



Department of Conservation and Recreation
Division of Planning and Recreation Resources
600 E Main Street, 24th Floor
Richmond, Virginia 23219



MACHICOMOCO STATE PARK **COMPREHENSIVE** **DRAFT MASTER PLAN**

3601 TIMBERNECK FARM ROAD, HAYES, VIRGINIA 23072

MACHICOMOCO STATE PARK MASTER PLAN 2025

ADOPTION PAGE

The plan was reviewed by the Board of Conservation and Recreation on _____, 2025

Board of Conservation and Recreation

Date

On _____, 2025 the plan was adopted by DCR Acting Director, Andrew Smith

Adopted

Andrew Smith, Acting Director, Department of Conservation and Recreation Date

ACKNOWLEDGMENTS

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LIST OF ACRONYMS AND ABBREVIATIONS

ADA	Americans with Disabilities Act
BCR	Board of Conservation and Recreation
CPSM	Virginia Construction and Professional Services Manual
DCR	Virginia Department of Conservation and Recreation
FY	Fiscal Year
lf	Linear Foot
MOA	Memorandum of Agreement
MPC	Master Planning Committee
MPT	Master Plan Team
MU	Main Unit of Machicomoco State Park
PRR	DCR Division of Planning Recreation and Resources
sf	Square Feet (measurement of area)
SFHA	Special Flood Hazard Area
sy	Square Yard
VOP	Virginia Outdoors Plan
WU	West Unit of Machicomoco State Park
YCC	Your Comments Count Survey

TABLE OF CONTENTS

Adoption Page	ii
ACKNOWLEDGMENTS	iii
Board of Conservation and Recreation	iii
Department of Conservation and Recreation	iii
Master Plan Team.....	iii
List of Acronyms and Abbreviations.....	iv
EXECUTIVE SUMMARY	1
Introduction.....	1
Mandates for Planning.....	2
Development of the Plan	2
Park Visitation.....	2
Overview of the Park	3
Proposed Buildout	3
Phase 1	5
Phase 2	6
Phase 3	7
Staffing and Operations	8
INTRODUCTION	9
Purpose of the Master Plan	9
Master Plan Development Process	10
Master Plan Timeline and Public Involvement.....	10
Public Input.....	11
Advisory Committee	11
Park Background	12
Location and General Description	12
Main Unit.....	12
West Unit	12
Property History and Acquisition.....	13
Prior Park Planning Efforts	14

Planning Context	14
2024 Virginia Outdoors Plan (VOP).....	15
GOALS AND OBJECTIVES	17
Goals, Objectives and Management Framework	17
Constitution of Virginia, Article XI, Section 1.....	18
Department of Conservation and Recreation Mission Statement.....	18
Virginia State Parks Mission Statement.....	18
Machicomoco State Park Purpose Statement.....	18
Machicomoco State Park Goals and Objectives.....	18
Existing Conditions	21
Surrounding Land Use.....	21
Physiographic Region and Geology	21
Topography.....	21
Watersheds and Hydrological Units.....	21
Flood Zones.....	22
Wetlands.....	23
Soil Conditions and Types	24
Natural Resources.....	29
Ecosystems	29
Element Occurrences	33
Watchlist Species	34
Predicted Suitable Habitat	34
Ecological Cores.....	34
Park Resource Management Issues.....	35
Other Special Resources of Note	36
Unique Management Areas	37
Shoreline Needs	37
Cultural and Historic Resources	38
Overview of Cultural Resource Management Areas (CRMA).....	38
Main Unit Cultural Resource Areas (Figure 16).....	38
West Unit Cultural Resource Areas – Figure 17	42

Physical Resources	44
Day Use Areas	44
Overnight Facilities	45
Staff and Management Facilities	45
VISITOR EXPERIENCE	47
Introduction	47
Audience Types	48
Visitor Wants, Needs and Expectations.....	48
Curriculum-based Users:	48
History and Culture Enthusiasts:	49
Tribal Citizens:	50
Outdoor Recreation Enthusiasts:.....	50
Overnight Users:.....	51
Park Purpose	52
Themes and Subthemes	52
Machicomoco' s Main Unit Theme.....	52
Machicomoco' s West Unit Theme	52
Essential Experiences	53
Experience Areas	54
Arrival Corridor:.....	54
Potential Capital Development Area #1:.....	55
Service Area #1:	55
Interpretive Area:	56
Transition Area – An “Add-on” Experience Area:	56
Passive Recreation and Habitat Management #1:	57
Primary Overnight Area:	57
Longleaf Pine Management Area	57
Service Area #2	58
Passive Recreation and Habitat Management #2:	58
Service Area #3:	58
Passive Recreation and Habitat Management #3:	59

Day Use Waterfront Area:	59
MARKET ANALYSIS	62
Service Area Demographics	63
Adapting to Changing Conditions	64
NEEDS ASSESSMENT AND PROPOSED DEVELOPMENT	67
Needs Assessment Workshop.....	68
Public Input.....	68
Advisory Committee.....	68
Virginia Outdoors Survey.....	68
Master Plan Survey	71
Your Comments Count	71
Needs Assessment Approach.....	71
Proposed 30-Year Phased Development Plan	72
Phase 1.....	72
Phase 2.....	74
Phase 3.....	75
Construction Cost Estimates Per Phase	78
Phase 1 Cost Estimate	78
Phase 2 Cost Estimate	79
Phase 3 Cost Estimate	80
Staffing Needs at Buildout	81
Existing Staffing (FY 2025)	81
Immediate Needs.....	81
Phase 1.....	83
Phase 2.....	83
Phase 3.....	83
CONCLUSION	84
REFERENCES	85
APPENDICES	86
Appendix A Machicomoco Business Plan 2020.....	87
Appendix B – Public Comment summary and agency responses.....	117

TABLE OF FIGURES

Figure 1 Sunset Over the York River	3
Figure 2 Machicomoco State Park Property and Location	4
Figure 3 Catlett Islands off the shore of the Main Unit	9
Figure 4 Master Plan Cycle	10
Figure 5 Welcome to Machicomoco State Park	13
Figure 6 Timberneck House	17
Figure 7 View of the York River from the West Unit	23
Figure 8 Main Unit Environmental Features	25
Figure 9 West Unit Environmental Features	26
Figure 10 Main Unit Wetlands	27
Figure 11 West Unit Wetlands	28
Figure 12 Crested coralroot	34
Figure 13 Emerald ash borer	35
Figure 14 Diamondback terrapin	36
Figure 15 Northern bobwhite	36
Figure 16 Shoreline Stabilization in the Main Unit	37
Figure 17 Catlett Cemetery	39
Figure 18 Main Unit Cultural Resource Areas	40
Figure 19 West Unit Cultural Resource Areas	43
Figure 20 Boat Slips w/Boardwalk	44
Figure 21 Yehakin Pavilion	44
Figure 23 Park Office/Entrance Building	45
Figure 22 Stone Map	45
Figure 24 Main Unit Physical Resources	46
Figure 25 Boardwalk and Canoe Launch	47
Figure 26 Yehakin and Interpretive Area	50
Figure 27 Main Unit Experience Areas	60
Figure 28 West Unit Experience Areas	61
Figure 29 Interpretive Area Timeline	62
Figure 30 Primary and Secondary Service Areas	63
Figure 31 Interpretive Area Picnic Shelter	64
Figure 32 Primary Service Area (0-60 minute drive time)	65
Figure 33 Secondary Service Area (60-180 minute drive time)	66
Figure 34 Detail of Stone Map	67
Figure 35 Main Unit Master Plan	76
Figure 36 West Unit Master Plan	77
Figure 37 Phase 1 Cost Estimate	78
Figure 38 Phase 2 Cost Estimate	79
Figure 39 Phase 3 Cost Estimate	80
Figure 40 West Unit Shoreline	84

EXECUTIVE SUMMARY

INTRODUCTION

Machicomoco State Park is located in Gloucester County on the York River, across from York River State Park, and sits just twelve miles from Werowocomoco, which was historically the primary residence of Chief Powhatan. The park is divided into two administrative units (Figure 2). The Main Unit comprises approximately 645 acres and the West Unit contains about 431 acres. The land was once part of the Powhatan Confederacy that dominated Southeastern Virginia. The confederacy included all of Tidewater Virginia, with its northern border along the Potomac River, the southern border along the south side of the James River, and its western boundary reaching the fall line. The Chiefdom covered approximately 6,000 to 8,000 square miles.

In 1619, the land was granted to English settlers and in 1639, it began being farmed for tobacco. Gloucester County was formed in 1651 from part of York County. The name was taken from Henry Stuart, the Duke of Gloucester. After the death of Paramount Chief Powhatan, tribal land was colonized by English settlers by way of land grants from the British Crown.

Machicomoco State Park, recognized as a special meeting place by the Virginia Indian Tribes, seeks to understand and share the intertwined history, culture, and stories of Indigenous peoples, European, and enslaved Africans, ensuring their persistence into a collective future.

MACHICOMOCO STATE PARK PURPOSE STATEMENT

Through the 17th and 18th centuries, the land, called the Roswell Plantation, covered approximately 3,000 acres and was primarily farmed for tobacco using enslaved labor. The plantation house was the largest residence in Colonial Virginia at over 12,000 square feet and 35 rooms. It was destroyed by a fire in 1916. In the mid-17th century, what was to become known as Timberneck Farm was part of the Roswell Plantation. The land was sold to the Catlett family near the end of the 18th century and operated as a farm until the early 2000s.

A proposed residential subdivision, which was planned by developers who bought the land from the Catletts, was never realized, and in 2017, The Conservation Fund purchased the land.

The Main Unit of Machicomoco State Park was developed after negotiations between the Commonwealth of Virginia and Dominion Energy resulted in a Memorandum of Agreement (MOA). The agreement was subject to the Army Corps of Engineers (USACE) approval. This MOA and its approval by the Army Corps of Engineers (USACE) was part of a mitigation package for the construction of a Dominion Energy power line, the Skiffes Creek line, across the James River. The transmission line's impacts to the Captain John Smith National Water Trail (National Park Service, 2025) were mitigated by the purchase, protection and development of this property as a park. Under the agreement, the park is dedicated to the understanding of the Virginia Indian tribes' use of the area and its natural resources. The Main Unit of the park was opened in 2021 as Machicomoco State Park.

The West Unit of the park, originally planned to be known as Middle Peninsula State Park, is a 431-acre property acquired in the spring of 2006. The unit's boundaries are, in part, defined by the frontage on the York River and on Aberdeen Creek.

As with the Main Unit, the West Unit was originally populated by the Powhatan confederacy until the mid-17th century when it became part of the Rosewell Plantation. The plantation was mainly farmed for tobacco. DCR acquired the land from the Trust for Public Land (TPL) in 2006.

MANDATES FOR PLANNING

This document is the first comprehensive master plan for Machicomoco State Park, covering both administrative units and incorporating the natural, cultural and physical aspects of the park. As described in section 10.1-200.1 of the Code of Virginia, all state parks must undertake a master planning process. This master plan is intended to set forth a clear vision for the future of the park based on phased development. It outlines the desired future condition for Machicomoco State Park when it is fully developed. As required by the Virginia code, the plan must be revisited every ten years to ensure that the development objectives outlined in the plan continue to meet the recreational and environmental protection needs of the citizens of the Commonwealth.

DEVELOPMENT OF THE PLAN

The Department of Conservation and Recreation's planners and Virginia State Park staff produced this master plan. In accordance with the Code of Virginia, public input was solicited throughout the process to ensure that plan recommendations were understood, accepted and supported by the community. A public comment meeting was held at the T.C. Walker Education Center in Gloucester, Virginia on November 20, 2024, where the public commented on the proposed master plan. A 30-day comment period followed this meeting to give the public more opportunity to provide input. These comments are summarized in this document in the Appendix.

As part of this process, previous planning efforts were reviewed. The phased development plan, staffing and costs have been calculated based on current conditions. This may need revising as the plan will be updated in the future.

PARK VISITATION

The following table depicts park attendance since the opening of the Main Unit in 2021. The West Unit is not open to the public as of this writing.

