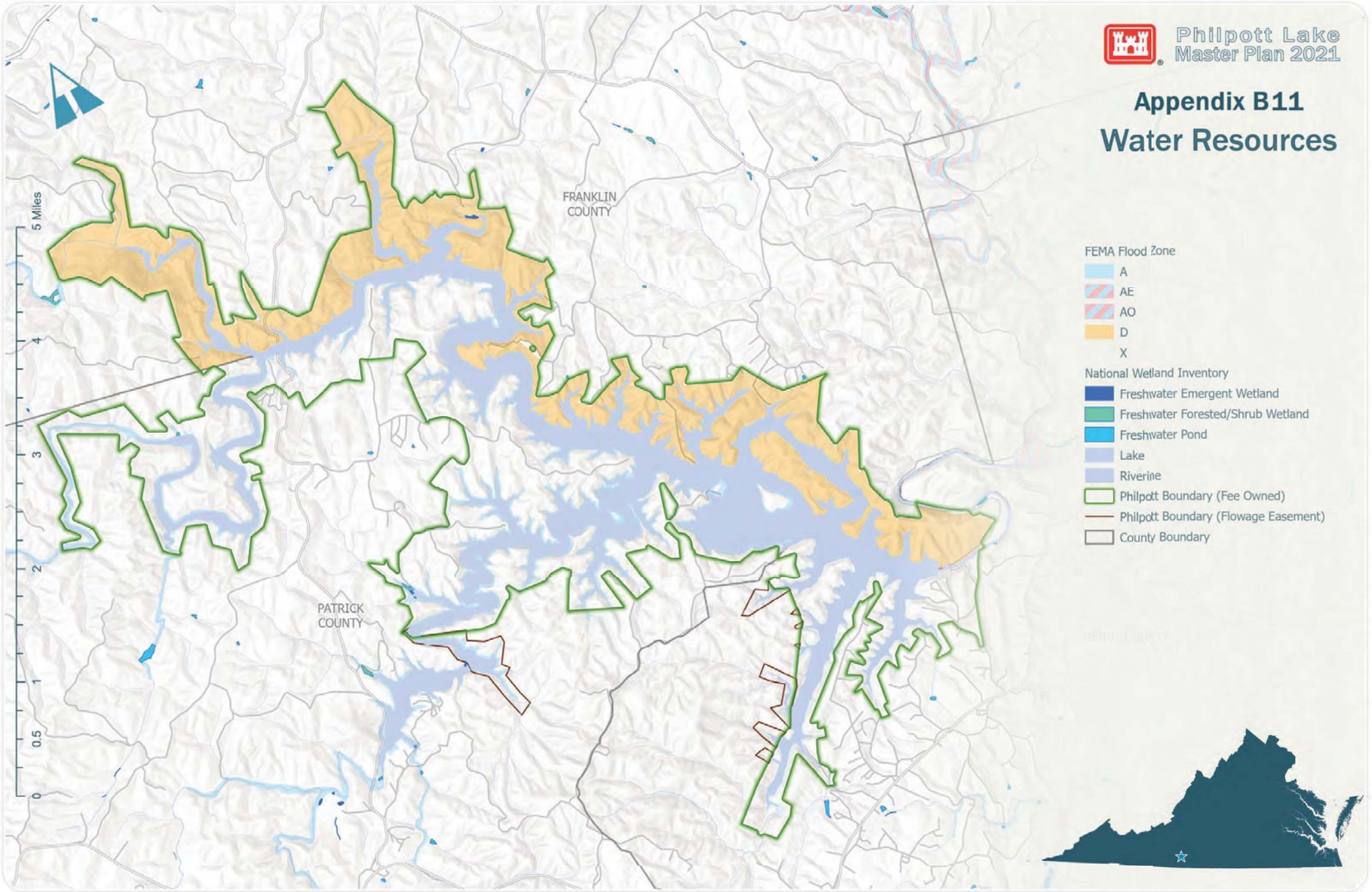
Label	Soil Description	Slope
30F	Hickoryknob-Rhodhiss complex	45-75%
34B	Minnieville-Redbrush complex	2-8%
34C	Minnieville-Redbrush complex	8-15%
34D	Minnieville-Redbrush complex	15-25%
38C	Penhook-Goblintown complex	8-15%
39C	Penhook-Strawfield complex	8-15%
39D	Penhook-Strawfield complex	15-25%
39E	Penhook-Strawfield complex	25-45%
48	Udorthents	