Year	2021	2022	2023
Total Visitors	92,396	96,566	114,617

Table 1 Total Visitation 2021-2023

A projection of park visitation and the effect it may have on the economy of the area is provided in the Machicomoco State Park Business Plan which is included in this plan by reference.

OVERVIEW OF THE PARK

Machicomoco State Park, having opened to the public in 2021, is one of the newer parks in the Virginia State Park system. It includes approximately 1,076 acres divided into two administrative units. The park is located along the York River at the southern end of Gloucester County in the town of Hayes. (Figure 2)

The Main Unit currently contains a gate house park office, trails, kayak launch, overnight camping facilities, and a day use area that includes extensive interpretive areas of tribal and early colonial settlement. The West Unit, formerly Middle Peninsula State Park, is closed to the public at this time. It is undeveloped land that includes forest, wetlands, open fields and York River shoreline.

Because of its location in proximity to important historic and tourist attractions, as well as its own natural, cultural and historic resources, the park has potential to become a popular destination.

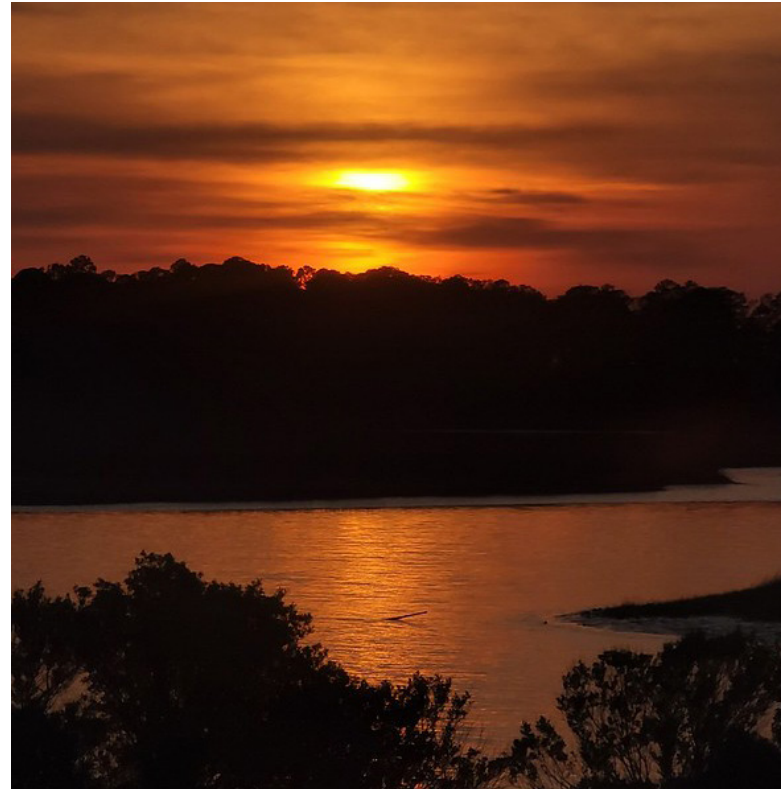


Figure 1 Sunset Over the York River

PROPOSED BUILDOUT

The 2025 master plan details new facilities needed at the park as well as improvements needed to existing facilities. New facilities should be designed and built with consideration for the natural surroundings while seeking to maximize the efficient use of space. Construction should also be in keeping with the protection of natural and cultural resources as described in the Natural Resource Management Plan, Cultural Resource Summary, and Visitor Experience Plan for the park. In addition, to the greatest extent possible all new development and improvements to existing infrastructure will be planned with regard to efficient use of taxpayer resources.

All future phases of park construction will be developed in an environmentally sensitive manner. Building and site design will implement green energy standards using energy-efficient and sustainable materials and processes to the greatest extent possible. These facilities will be carefully sited to minimize impacts to scenic views within and outside of the park and into the park from adjacent lands and water bodies. Development activities will comply with the requirements set forth by the Virginia Erosion and Sediment Control (VESC) Law and Regulations, and the Stormwater Management Program (VSMP) Law and Regulations, including the Virginia Stormwater Management Handbook published by the Virginia Department of Environmental Quality (DEQ).

The acquisition of additional park land could be considered to enhance the park, particularly to provide a location for increased overnight accommodation. In working cooperatively with neighboring landowners, the site will be enhanced and protected over time.

MACHICOMOCO STATE PARK PROPERTY MAP

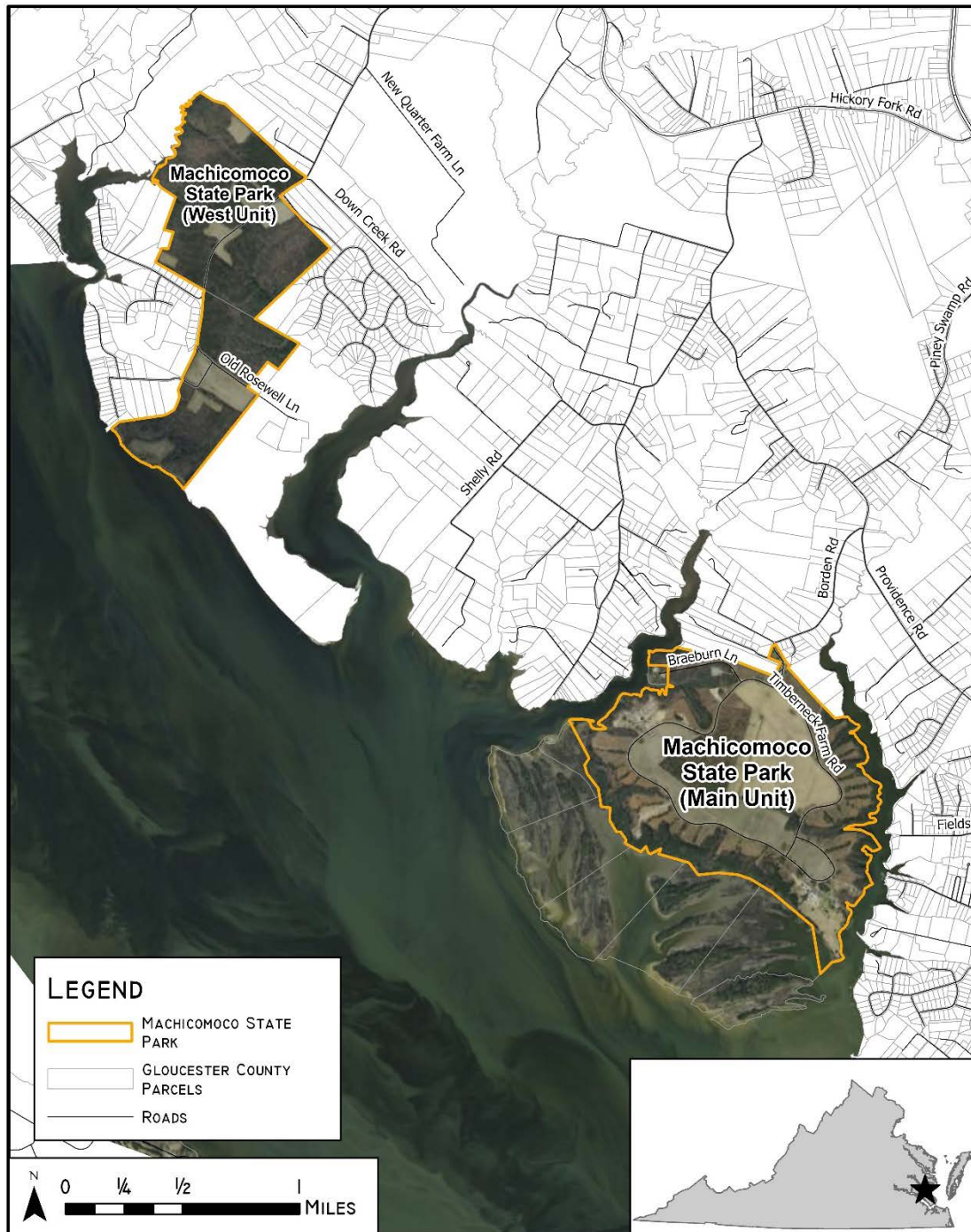


Figure 2 Machicomoco State Park Property and Location

The proposed developments for Machicomoco State Park are presented in a phased development plan consisting of three phases. These recommendations are based on currently projected needs, park visitation numbers, recreational needs surveys, and staff observations. Completion of all the projects in this list will represent a completion of the master plan over a 30-year timeframe. All costs given are in FY 2024 dollars.

PHASE 1

Phase 1 addresses the immediate infrastructure and facility needs at the park as identified by the park staff and by the public through observation, surveys and public meetings:

- **Maintenance Facility – Main Unit (MU):** A new maintenance facility with room for two service bays, restrooms, storage, laundry, offices for two staff members and a 3-bay pole shed.
- **Waterfront Safety Improvement – West Unit (WU):** Wood fence or other barrier along the eroded shoreline.
- **Parking with Self Pay and Trailhead (WU):** New parking area with 80 spaces and asphalt surfacing.
- **Trails in the Day Use Waterfront Area (WU):** Walking and hiking trails.
- **Picnic Area (WU):** Start to open the waterfront picnic area by constructing picnic pads for day use, four gravel 12' x 12' pads and one 16' x 16' ADA pad. Install one pit toilet.
- **Bury Existing Power Line (WU):** An existing overhead power line will be buried to improve the view of the park. Cooperation with Dominion Energy will be needed.
- **ADA Trail to Picnic Area (WU):** An ADA accessible concrete trail from the new parking area to the picnic area provides access.
- **Longleaf Pine Management Area Trail (MU):** Hiking and walking trails.
- **Native Meadow Viewshed in Arrival Corridor (MU):** This is the first phase of the project that will replace the current agricultural use in the Main Unit field with native wildflower meadows. This area will be seen upon arrival in the park.
- **Electrify Yurts (MU):** Electrifying existing yurts to improve camper experience.
- **Maintenance Facility (WU):** A new maintenance facility for the West Unit to contain two service bays, restrooms, storage, a three-bay pole shed, laundry and offices for two staff members. This will avoid staff having to shuttle equipment between the two administrative units.
- **Parking at the Interpretive Area (MU):** Current parking is inadequate at high volume times. This new parking area will accommodate 80 spaces. Surface will be permeable paving.

The total estimated cost for Phase 1 development is \$7,602,993.

PHASE 2

Phase 2 addresses intermediate needs at the park to expand visitor services; day use and overnight facilities and increased staffing by proposing the following improvements:

- **New Ranger Residence (WU):** A new residence to accommodate an increase in park staffing.
- **Visitor Center with Staff Offices (MU):** The new visitor center includes information services, staff offices, storage areas, interpretive classrooms, park store and exhibit spaces. A parking area for 40 cars, 2 buses and 3 RVs is also included.
- **Gatehouse Renovation (MU):** The existing gatehouse will be renovated to better accommodate the contact station function and improve staffing.
- **Trails in Passive Recreation Area (WU):** Approximately 3.5 miles of hiking/walking low-impact trails will be constructed. Trails will be located on-site in order to avoid sensitive areas.
- **Three Parking Hubs and Trailheads (WU):** Three areas along the west side of the entrance road will be designated as trailheads with small parking hubs. These are located in spots where there is good opportunity for a trail to the west.
- **Contact Station with Employee Toilet and Two Public Toilets (WU):** Located across the road from the parking lot and providing space for toilet facilities as well as staffing.
- **Second Campground (MU):** A second 25-site campground will be constructed across the road from the current campground. All sites will have electricity and water. A new bathhouse will be part of this new campground.
- **Group Camp Site (MU):** A group campsite with four (4) 24' x 24' tent sites and a vault toilet will be constructed just north of the existing campground.
- **Nature Playground (MU):** A nature-based playground will be constructed west of the interpretive area.
- **Native Meadow Development (MU):** This is a continuation of the native wildflower meadow project started in Phase 1. This phase will convert approximately one-half of the remaining agricultural field.
- **Shoreline Stabilization and Restoration (WU):** In conjunction with the Army Corps of Engineers (ACOE), the eroded York River shoreline will be stabilized with both vegetative and hardened solutions.
- **First Half of New Trail System in Meadow (MU):** The first half of approximately 7 miles of trails will be constructed along with the new wildflower meadows.
- **2 Boardwalk Overlooks (MU):** Two boardwalk-type overlooks, one ADA accessible, will be constructed in the outer ring road to allow observations into the wildflower meadow.

The total estimated cost for Phase 2 development is \$32,390,694.

PHASE 3

Phase 3 concentrates on completion of the multi-phased projects as well as overnight facilities in the Main Unit and additional development of the day use area in the West Unit.

- **Large Picnic Shelter (WU):** A large picnic shelter with grilling facility will be constructed in the picnic area. This will accommodate groups picnicking together.
- **Fishing Pier (WU):** The pier will be constructed boardwalk style perpendicular to the shoreline to approximately 150' offshore. There is an oyster bed lease offshore in the York River so care will be taken not to interfere with the lease.
- **Ten (10) 3 Bedroom Cabins (MU):** The cabins will be constructed in the areas that were previously cleared for residential development. The complex will include all utilities and a loop road separate from the main park road.
- **6 Bedroom Lodge (MU):** Constructed as part of the cabin complex but on its own drive at the southern end of the cabins.
- **Second Half of Native Meadow Development (MU):** Completion of the meadow conversion that was started in the first two phases.
- **Trails in Converted Meadow Area (MU):** Completion of meadow area trails that started in the second phase.
- **2 Boardwalk Overlooks (MU):** Two additional boardwalk-type overlooks, one ADA accessible, will be constructed as completion of project started in Phase 2.
- **Outdoor Education Space adjacent to Visitors' Center (MU):** Small space associated with the visitor center to conduct demonstrations and outdoor education presentations, with simple benches and a presentation area.

Total estimated cost for Phase 3 development is \$13,269,706.

Total cost to bring Machicomoco State Park to its desired future condition is \$53,263,394 over an estimated thirty years.

STAFFING AND OPERATIONS¹

See the full staffing buildout, including roles for FTE positions beginning on page 76.

Existing (FY 2025)

• Staffing: 6 FTE salary and benefits	\$544,944
• Wage Totals	\$178,753
• OTPS	\$99,327
Total	\$833,024

Immediate Needs

• Staffing: 1 FTE salary and benefits	\$167,026
• Wage Totals	\$20,880
• OTPS	\$0
Total	\$187,906

Needs with Phase 1 Buildout

• Staffing: 0 FTE salary and benefits	\$0
• Wage Totals	\$45,000
• OTPS	\$55,328
Total	\$100,328

Needs with Phase 2 Buildout

• Staffing: 3 FTE salary and benefits	\$281,076
• Wage Totals	\$90,000
• OTPS	\$143,461
Total	\$514,537

Needs with Phase 3 Buildout

• Staffing: 5 FTE salary and benefits	\$430,014
• Wage Totals	\$90,000
• OTPS	\$126,122
Total	\$646,136

Full Buildout

• Staffing: 16 FTE salary and benefits	\$1,425,060
• Wage Totals	\$424,633
• OTPS	\$424,238

Full Buildout Total **\$2,271,931**

¹ Amounts are in FY25 dollars and all costs such as salary, wage and Other Than Personnel Services (OTPS) are based on FY25 budget projections. OTPS includes non-staffing expenses such as (but not limited to) equipment, supplies, utilities and resource management.



Figure 3 Catlett Islands off the shore of the Main Unit

INTRODUCTION

PURPOSE OF THE MASTER PLAN

Section 10.1-200.1 of the Code of Virginia states that the purpose of a park's master plan is to guide the development, utilization and management of a park and its natural, cultural and historic resources. The Code further states that park master plans shall be adhered to closely.

In accordance with the Code, master plans are written for 1) all existing state parks, and 2) following the acquisition of land for a new state park, and 3) prior to undertaking substantial improvements to state parks that are not already documented in a park's existing master plan. The Code also stipulates that existing park master plans shall be reviewed and updated by DCR and BCR no less frequently than once every 10 years.

Machicomoco State Park was selected for a new master plan because of the need for substantial facility development; natural, cultural and historic resource protection; and the addition of the West Unit (formerly Middle Peninsula State Park). The plan addresses these needs and reflects the current context of the park in the local community, region and within the Virginia State Parks system. The plan includes the phased development plan and staffing based on current and projected needs over the next 30 years. This report reflects both the developed park purpose statement, and the future direction of the park in accordance with Article XI Conservation of the Constitution of Virginia.

MASTER PLAN DEVELOPMENT PROCESS

The Department of Conservation and Recreation process for addressing the requirements of the Code of Virginia for State Park Master Planning, was reevaluated during a period from February to September of 2022. This effort culminated in a report, *Evaluation and Refinement of the Master Planning Process for Virginia State Parks*, developed in a collaborative effort with DCR personnel from the Division of Planning and Recreation resources (PRR), Virginia State Parks (VSP), and other Divisions and Offices that have, historically, and are projected to continue to be involved in the process.

A key deliverable of this report was the development of a defined master planning process that places an emphasis on preplanning, public engagement, and integration of a park's unique resources and desired visitor experience. (Figure 3)



Figure 4 Master Plan Cycle

By Code, park master plans are developed in two stages. The first stage includes the specific purposes for the park and the goals and objectives to support those purposes. The first stage also includes a characterization of the potential types of uses, called visitor experiences, for different portions of the park. This stage includes the development of maps which illustrate, at a minimum, the park's boundaries, inholdings, and adjacent property holdings. Maps of other features, such as slopes, water resources, soil conditions and types, natural resources, and cultural and historic resources are also included to accompany a narrative description of the natural, physical, cultural and historic attributes of the park.

Stage two of the master plan development process utilizes the findings from the first stage and addresses the potential size, types and locations of facilities and the associated infrastructure including roads and utilities, as applicable. It also includes a proposed phased development plan of the potential facilities and infrastructure. Proposed development of any type shall be in keeping with the character of existing improvements, if appropriate, and the natural, cultural and historic heritage and attributes of the park. A map indicating locations of the proposed facilities is prepared during this stage.

Development, operational, maintenance, and staffing costs for each of the various phases of park development, as well as income projections are also included in the plan as part of the second stage of this process.

MASTER PLAN TIMELINE AND PUBLIC INVOLVEMENT

The timeline for the development of a master plan is driven by the scope of the project, which varies depending on whether the process is for a new park, a 10-year update, revision following the acquisition of land or prior to undertaking substantial improvements not documented in the plan, or for non-substantial amendments. The timeline is also influenced by the public engagement involved and final reviews by the DCR Director's Office, the Board of Conservation and Recreation (BCR), and the General Assembly.

The Master Plan process for Machicomoco State Park was undertaken as a new plan and took about two years. The scope of, and anticipated timeline for, this plan was developed based on DCR's current master planning process standards, in conjunction with the scheduling needs for both internal and external stakeholders.

Public Input

Recognizing the importance of community involvement and public input in DCR's development of a park master plan, the process included two hybrid public meetings held on December 14, 2023, and November 20, 2024, respectively. The meetings were well-attended with over 50 participants and provided an opportunity for members of the public to speak directly with the Master Planning Team and DCR leadership, learn more about the planning process, comment on the future of the park, provide feedback and help focus the vision for the master plan. Public comment periods were open for 30 days following each meeting.

Initial feedback focused on maintaining and improving upon the park's high level of natural resources and interpretation of the history of various populations that have occupied the land over generations. Also important in the feedback was the park's community context, and other needs including day-use facilities, overnight accommodations, preservation of natural areas, and recreational resources. This feedback was incorporated into the draft plan which was also made available for public comment. A more detailed summary of public comments is available in the Appendix.

Advisory Committee

As part of the public input required by state code, an Advisory Committee was convened to support the development of the Machicomoco State Park planning process. Invitations were extended to 46 people from various organizations including tribal nations, local government, conservation groups, academic institutions, and other key stakeholders.

Specific organizations included 10 Indian tribes, Gloucester County elected officials, Middle Peninsula Master Naturalists, National Park Service, The Fairfield Foundation, US Army Corps of Engineers, Virginia Department of Forestry, Virginia Department of Transportation, Virginia Institute of Marine Science, College of William and Mary, Gloucester Garden Club, and the Friends of Machicomoco State Park.

The Advisory Committee was involved throughout the planning process.

- **Initial Meeting (Kickoff)** – The purpose of this meeting was to gather members' thoughts on the scope of the plan as well as topics particular to them and their organizations.
- **Second Meeting (Needs Assessment)** – This meeting included a recap of the progress on the plan as well as an overview of the results of the public survey and the Advisory Committee survey. The results of the visitor experience workshop and the draft phased development plan were presented and discussed.
- **Third Meeting (Draft Plan Review)** – Participants were provided a summary of the draft master plan and the draft business plan/market analysis and were given the opportunity to comment.

Additionally, the Advisory Committee was invited to participate in the full public comment process.

PARK BACKGROUND

Location and General Description

Machicomoco State Park is located on the north shore of the York River in southern Gloucester County, Virginia. The park is comprised of two administrative units, the Main Unit and the West Unit. The units total 1,076 acres with significant river frontage. Each unit contributes to the historical and recreational opportunities available in the region. The park is approximately 10 miles downriver from Werowocomoco, which was a village that served as the headquarters of Chief Powhatan in the early 1600s. It is an important archaeological site and a place of historical and cultural significance for both the tribal nations and early colonial history.

Main Unit

The Main Unit is 645 acres and is adjoined to the Catlett Islands at the southern border. The Catlett Islands are classified as a National Estuarine Research Reserve, which is National Oceanic and Atmospheric Administration (NOAA) funded. There are currently two leases managed on the park property. One lease is for agricultural use in the center of the Main Unit. The second lease is Timberneck House and surrounding area to the Fairfield Foundation (a local archaeological not-for-profit organization). The Timberneck House is under restoration through grants from the National Park Service and will eventually serve as the Foundation's office, museum, and small accommodation space.

An open-air interpretive pavilion, patterned after a traditional Powhatan yehakin, provides information on the culture, landscape and movement of Virginia Indians through displays and a walking path in the landscape. A paved trail follows along the main park road for walking or bike riding. The surrounding land provides diverse wildlife habitats, from open fields to woodlands and waterfront/marsh areas supporting deer, turkey, and many species of songbirds and birds of prey.

Other amenities in the Main Unit include a campground with sites for vehicle camping and hike-in tent sites, three overnight yurts, two picnic shelters, a car-top boat launch pier with an accessible boat entry structure, and a set of small floating docks on Timberneck Creek for daytime boat tie-ups and fishing.

West Unit

The West Unit contains 431 acres and is located approximately three miles west of the Main Unit along the York River. There are no visitor-focused physical resources at the West Unit which is currently closed to the public. The unit is mostly undeveloped with one service road for park staff to perform maintenance. There are two planted pollinator fields and a tree memorial on the site that was planted in honor of State Delegate Harvey Morgan who served in the Virginia House of Delegates from 1980-2012. He represented the 98th District on the Middle Peninsula. The unit also contains an area leased for agricultural activities.

Property History and Acquisition

The Main Unit of Machicomoco State Park opened in 2021 as Virginia's 40th state park. The West Unit of the park (originally called Middle Peninsula State Park) was acquired in 2006. The park is in Gloucester County on the York River and sits just twelve miles from Werowocomoco, Chief Powhatan's primary residence, and across the river from York River State Park. The park is situated on a combined 1,076 acres of land that was once part of the chiefdom of the Powhatan Indians. Powhatan was the paramount chief of Tsenacomoco, or Tidewater Virginia, in the late 1500s and early 1600s. During his lifetime, he was responsible for uniting dozens of tribes into a single, powerful alliance. He was the highest authority in the region when English colonists arrived and built the Jamestown fort in 1607. With a shrewd political mind, Powhatan led his people through the early years of European colonization.



Figure 5 Welcome to Machicomoco State Park

The tribes were a powerful confederacy that dominated the southeastern region of Virginia from the mouth of the James River north to the south end of the Potomac River and the Eastern Shore. The Powhatan, also called Virginia Algonquians, spoke an eastern-Algonquian language. The Chief built a mighty empire starting with six tribes and growing it to 30 or more by conquering or through agreements of affiliation from other tribes, between the late 1500s and 1607. The chiefdom covered approximately 6,000 to 8,000 square miles.