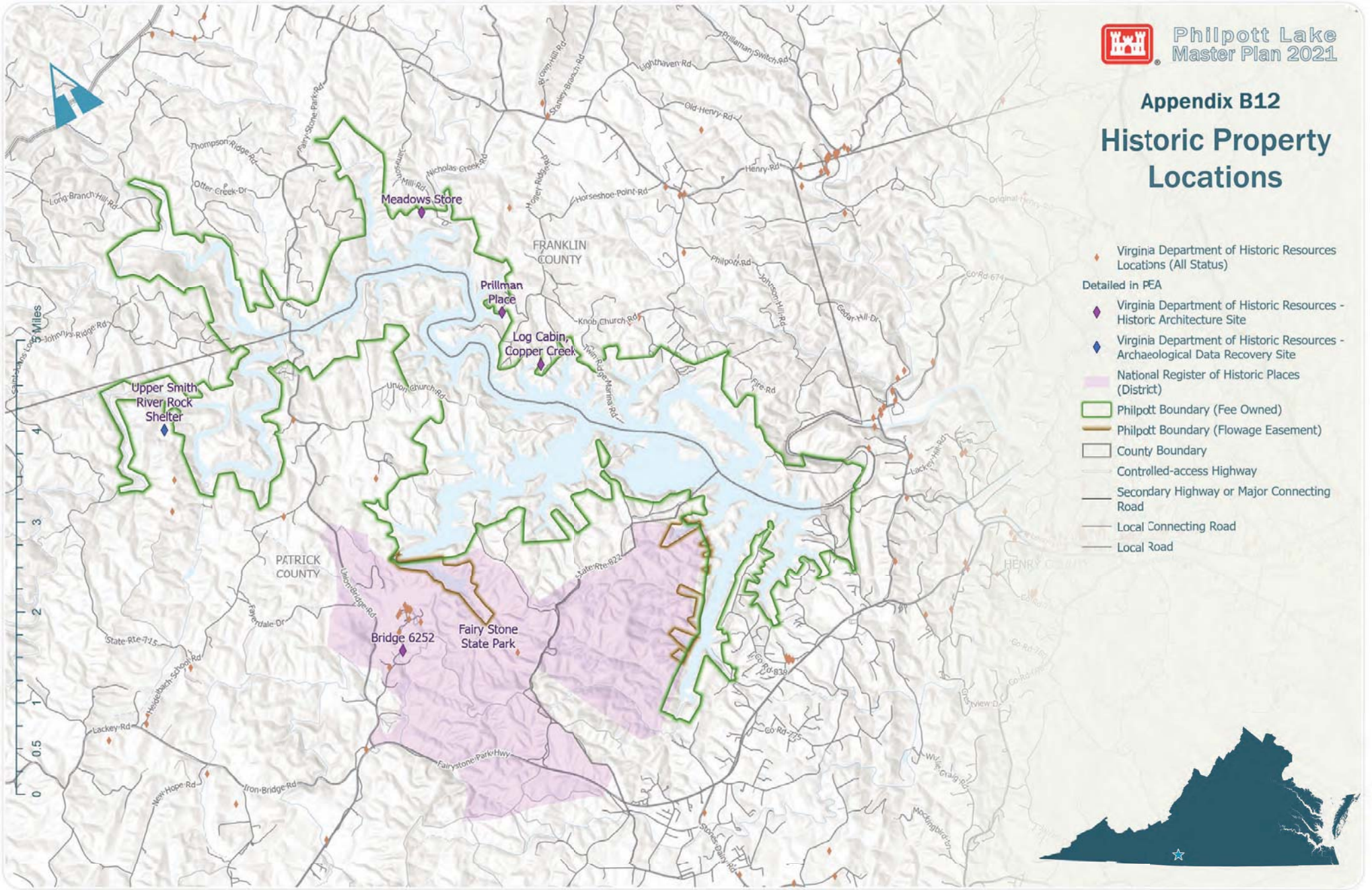
Patrick County Soil Types (cont.)

51C	Woolwine-Fairview complex	8-15%
51D	Woolwine-Fairview complex	15-25%
51E	Woolwine-Fairview complex	25-45%
W	Water	


Philpott Lake
Master Plan 2021
Appendix B9
USDA Web
Soil Survey
Recreational Development
Camp Area Ratings
USDA WSS Rating for Camp Areas
Not Rated
Somewhat Limited
Very Limited
County Boundary
Project Area, Fee Owned and Lease
Park Areas
0
0.5
1
2
3
4
5 Miles


Philpott Lake
Master Plan 2021
Appendix B10
USDA Web
Soil Survey
Recreational
Development
Path and Trail
Ratings
USDA WSS Rating for Paths and Trails
Not Rated
Somewhat Limited
Somewhat or Very Limited
Very Limited
Project Area, Fee Owned and Lease
County Boundary
Park Areas
0
0.5
1
2
3
4
5 Miles


Philpott Lake
Master Plan 2021
Appendix B11
Water Resources
FRANKLIN
COUNTY
PATRICK
COUNTY
5 Miles
0
0.5
1
2
3
4
FEMA Flood Zone
A
AE
AO
D
X
National Wetland Inventory
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Lake
Riverine
Philpott Boundary (Fee Owned)
Philpott Boundary (Flowage Easement)
County Boundary


Philpott Lake
Master Plan 2021
Appendix B12
Historic Property Locations
Meadows Store
Prillman Place
Log Cabin, Copper Creek
Upper Smith River Rock Shelter
Bridge 6252
Fairy Stone State Park
FRANKLIN COUNTY
PATRICK COUNTY
HENRY COUNTY
Virginia Department of Historic Resources Locations (All Status)
Detailed in PEA
Virginia Department of Historic Resources - Historic Architecture Site
Virginia Department of Historic Resources - Archaeological Data Recovery Site
National Register of Historic Places (District)
Philpott Boundary (Fee Owned)
Philpott Boundary (Flowage Easement)
County Boundary
Controlled-access Highway
Secondary Highway or Major Connecting Road
Local Connecting Road
Local Road
Saint Johns Log Miles
0
0.5
1
2
3
4
Thompson Ridge Rd
Long Branch Hill Rd
Otter Creek Dr
Fairy Stone Park Rd
Johnsons Mill Rd
Nicholas Creek Rd
Stanley Branch Rd
Lighthaven Rd
Prillaman Switch Rd
Old Henry Rd
Henry Rd
Horseshoe Point Rd
Philpott Rd
Johnson Mill Rd
Cedar Hill Dr
Knob Church Rd
Union Church Rd
Twin Ridge Marina Rd
Fire Rd
Lackey Hill Rd
Johnsons Ridge Rd
Union Bridge Rd
Rayondale Dr
State Rte 715
Heidelberg School Rd
Lackey Rd
New Hope Rd
Iron Bridge Rd
Fairystone Park Hwy
State Rte 822
Go Rd 838
Go Rd 775
Go Rd 674
Stones Dam Rd
Wire Craig Rd
Mockingbird Dr
Crestview Dr

moffatt & nichol