After his death, the land of the chiefdom was colonized by English settlers by way of land grants from the British Crown. These settlers farmed for tobacco utilizing enslaved laborers. Gloucester County was formed in 1651 from part of York County and named after Henry Stuart, the Duke of Gloucester. In the mid-17th century, the land that was to become Timberneck Farm was part of the Rosewell plantation. The land was subsequently sold to the Catlett family near the end of the 18th century and was farmed until the early 2000s.

The property was then sold to a developer who planned a residential subdivision which was never brought to fruition. In 2017, the land was sold to the Conservation Fund.

As part of the mitigation package for a power line across the James River, Machicomoco State Park, now the Main Unit, was funded as a result of negotiations between the Commonwealth of Virginia and Dominion Energy, subject to the Army Corps of Engineers approval of a multiparty Memorandum of Agreement (MOA). The MOA included the development of a state park on the York River as part of the Captain John Smith Trail and tribal negotiations. Impacts to the Captain John Smith National Water Trail are mitigated by the purchase, protection, and development of this property as a park, which is dedicated to the understanding of the Virginia Indian tribes' use of the area's natural resources.

The Main Unit opened in 2021 with trails for hiking and biking, picnic shelters, a car-top boat launch, day-use boat slips, an interpretive area, and overnight camping. A description of the existing physical resources at the park is given in the existing conditions section.

The West Unit, also originally part of the chiefdom and subsequently the Rosewell Plantation, was sold to the Commonwealth by the Trust for Public Land in 2006. The Trust had acquired the land in 2005 from the Pela P. Hundley Trust.

PRIOR PARK PLANNING EFFORTS

Before DCR owned and oversaw the property, a master plan called *Gateway to Werowocomoco* was completed in 2018 for the Main Unit. It included plans for integration of the region's natural, cultural and historic resources to build an understanding of the Virginia Indian cultures at Werowocomoco. The plan called for extensive interpretive and educational opportunities as well as outdoor recreation facilities. The plan also presented proposed goals and themes to guide future development.

A business plan for the park was developed in 2020 by DCR through an MOU with Virginia Tech. (Department of Conservation and Recreation, 2020). The purpose of the plan was to develop realistic expectations for the concessions and service development of Machicomoco State Park. This included facilities, revenues, and expenditures associated with the park's operations. The plan was meant to assist park management and staff in the decision-making process regarding the management, operation and development of park resources. The report suggests several avenues of marketing, including websites, blogs, social media, and various levels of advertising. The report concludes that "... the addition of Machicomoco State Park to the Tidewater region will help to provide unique recreational opportunities to a visitor base that lives and works in one of the busier areas of the Commonwealth. The peacefulness of Machicomoco State Park within this region will serve thousands of guests looking for a respite from the stress of everyday life." (Department of Conservation and Recreation, 2020, p. 28)

A master plan for the West Unit (originally called Middle Peninsula State Park) was written as an Executive Summary in 2010 and subsequently renewed in 2015. That plan called for general development of outdoor recreation at that site.

PLANNING CONTEXT

Gloucester County is at the northern end of the Hampton Roads which is the largest metropolitan area between Washington D.C. and Atlanta, Georgia. Access to water offers exceptional water-related recreational activities. The county is within 750 miles of two-thirds of the U.S. population and is home to several major employers. Its population offers a sizable local and extended labor market. The market analysis section provides more information about this context as well as the service area of the park.

Both units of the park are immediately surrounded mainly by residential development. This development is fragmented by creeks which stem from the York River. Access to the park is gained mainly on the land side by local roads.

The *Gloucester County Comprehensive Plan 2016* (Gloucester County, 2016) (the County Plan) serves as a long-range guide for the county's growth and development. It outlines goals, objectives and implementation strategies. The plan identifies upward trends in the county in both retail sales and employment. This trend is expected to continue. A similar trend in tourism is also expected to continue, and the county desires to expand partnerships with

key stakeholders to improve tourism opportunities and revenues. The report projects that the county's population and workforce will increase along with employment through 2040, the last year of this study.

The County Plan spotlights increased tourism as an important goal. It acknowledges that cultural, historic and natural resources provide benefits that include increased tourism which can be a major component of the local and regional economy. The plan mentions the state park (then called Middle Peninsula State Park) as an example of increased tourism opportunity. The park also provides outdoor recreation resources mentioned in the plan as a component of tourism attractions as well as residents' quality of life.

2024 VIRGINIA OUTDOORS PLAN (VOP)

The Virginia Outdoors Plan (VOP) is the Commonwealth's plan for land conservation, outdoor recreation, and open-space planning. The plan helps all levels of government, and the private sector identify trends and meet the needs of the public for access to land and water for outdoor recreation. The VOP is required for state participation in the federal Land and Water Conservation Fund (LWCF) program and it also provides guidance for the protection of farmland, forests, lands of historic or cultural significance, natural areas, open spaces, and parkland through the Virginia Land Conservation Fund. (Department of Conservation and Recreation, 2025)

The 2024 Virginia Outdoors Plan utilizes ArcGIS Hub and StoryMaps to create an online plan that includes interactive mapping, videos, photographs, links to related studies and immersive content to identify past and present trends in outdoor recreation. The VOP recognizes the substantial contributions of outdoor recreation to the Virginia economy. As such, it establishes recommendations and priorities to guide public use of parks, greenways, waterways, and open spaces of all types over the next five years.

Virginia State Parks provide many opportunities for outdoor recreation. The following findings of the VOP are relevant to those activities and provide clear evidence for the type of accommodation and development contemplated for state parks generally and at Machicomoco State Park specifically:

- State parks are significant nodes in Virginia's network of public lands and represent an important opportunity to expand recreational infrastructure and associated overnight accommodations across the Commonwealth. The COVID-19 pandemic prompted more people to participate in outdoor recreation, straining Virginia's public lands and outdoor recreation venues. The public expressed a clear need for additional recreation inventory to meet increased demand resulting from factors that include changing population densities in certain regions and increased visitation to popular recreation destinations. As a result, more than half of Virginia Outdoors Survey respondents (55.4%) were unable to reserve an overnight accommodation at a state park, primarily due to a lack of availability of their preferred lodging (campsite, cabin, or lodge) or a lack of accommodations during their preferred dates.
- Virginians desire facilities and programs that are adequately funded, safe, resilient, and able to accommodate users with widely varying needs, backgrounds, experience levels, and abilities. This is particularly true for the physical and mental health

benefits such activities provide. The plan recommends prioritizing projects that expand outdoor recreation access, improve safety, give rise to better public health outcomes, and address climate change challenges through resilient infrastructure and resources management.

- Learning about our natural surroundings, gaining new outdoor skills, and building on those experiences with repeated exposure and guidance encourages long-term interest in outdoor recreation pursuits. For these reasons, the plan recommends prioritizing projects that improve outdoor recreation access through immersive outdoor experiences and programming, outdoor skills- and confidence-building exercises, guided tours and instruction, and affordable (or free) rental of outdoor equipment.
- Access to outdoor recreation has not always been equally available to individuals of all races, cultures, and backgrounds. The plan encourages projects in communities that have been historically underserved, underfunded, and underdeveloped with respect to recreation opportunities and address common barriers people with disabilities may encounter in the outdoors.
- Virginians rank water access (29.1%) as the fourth most-needed outdoor recreation activity in Virginia, and they spent an equal or greater number of days on average engaging in water-based activities than they did visiting parks and natural areas generally. The plan recommends additional and upgraded public access sites for motorized and non-motorized boating, swimming, fishing, water sports, and passive recreation use.

The VOP further recommends that park plans consider conservation values, purposes, and how the landscape may predictably change over time during land acquisition and project planning and design. The plan's recommendations recognize the importance of enhancing recreation opportunities in natural landscapes throughout the existing network of state natural areas and parks and engaging visitor interest in the natural landscape and local wildlife. Furthermore, the Virginia State Parks Natural Resources Management section is continually implementing biodiversity best management practices in state parks that support Virginia's ecological resiliency goals and enhance recreational enjoyment.

This master plan recognizes all these recommendations of the VOP. It includes efforts to put these VOP recommendations into practice by aligning the goals, objectives and visitor experience information developed during the planning process with them.

*Figure 6 Timberneck House*

GOALS AND OBJECTIVES

GOALS, OBJECTIVES AND MANAGEMENT FRAMEWORK

The Constitution of Virginia, the Code of Virginia and the mission statements for DCR and Virginia State Parks form the foundation for the park's long term development plan. The Machicomoco State Park purpose statement, themes, and subthemes were written to be consistent with the mission of both the agency and state park system. These statements and themes, in turn, guided the wording of the goals and objectives to ensure consistent guidance regarding future improvements to Machicomoco State Park. Taken together, these sections of this master plan are intended to meet the Stage One requirements of the Code of Virginia referenced in the previous chapter.

Constitution of Virginia, Article XI, Section 1

“To the end that the people have clean air, pure water, and the use and enjoyment for recreation of adequate public lands, waters, and other natural resources, it shall be the policy of the Commonwealth to conserve, develop, and utilize its natural resources, its public lands, and its historical sites and buildings. Further, it shall be the Commonwealth’s policy to protect its atmosphere, lands, and waters from pollution, impairment, or destruction, for the benefit, enjoyment, and general welfare of the people of the Commonwealth.”

Department of Conservation and Recreation Mission Statement

“Conserve, protect, enhance, and advocate wise use of the Commonwealth’s unique natural, historical, recreational, scenic, and cultural resources.”

Virginia State Parks Mission Statement

“To conserve the natural, scenic, historic, and cultural resources of the Commonwealth and provide recreational and educational opportunities consistent with the good stewardship of these lands, waters, and facilities that leaves them unimpaired for future generations.”

Machicomoco State Park Purpose Statement

“Machicomoco State Park, recognized as a special meeting place by the Virginia Indian Tribes, seeks to commemorate and communicate the intertwined history, culture, and stories of indigenous peoples, Europeans, and enslaved Africans, ensuring their persistence into a collective future.”

Machicomoco State Park Goals and Objectives

Goal 1.0: Protect, conserve, and enhance the natural, cultural, and historic resources of the park.

- Objective 1.1 – Develop and manage the park, its resources, and facilities in a culturally and environmentally sensitive manner.
- Objective 1.2 – Preserve, protect, promote, and interpret the natural, cultural, and historic resources on site.
- Objective 1.3 – Develop and implement the park’s Natural Resources Management Plan, focusing on the preservation and restoration of native species, control of invasive species, and proper management of native ecosystems and associated wildlife resources.
- Objective 1.4 – Work with authorized indigenous tribes to enhance their stories and to protect the natural, cultural, and historic resources at the park.
- Objective 1.5 – Implement best management practices for soil and water conservation and stormwater management to protect water quality and reduce shoreline erosion.

Goal 2.0: Create a welcoming and safe environment for all visitors to learn, and gain a better understanding of the natural, cultural, and historic resources of the park.

- Objective 2.1 – Develop and implement a Visitor Experience Plan to guide programming and events at the park.
- Objective 2.2 – Provide a range of high-quality experiential opportunities for users, regardless of income, background, and ability.
- Objective 2.3 – Provide visitors with clear orientation and wayfinding.
- Objective 2.4 – Create experiences that inspire repeat visitation, volunteerism, stewardship, and/or future employment opportunities.
- Objective 2.5 – Preserve, enhance, and add to the existing infrastructure and interpretation facilities.

Goal 3.0: Provide a range of day-use and overnight opportunities, facilities, and amenities for visitors to the park.

- Objective 3.1 – Design and manage recreational activities to minimize impacts on cultural, historic, and natural resources to preserve the experience for future visitors.
- Objective 3.2 – Enhance the existing system of multi-use and hiking trails by completing the existing Loop Trail and providing a circulation plan that connects park components efficiently including vehicular, bicycle and pedestrian accommodations.
- Objective 3.3 – Continue participation as a stop on the Virginia Birding and Wildlife Trail, and advance unique viewing opportunities and accessibility. Develop and interpret native meadows that provide critical habitat for the park's abundant wildlife.
- Objective 3.4 – Develop a group campground.
- Objective 3.5 – Provide a spectrum of high-quality opportunities and supporting infrastructure for park users that encourages repeat visitation.

Goal 4.0: Provide programming for natural, cultural, and historic education and interpretation.

- Objective 4.1 – Provide a variety of inclusive educational formats for all learning capabilities and levels.
- Objective 4.2 – Teach environmental and cultural awareness and stewardship.
- Objective 4.3 – Provide educational opportunities about the value of the environmental, cultural, and historic resources in the park and the region and how to act to sustain and conserve these resources.
- Objective 4.4 – Provide site-appropriate education and interpretation.
- Objective 4.5 – Develop partnerships with local organizations and tribes to promote educational opportunities and enhance programming.
- Objective 4.6 – Engage diverse groups with programming and cultural interpretation on site.

Goal 5.0: Continue to collaborate across sectors to provide mutually beneficial efforts to enhance Machicomoco State Park and the surrounding region.

- Objective 5.1 – Participate in local and regional planning efforts to foster sustainable land use and development that protects the water quality, natural and cultural heritage, and scenic beauty of the region.
- Objective 5.2 – Partner with authorized tribes, Gloucester County, the National Park Service, and other organizations to enhance site offerings and educational opportunities and to market Machicomoco State Park and other amenities of the region.
- Objective 5.3 – Foster community support and volunteerism to support the park and its programs.
- Objective 5.4 – Collaborate with local and regional tourism on park-oriented efforts.

Goal 6.0: Continue to administer and manage the park professionally and transparently, which fosters the public's trust.

- Objective 6.1 – Ensure the park has adequate, well-trained staff to support safe and meaningful visitor experiences and to protect and conserve resources.
- Objective 6.2 – Acquire additional land from willing sellers that will meet the needs and objectives of the park as opportunities arise.
- Objective 6.3 – Regularly update and implement the park's Business Management Plan.
- Objective 6.4 – Assure proper care and maintenance of park facilities and infrastructure.
- Objective 6.5 – Upgrade and provide communications and informational access to enhance the visitor's experience throughout the park.
- Objective 6.6 – Implement plans and practices that foster appropriate "green" facility design and an architectural style keeping with the historic and natural character of the park.
- Objective 6.7 – Protect archaeological, natural and culturally sensitive sites from unauthorized activities.
- Objective 6.8 – Provide adequate road and entry facilities for traffic control on busy days.
- Objective 6.9 – Protect privacy and prevent access to adjacent private property.

EXISTING CONDITIONS

Surrounding Land Use

Both units of Machicomoco State Park are surrounded by rural residential land uses. *The Gloucester County Comprehensive Plan 2016* (Gloucester County, 2016) lists the Main Unit as zoned PUD-1 for planned unit development with surrounding zoning as SC-1 (Suburban Countryside) and SF-1 (Single-Family Detached) residential development. The Main Unit and most of the land to the north and east (across Timberneck Creek) are within a development district which includes all the land from Gloucester Point to Gloucester along Route 17 and includes various types of zoning districts.

The West Unit is zoned MF-1 for residential development with SF-1 areas to the north and RC-1 residential areas to the east.

Physiographic Region and Geology

Machicomoco State Park lies within Virginia's Coastal Plain region. This region is part of the coastal plain that stretches from Cape Cod south to Florida. It is characterized by a low-relief, terraced landscape that slopes gently towards the Atlantic Ocean. Geologically, this region is a young landscape, sculpted during the last few million years by the repeated rising and falling of sea level during several cycles of Pleistocene glaciation. The soils tend to be sandy, although deposits of terrace gravels, marine clays, silt, and fossiliferous shales are extensive in places. Most streams (such as the York River) draining the eastern portion of the coastal plain are estuaries in river valleys and are subject to tidal fluctuations. (Virginia Department of Conservation and Recreation Division of Natural Heritage, 2021, pp. 9-10)

Topography

The topography of both units of the park is relatively flat and typical of the coastal plain. The elevation varies from mean sea level to a high point of 30 feet above sea level in the Main Unit and 20 feet above sea level in the West Unit. Some steep areas slope down to Timberneck Creek on the eastern side of the Main Unit.

Watersheds and Hydrological Units

A watershed is traditionally defined as an area that collects water into a single convergence point. A hydrological unit, on the other hand, may have multiple convergence points throughout its area. Therefore, hydrological units (HUs) are able to be a little more specific than watershed boundaries. Today, there are two recognized ways of labelling watersheds in Virginia:

- A 12-digit HUC12 code as part of the National Watershed Boundary Dataset developed by a team of federal agencies in the early 2000s. The far northwest portion of the West Unit falls within the HUC12 code 020801070201, whereas the eastern portion of the West Unit as well as the entirety of the Main Unit falls within HUC12 code 020801070203.
- A 4-digit VAHU6 code as part of the Virginia National Watershed Boundary Dataset developed for use in the Commonwealth by the Virginia Department of Conservation and Recreation. The first two digits refer to the major stream name (i.e. YO = York River)

and the last two numbers reference a sequential numbering system designed to indicate drainage from the headwaters to the mouth of the waterway. The far northwest portion of the West Unit falls within the VAHU6 code YO66. Meanwhile, the eastern portion of the East Unit, as well as the entirety of the Main Unit, falls within VAHU6 code YO68.

These designations indicate that both the Main Unit and the West Unit provide drainage for the surrounding landscape and drain into the York River, which eventually drains into the Chesapeake Bay and the Atlantic Ocean. This is an important distinction. It indicates that these lands can help the Commonwealth fulfill its obligations to the regional interstate Chesapeake Bay Program partnership and the federal Clean Water Act for improving water quality in Chesapeake Bay.

Flood Zones

Flood zones are used to help visualize the frequency and intensity of flooding events in an area. To that end, the Virginia Department of Conservation and Recreation's Division of Floodplain Management has outlined areas of high, moderate, low and other flood risk throughout the Commonwealth. Each flood zone is given a special categorization in accordance with its relative risk. All A and V zones are considered to be Special Flood Hazard Areas (SFHA), meaning that the area that will be inundated by a flood event has a 1 percent chance of occurring in any given year (i.e. the 100-year floodplain). Zone X is considered to have a moderate flood risk with a 0.2 percent chance of flooding in any given year (i.e. the 500-year floodplain). These classifications are particularly important in light of the Virginia Floodplain Management Standard. See figure 6 and 7 for the general locations of flood zone areas in the two units of the park. (Virginia Department of Conservation and Recreation, n.d.)

The following descriptions depict certain areas of the park that, due to flood zone classifications, may need further investigation before any proposed development is undertaken:

- Approximately 956 acres at Machicomoco State Park, the majority and core of both the Main and West Units, are categorized as areas of minimal flood hazard. Accordingly, flood zones are not a key consideration in discussions of development in these areas.
- Approximately 112 acres, particularly along the York River and its inlets into both units, are classified as Riverine Special Flood Hazard Area. These flood zones and their associated regulations will need to be taken into consideration when discussing any potential future development in these areas.
- Approximately 8 acres of Machicomoco State Park are classified as moderate flood risk. These sites are mainly located slightly upland of SFHA areas on the two tracts; associated floodplain regulations will need to be taken into consideration when discussing any potential future development in these areas.
- Approximately 3 acres are classified as Zone VE, a Coastal Special Flood Hazard Area. These areas are located along the southwestern shoreline of the West Unit as it runs along the York River and on the northwestern shoreline of the Main Unit along Cedarbush Creek. Any discussions of future development on or along these immediate shorelines must consider this significant flooding classification.

Wetlands

With both tracts falling along the tidal York River, Machicomoco State Park unsurprisingly contains abundant wetlands within its boundaries. Collectively there are three main types of wetlands on the property that are relatively evenly spread in terms of total acreage:

- Approximately 33 acres of Freshwater Forested/Shrub Wetlands, often slightly upland of the Estuarine and Marine Wetlands, are found on the property. This category includes both tidal and nontidal portions and is dominated by either broad-leaved deciduous or needle-leaved evergreen trees.
- Approximately 31 acres of Estuarine and Marine Wetlands, largely intertidal in nature, can be found along the shores and inlets of both tracts;
- Approximately 30 acres of Freshwater Emergent Wetlands are largely located in the nontidal interior of the Timberneck tract just southeast of the campground, beside the longleaf pine stand, and otherwise isolated from the York River.



Figure 7 View of the York River from the West Unit

Soil Conditions and Types

Understanding the soil types at the park can inform decisions on land development, such as trail building or construction. Soils are defined by the four basic ingredients that make them up. Those materials are minerals, organic material, air and water. In addition, soils are also characterized by their textural characteristics and can be classified as silty, clayey or loamy, or some combination of the three. The percentage of those three textural types determines physical properties of the soil such as its water retention capacity and, consequently, what type of plant life or physical development it can support. At Machicomoco State Park, around 20 different soil types have been mapped throughout the property's two units. The five most prevalent soil types on the property and their relative suitability for different types of development are described in the following table:

Soil Type	Acres (approx.)	Limitations to Development			
		Structures without basements	Camp Areas	Picnic Areas	Trails
Kenansville loamy fine sand, 0 to 4 percent slopes (well drained)	225	Not Limited	Somewhat Limited	Somewhat Limited	Somewhat Limited
Eunola fine sandy loam (moderately well drained)	147	Somewhat Limited	Somewhat Limited	Somewhat Limited	Somewhat Limited
Suffolk fine sandy loam, 6 to 10 percent slopes (well drained)	127	Not Limited	Somewhat Limited	Somewhat Limited	Somewhat Limited
Psammets-Hapludults complex, steep (moderately well drained)	119	Very Limited	Very Limited	Very Limited	Very Limited
Ochraquults-Haplaquepts complex (poorly drained)	119	Very Limited	Very Limited	Very Limited	Very Limited

Table 2 Soil Types and Limitations

MACHICOMOCO STATE PARK ENVIRONMENTAL FEATURES (MAIN UNIT)

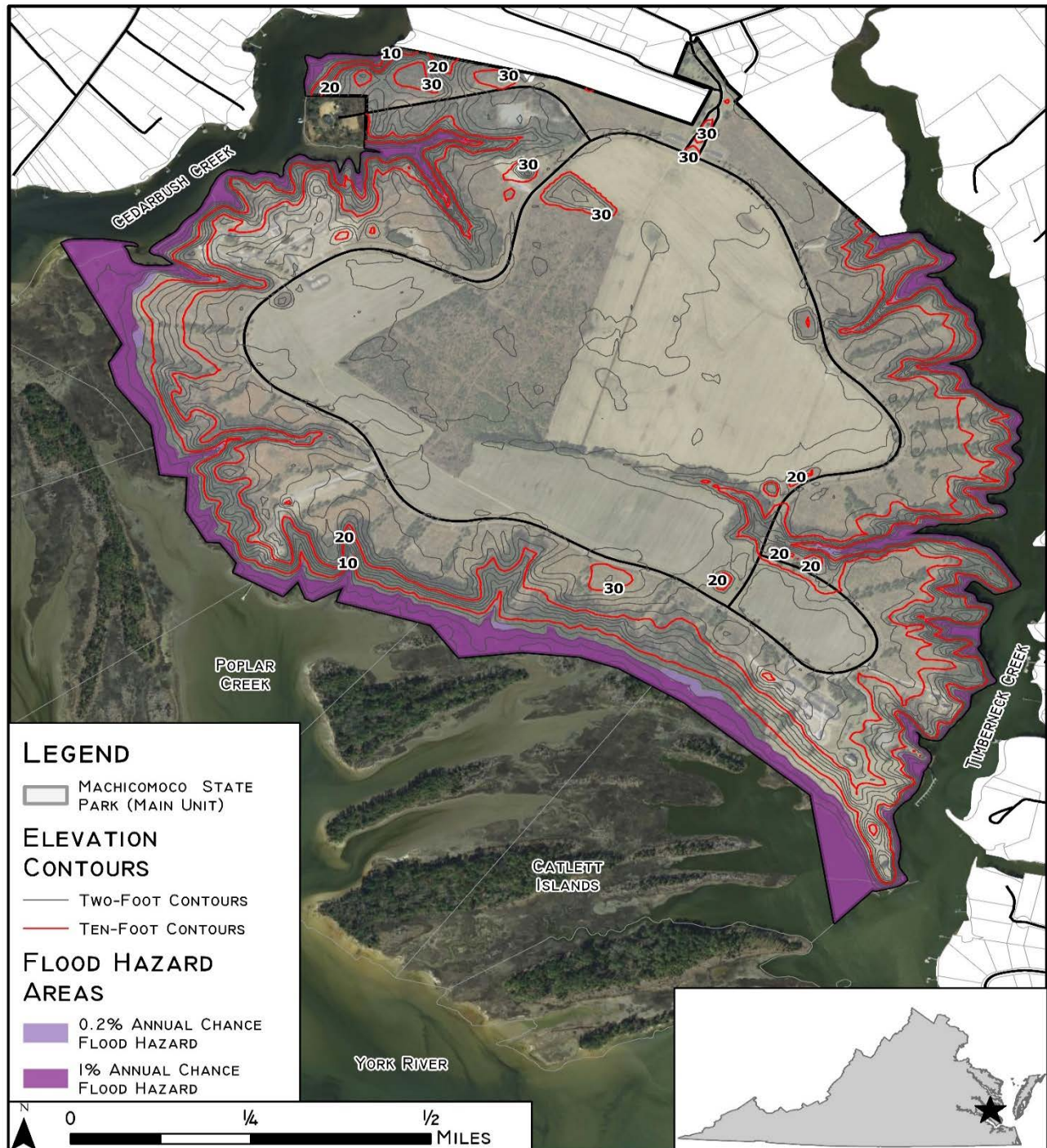


Figure 8 Main Unit Environmental Features

MACHICOMOCO STATE PARK ENVIRONMENTAL FEATURES (WEST UNIT)

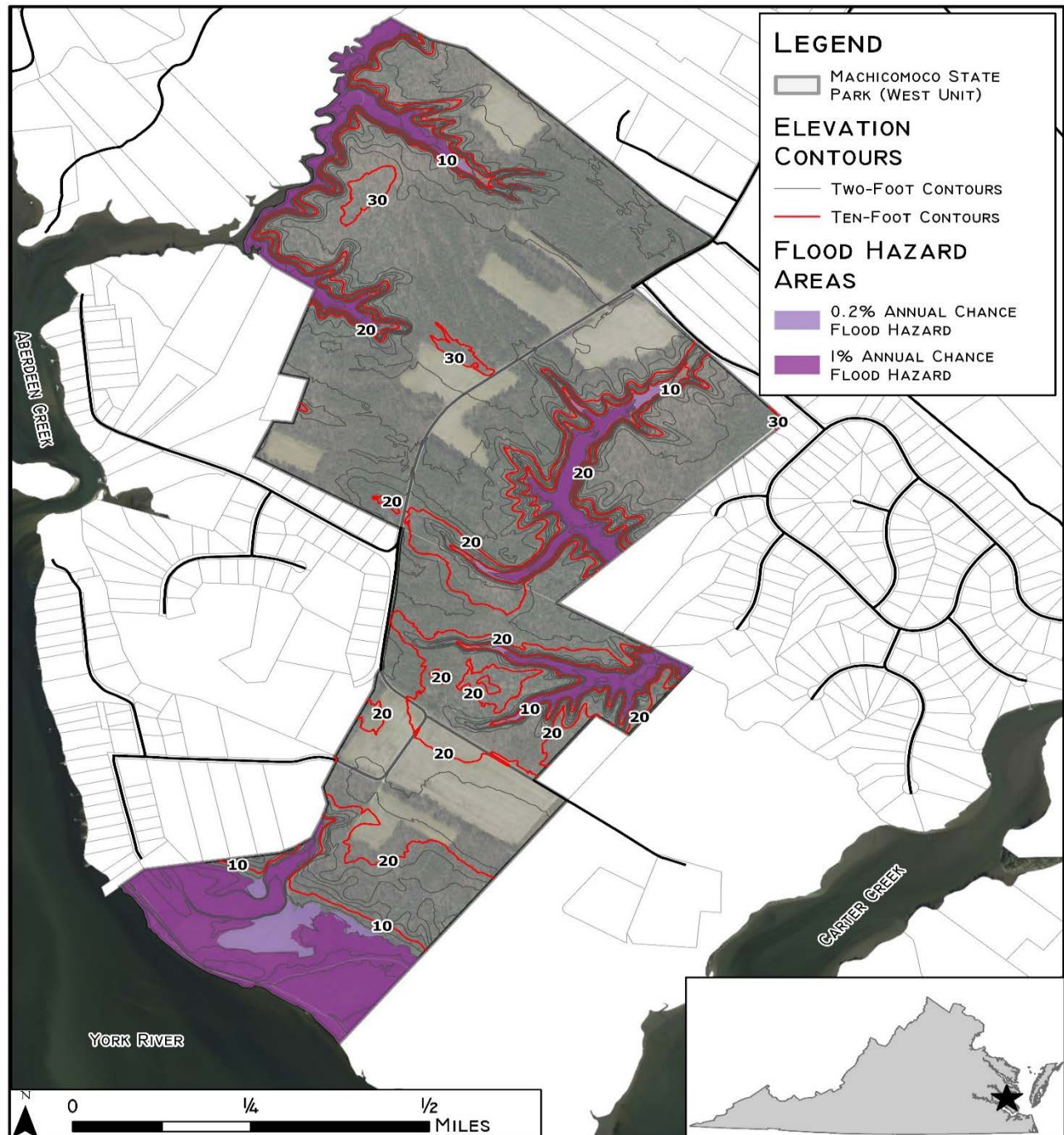


Figure 9 West Unit Environmental Features

MACHICOMOCO STATE PARK WETLANDS (MAIN UNIT)

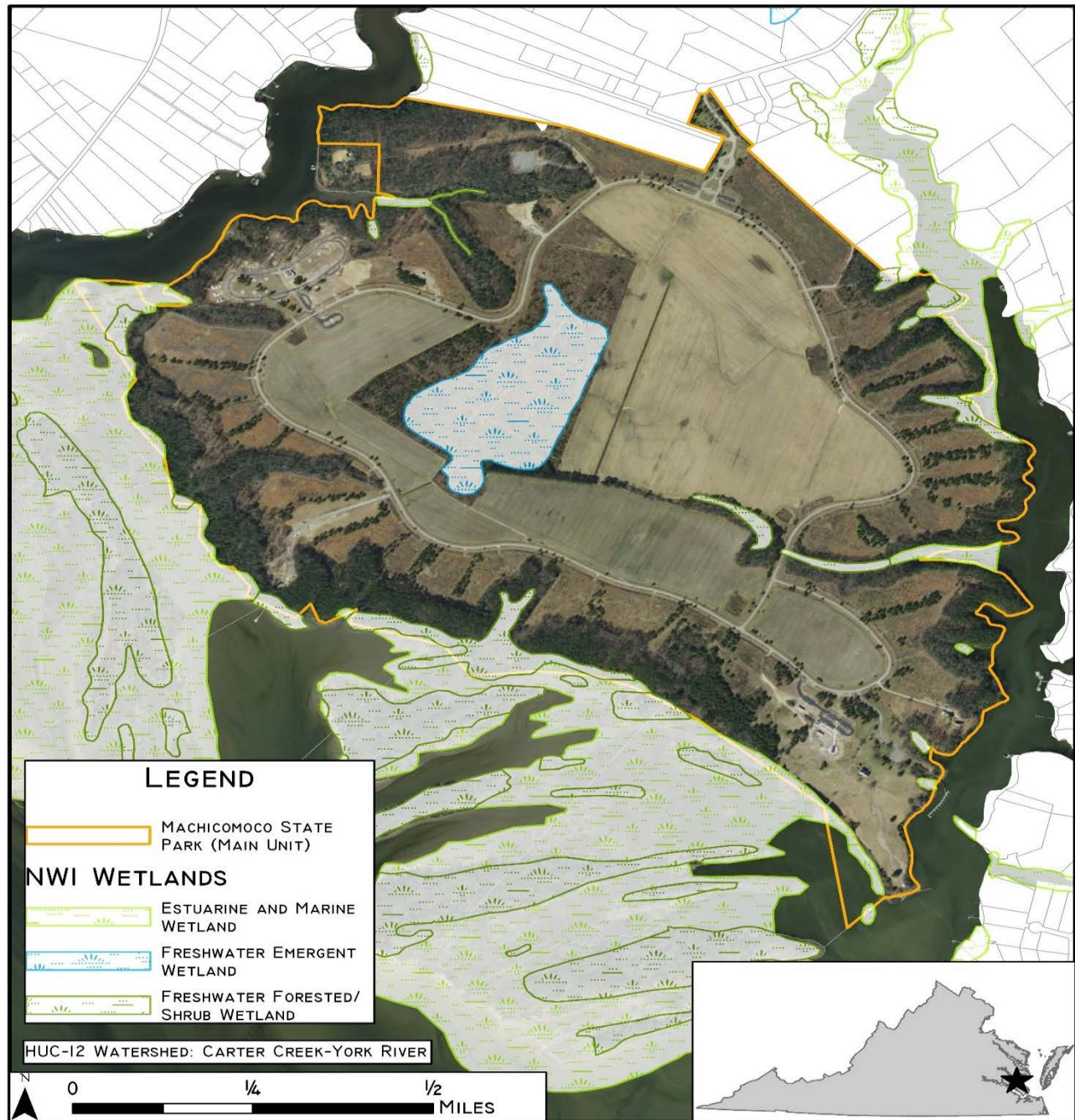


Figure 10 Main Unit Wetlands

MACHICOMOCO STATE PARK WETLANDS (WEST UNIT)

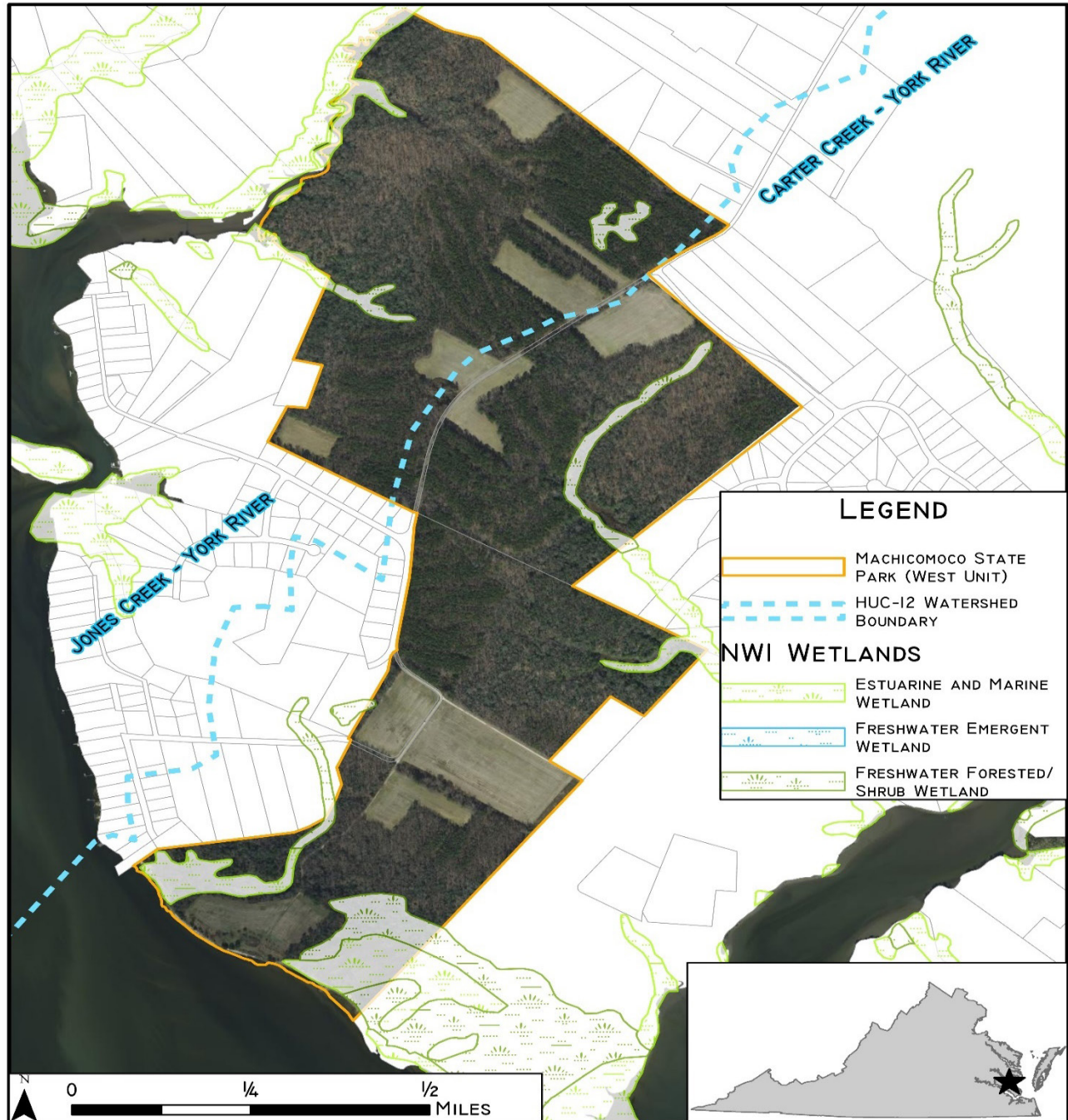


Figure 11 West Unit Wetlands

NATURAL RESOURCES

The two units of Machicomoco State Park contain important elements of natural resources found in this part of Virginia. Some of these resources are unique or sensitive and require specialized management practices. The information in this section was provided by the Resource Management Team of Virginia State Parks applying existing data and experience from field studies. Additional information was provided by the DCR Division of Natural Heritage ecosystem mapping information. Because some of the resource data discussed here is protected (e.g. Element Occurrences) geospatial data is not presented in this master plan. The information is used, however, during internal DCR planning efforts.

Ecosystems

Resource Management efforts within individual Virginia State Parks are based upon the various ecosystems that make up the park and the recommended desired future condition (DFC) of each ecosystem. Often the Virginia State Parks Resource Management Team works with the DCR Division of Natural Heritage (Natural Heritage) to have its parks fully mapped and up to date.

The Main Unit of the park has been developed for farming and residential use over a long period of time. This development extends from the earliest European settlement on the land to the present day. Because of this level of development, Natural Heritage did not map the ecosystems in the Main Unit. Ecosystems in the West Unit have been mapped and are described here. The following is a brief overview of the ecosystems found there:

- **Basic Mesic Forest** – Covering 16 acres of park land, this forest can be found on fertile, mesic, low-elevation habitats only documented in the southern end of the West Unit. It is located on the uplands adjacent to the tidal marsh and is often abundant with exposed natural shell deposits or shell middens. The soils are often weathered from the calcareous, shell-rich deposits found in portions of the Coastal Plain. The typical overstory for this ecosystem is dominated by black walnut (*Juglans nigra*), chinquapin oak (*Quercus muehlenbergii*), sweet gum (*Liquidambar styraciflua*), and tulip poplar (*Liriodendron tulipifera*); the understory/shrub layer is full of abundant blackhaw (*Viburnum prunifolium*), eastern red cedar (*Juniperus virginiana*), northern spicebush (*Lindera benzoin*), and pawpaw (*Asimina triloba*). The herbaceous layer contains many species such as crested coralroot orchid (*Hexalectris spicata*), enchanter's nightshade (*Circaea canadensis*), golden ragwort (*Packera aurea*), mayapple (*Podophyllum peltatum*), point-leaved tick-trefoil (*Hylodesmum glutinosum*), red columbine (*Aquilegia canadensis*), and yellow passionflower (*Passiflora lutea*). It is important to note that the crested coralroot orchid (*H. spicata*) is considered vulnerable (G5/S3) in Virginia, and it is on the watchlist of the DCR Division of Natural Heritage.

The main threats to this ecosystem are deer browse, particularly within the herbaceous layer, and invasive species such as Japanese stiltgrass (*Microstegium vimineum*), wavyleaf basketgrass (*Oplismenus undulatifolius*), and Japanese honeysuckle (*Lonicera japonica*).

- Mesic Mixed Hardwood Forest** – The most common ecosystem type with widespread forest blocks in the West Unit, the Mesic Mixed Hardwood Forest covers 114 acres of park land. Two stands at the park, comprising 77 acres, are Natural Heritage resources and are listed as G5/S5 ecosystems. Forests in this ecosystem type occupy deep-soiled uplands, ravines, lower slopes, and well-drained flatwoods with low to moderate fertility soils. Though all the stands of this ecosystem within the park are recovering from past disturbances, some high-quality areas exist with trees greater than 20 inches in diameter. Some of these species are estimated to be 125-130 years old. The typical overstory for this ecosystem is dominated by American beech (*Fagus grandifolia*), red maple (*Acer rubrum*), tulip poplar (*Liriodendron tulipifera*), and white oak (*Quercus alba*); the understory/shrub layer contains American holly (*Ilex opaca*) and red maple (*A. rubrum*); and the herbaceous layer contains many species such as Christmas Fern (*Polystichum acrostichoides*), New York fern (*Parathelypteris noveboracensis*), partridgeberry (*Mitchella repens*), smooth Solomon's seal (*Polygona-tumbiflorum*), and wild licorice (*Galium circaezans*).

Deer browse, especially in the herbaceous layer, and invasive species such as Japanese stiltgrass (*Microstegium vimineum*) and wavyleaf basketgrass (*Oplismenus undulatifolius*) are the main threats to this ecosystem.

- Coastal Plain/Piedmont Oak-Beech/Heath Forest** – This forest type at Machicomoco comprises a total of 29 acres of park land scattered in the western and eastern extremities of the West Unit. Of those, 26 acres are significant Natural Heritage resources, with mature stands in good to excellent condition (G4/S3). This ecosystem type occurs at the park on short, steep slopes and bluffs bordering ravines and tidal creeks. Soils here are extremely acidic and infertile but hold moisture well. Occasional loblolly pine (*Pinus taeda*) is evident in this community, likely due to past logging disturbances. The typical overstory for this ecosystem is dominated by American beech (*Fagus grandifolia*), chestnut oak (*Quercus montana*), and white oak (*Q. alba*); the understory/shrub layer is dominated by mountain laurel (*Kalmia latifolia*); and the herbaceous layer contains many species such as Christmas fern (*Polystichum acrostichoides*) and partridgeberry (*Mitchella repens*).

Threats to this ecosystem are mainly fire suppression that has led to minimal oak regeneration, and logging disturbance in some stands throughout this ecosystem type.

- Coastal Plain/Piedmont Seepage Swamp** – This ecosystem type, while a small 6-acre portion of the park on the West Unit, is a rare Natural Heritage site (G2/S2). The habitat consists primarily of mucky ravine bottoms saturated by constant groundwater seepage. Sand-bottomed channels wind throughout the swamps and moss-covered logs and hummocks are prevalent between. The soils have a high calcium level due to the shell deposits and lime sand. The 6 acres on this part of the park are high-quality examples of the community. Since they are so rare throughout the state, occurring only in Surry, Isle of Wight, York, James City, and Gloucester Counties, it is important to monitor and protect these stands. The typical overstory for this ecosystem is dominated by green ash (*Fraxinus pennsylvanica*), red maple (*Acer rubrum*), and sweetbay (*Magnolia*

virginiana); Species in the understory and shrub layer are dominated by American hornbeam (*Carpinus caroliniana*), northern spicebush (*Lindera benzoin*), and swamp dogwood (*Cornus foemina*). The herbaceous layer contains many species such as bulbous bittercress (*Cardamine bulbosa*), drooping bulrush (*Scirpus lineatus*), eastern skunk-cabbage (*Symplocarpus foetidus*), golden ragwort (*Packera aurea*), marsh blue violet (*Viola cucullata*), marsh marigold (*Caltha palustris*), and smooth beggarticks (*Bidens laevis*).

The main threats to this ecosystem are deer browse, particularly within the herbaceous layer, invasive species, and canopy decline and death resulting from the presence of the forest pathogen emerald ash borer (*Agrilus planipennis*.)

- **Coastal Plain/Piedmont Bottomland Forest** – The Coastal Plain/Piedmont Bottomland Forest at Machicomoco comprises a total of 11 acres of park land. This ecosystem type is documented within six separate stands across the West Unit, occurring in poorly drained areas along small streams and backswamps along the outer edges of large floodplains. There is a microtopography in these areas of hummock and hollow. The typical overstory for this ecosystem is dominated by red maple (*Acer rubrum*), sweet gum (*Liquidambar styraciflua*), and tulip poplar (*Liriodendron tulipifera*). American beautyberry (*Callicarpa americana*), American holly (*Ilex opaca*), black tupelo (*Nyssa sylvatica*), and northern spicebush (*Lindera benzoin*) dominate the understory/shrub layer. The herbaceous layer contains many species such as cinnamon fern (*Osmundastrum cinnamomeum*), fowl mannagrass (*Glyceria striata*), golden ragwort (*Packera aurea*), hop sedge (*Carex lupulina*), lizard's tail (*Saururus cernuus*), Jack-in-the-pulpit (*Arisaema triphyllum*), shallow sedge (*C. lurida*), white cutgrass (*Leersia virginica*), and yellow-fruited fox sedge (*C. annectens*). Additionally, the shadow witch orchid (*Ponthieva racemose*) is a watchlist species (G5/S3) of particular note in this ecosystem.

The main threats to this ecosystem are invasive species, especially Japanese stiltgrass (*Microstegium vimineum*), Japanese honeysuckle (*Lonicera japonica*), and English ivy (*Hedera helix*).

- **Non-Riverine Flatwood and Swamp** – The Non-Riverine Flatwood and Swamp ecosystem at Machicomoco makes up 9.5 acres of the park. Located in the far southeastern portion of the West Unit, this ecosystem is defined as a deciduous, typically saturated forest in very flat, broad land areas. There is evidence of past human disturbance in this ecosystem, which is seen in the present berms and ditches. The soils are extremely acidic infertile silt or silty-clay loams. This ecosystem type is listed as globally uncommon and state imperiled (G2/S2). While much larger stands exist across the state (e.g. 100 acres or more), it is important to monitor and protect the area from further disturbances. Typically the overstory is dominated by black tupelo (*Nyssa sylvatica*), sweet gum (*Liquidambar styraciflua*), tulip poplar (*Liriodendron tulipifera*), and willow oak (*Quercus phellos*); the understory/shrub layer is dominated by American holly (*Ilex opaca*) and red maple (*Acer rubrum*); and the herbaceous layer contains many species such as broad beech fern (*Phegopteris hexagonoptera*), Jack-in-the-

pulpit (*Arisaema triphyllum*), netted chain fern (*Lorinseria areolata*), royal fern (*Osmunda spectabilis*), slender woodoats (*Chasmanthium laxum*), southern lady fern (*Athyrium asplenoides*), and Virginia chain fern (*Anchistea virginica*).

Sea level rise that could impact species composition, invasive species, especially Japanese stiltgrass (*Microstegium vimineum*), and Japanese honeysuckle (*Lonicera japonica*) are the main threats to this ecosystem.

- **Tidal Shrub Swamp** – This small ecosystem on the West Unit is located on Carter Creek off the York River and as such is subject to tidal flooding. This ecosystem type only makes up a total of 1.4 acres of land at the park but is a unique system worthy of note. The microtopography of this area is highly variable, ranging from large hummocks and hollows to flat areas, and the substrate is a partially decomposed peat with sand or silt. There is no overstory layer here, rather the swamp is dominated by an understory/shrub layer of smooth alder (*Alnus serrulata*) and southern wax myrtle (*Morella cerifera*). The herbaceous layer is composed mainly of false nettle (*Boehmeria cylindrica*), green arrow-
arum (*Peltandra virginica*), and lizard's tail (*Saururus cernuus*).

The main threats to this ecosystem are sea level rise and associated salinity changes that could impact species. Invasive species are also an issue, especially common reed (*Phragmites australis*), marsh dewflower (*Murdannia keisak*) and emerald ash borer (*Agrilus planipennis*.)

- **Tidal Mesohaline/Polyhaline Marsh** – This ecosystem makes up a total of 23 acres of Machicomoco State Park, located primarily in the southern portion of the West Unit as well as along a few tidal inlets. This ecosystem type is often characterized by low biodiversity due to the tidal flux and salinity changes. Soils in this ecosystem are mucky silt to silty coarse fibrous peat with a high organic matter content. This marsh system is dominated by herbaceous species such as big cordgrass (*Spartina cynosuroides*), saltmarsh cordgrass (*S. alterniflora*), and saltmeadow hay (*S. patens*).

Sea level rise and associated salinity changes that could impact species composition are the main threats to this ecosystem. Another issue is invasive species such as common reed (*Phragmites australis*) and marsh dewflower (*Murdannia keisak*).

- **Salt Scrub** – This ecosystem makes up just 1.8 acres of land along the southern edge of the West Unit along the York River. These areas are typically at a higher elevation than the more widespread tidal marshes and, as such, are only subject to irregular flooding. This marsh ecosystem is dominated by herbaceous species such as desert saltgrass (*Distichlis spicata*), saltmarsh cordgrass (*Spartina alterniflora*), saltmeadow hay (*S. patens*), seaside goldenrod (*Solidago sempervirens*), and swamp rose mallow (*Hibiscus moscheutos*).

The main threats to this ecosystem are sea level rise and associated salinity changes that could impact species composition. Invasive species are also an issue, especially common reed (*Phragmites australis*).

Element Occurrences

The DCR Division of Natural Heritage has developed and manages an inventory of rare, threatened, and endangered plant and animal species as well as exemplary natural communities. Collectively these species and communities are referred to as Element Occurrences (EOs). The exact locations of these Element Occurrences are protected information. Their locations are, however, relevant for planning purposes to avoid adverse impacts to sensitive species and ecological communities.

The relevant codes from the NatureServe system (NatureServe, 2025) used by DCR to rank the relative abundance of species, subspecies, and communities both globally and statewide are described below:

- **Global/State Rank:** Critically Imperiled (G1/S1), Imperiled (G2/S2), Vulnerable (G3/S3), Apparently Secure (G4/S4), and Secure (G5/S5).
- **Subspecies Rank:** A “T-rank” following a species’ global rank (“T” followed by a number) represents the rank or status of a subspecies/variety on an identical scale from Critically Imperiled (T1) to Secure (T5).
- **Inexact Rank:** A question mark (“?”) denotes an inexact numeric rank.

Today at Machicomoco State Park, there are no known EO species in either administrative unit. However, there are three EO communities in the West Unit that will need consideration during the planning process, to avoid or minimize disturbance.

- **Northern Coastal Plain/Piedmont Mesic Mixed Hardwood Forest** – Approximately 51 acres in area, this community is ranked as a G5/S5, meaning that it is at very low risk of extirpation in the jurisdiction due to a very extensive range, abundant populations or occurrences, with little to no concern from declines or threats. Currently there are two known locations of this community type within the park, in the northwest and northeast forested portions of the West Unit, with one large block on each side of Aberdeen Creek Road.
- **Northern Coastal Plain/Piedmont Oak – Beech/Heath Forest** – Approximately 22 acres in total area, this community is ranked as a G4/S3. This means that on the global level this community is apparently secure with fairly low risk of extirpation due to an extensive range and/or many populations or occurrences. There is a possible cause for some concern because of recent local declines, threats, or other factors. However, at a state level the S3 rank indicates that the community is vulnerable and at moderate risk of extirpation in the state due to a restricted range, relatively few populations or occurrences, recent and widespread declines, and threats, or other factors. Currently there are six known instances of this community scattered throughout the northern half of the West Unit. Due to their sensitive nature on the state level, development should be minimized or avoided altogether where this EO occurs if possible.
- **Coastal Plain Calcareous Seepage Swamp** – Approximately 7 acres in area, this community is ranked as a G2/S2. This means that at both a global and state level,

this community is imperiled and at high risk of extirpation due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors. Currently there are two known locations of this community type within the park, in the northwest and northeast forested portions of the West Unit, with one small block on each side of Aberdeen Creek Road. Due to the swampy nature of these locations, their relatively small sizes, and the rarity of the community on the global and state levels, development should be avoided altogether where this EO occurs.

Watchlist Species

Watchlist species are uncommon in Virginia but are not scarce enough to merit inclusion in the Division of Natural Heritage's Rare Vascular Plant List .

- Two plant species found in the park in the West Unit are currently considered watchlist species, namely the crested coralroot (*Hexalectris spicata*) and the shadow witch orchid (*Ponthieva racemosa*). Efforts should be made to protect these species and avoid disturbance where possible.



Figure 12 Crested coralroot

Predicted Suitable Habitat

Utilizing species habitat modeling, the DCR Division of Natural Heritage can predict suitable habitat (PSH) areas for rare plants and animals. Currently, there is no known predicted suitable habitat for any rare species at the West Unit, but the waters surrounding the Main Unit, particularly on the northeast border, southern border, and towards the south and along the eastern border with Timberneck Creek, are predicted to be suitable habitat for the Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*).

Ecological Cores

The DCR Division of Natural Heritage utilizes satellite imagery to determine areas throughout the Commonwealth that contain at least 100 acres of undisturbed natural area. These areas, or cores, can include forested areas, marshes, dunes, and beaches. The cores are then assigned an Ecological Integrity Score from C1 to C5 based on factors such as biodiversity, environmental diversity, and water quality benefits. The scores rank as follows: C1-Outstanding; C2-Very High; C3-High; C4-Moderate; C5-General. Ecological cores may have important background information for utilization in planning future development in the park. Four ecological cores are found at Machicomoco State Park, they are listed below.

- Much of the tidal marshes and adjacent woodland on the southern side of the Main Unit are currently included with the Catlett Islands and marshes surrounding Poplar Creek as a C4 core of moderate significance. This core is 474 acres in total, though the majority is found outside of the park's southwestern boundary.

- Most of the northern half of the West Unit is included within two C4 cores of moderate significance, one each on the western and eastern side of Aberdeen Creek Road. Both cores continue onto adjacent properties. These two cores are 254 acres and 209 acres, respectively, with at least half on the West Unit itself.
- The southeast corner of the West Unit is part of a C5 core of general significance which extends onto a neighboring property to the east. This core is 96 acres in area, with slightly over half outside of the park's boundary.

Park Resource Management Issues

The following Resource Management Priorities were identified with the help of the Virginia State Parks District 1 Resource Specialist. These priorities will be addressed as part of long-term projects anticipated to either begin, or be continued, during the next five years.

- **Treating Invasives** – Several invasive species threaten the natural ecosystems at the park. These non-native plant species cause dramatic changes to the biodiversity that normally thrives in the commonwealth, limiting the resources available to native species. Prioritization and tracking of invasive species treatments **are** key to the future of the park's natural resources. Special consideration should be given to the removal of Callery (Bradford) pear (*Pyrus calleryana*).
- **Emerald Ash Borer Treatment** – Emerald ash borer (*Agrilus planipennis*) (EAB) is a small metallic green beetle that was introduced to the U.S. in 2002 in packaging material from Asia. Since its introduction, EAB has decimated ash (*Fraxinus*) forests throughout much of the U.S. and parts of Canada. The beetles live out their larval stages in the inner bark of ash trees, where they do the most damage by feeding on the living tissue of the tree under the bark. Where possible, EAB treatment should be a priority for resource management.
- **Managed Hunts** – Deer grazing is a threat to many of the ecosystems within the Main Unit of the park. The park hosts two small managed hunts over the course of a year. Resource management staff and park staff should consider working to develop a plan that would broaden the scope of these hunts to increase effectiveness.
- **Trail Development** – The District Resource Specialist determined that passive recreation trails should be included in the West Unit. This area of the park is relatively undeveloped as of yet and including recreation opportunities like this will provide an area of interest for this portion of the park.
- **Prescribed Burning** – The longleaf pine plantation at Machicomoco State Park was established by previous ownership in 2008. The site was initially burned and mulched for site preparation, and the seedlings were subsequently planted. In 2010, a chemical aerial release spray was performed to help control competition, and a follow-up understory



Figure 13 Emerald ash borer

burn was conducted in 2014. In the decade since that burn, the longleaf stand has matured significantly and would currently benefit from a combination of mechanical removal of other competing tree species, chemical treatment of invasive species such as Callery pear and Japanese honeysuckle, and routine prescribed burning. According to Machicomoco's Natural Resource Management Plan, prescribed burning should be used on a rotation of every 2 to 5 years during the March to May timeframe. Due to staffing and other constraints, the forest block has not been burned in recent years, but it is a high resource management priority to reintroduce fire to this area soon.

Other Special Resources of Note

- Machicomoco State Park is home to Virginia's native passionflower (*Passiflora incarnata*). The showiness of the passionflower vine, or maypop, is one of its biggest draws. The light purple fringed petals and sepals flow from the center of the flower in wispy strands. Come mid to late summer, the maypop will produce its noteworthy round, green fruits. Colonial accounts from the local area related the use of the vine and its edible fruit by indigenous peoples.
- The park regularly sees visits from the diamond-backed terrapin (*Malaclemys terapin*), a species that has been in considerable decline since the turn of the 20th century due to harvesting for food. Though populations have seen some increase since, they still face threats from crabbing pots, where they get trapped and drown. Diamond-backed terrapins are the only estuarine reptile in the commonwealth of Virginia. The species possesses a nasal salt gland that allows for the filtering out of excess salts in the turtle's bodily fluids. At Machicomoco, these turtles can often be seen in the brackish water along the car-top boat launch boardwalk.



Figure 14 Diamondback terrapin



Figure 15 Northern bobwhite

- Machicomoco State Park is a birdwatcher's paradise with 160 documented bird species at the park. Due to its geographic location along an estuarine part of the York River, many shore and wading birds as well as waterfowl can be found here. Visitors and staff have observed five heron species, four types of duck, osprey, bald eagles, and many more. The park also appears to be a migratory hotspot for many songbirds, including thirteen different types of warblers, as well as flycatchers, tanagers, and orioles. Resident northern bobwhite (*Colinus virginianus*) also call Machicomoco part of their year-round home.

Unique Management Areas

Before coming into DCR's possession, the Main Unit had been owned by a developer who planned a small subdivision there. During the 2008 recession, however, that project came to an abrupt halt, leaving behind 47 empty fields of blocked out housing lots. Although they do not currently provide much natural ecological value to the park, the current early successional habitat within these lots offers a unique opportunity for management techniques not available to other areas. Each of the 47 housing lots have a similar species composition of various grasses, eastern red cedar, and the invasives Callery (Bradford) pear (*Pyrus calleryana*), Japanese honeysuckle (*Lonicera japonica*), English ivy (*Hedera helix*), and Chinese privet (*Ligustrum sinense*). While the land was still owned by the developer, buffers of primarily loblolly pine (*Pinus taeda*) were installed to separate the lots. Moving forward, Virginia State Parks would like to slowly begin converting some of these various lots to either mature, native forests blocks or open, early successional meadows using a combination of mechanical and chemical invasive species control. Other lots may be considered for cabin, lodge, and visitor center development.



Figure 16 Shoreline Stabilization in the Main Unit

Shoreline Needs

A significant portion of the York River shoreline in both administrative units has been, and continues to be, severely eroded. If left unchecked, this will result in loss of land area and habitat. DCR has been in discussion with the Army Corps of Engineers (ACOE) to devise a plan for shoreline stabilization. This project would include both hard and green solutions. Currently there is a proposed plan for the shoreline at the West Unit (US Army Corps of Engineers, 2025). Plans for more work at the Main Unit shoreline may be arranged further in the future.

CULTURAL AND HISTORIC RESOURCES

The cultural resources at Machicomoco tell the story of the land and the people who have occupied it throughout history from the earliest tribes to the settlement by Europeans up to the present time. The locations of these resources are shown in Figures 16 and 17. The exact locations of archaeological resources are obscured to prevent their removal, damage, and, or destruction.

The Main and West Units have been surveyed multiple times over the past 40 years. Some sites on the West Unit were identified and informally surveyed by Virginia Archaeological Research Center. However, most of the cultural resources in both units have been identified and tested by several cultural resource management contract firms. Notwithstanding, it is always considered good practice to perform a new archaeological survey wherever ground disturbance is anticipated on park property regardless of the prior work to confirm complete documentation and preservation of archaeological sites.

Because Virginia's archaeological data is sensitive and protected, the information provided in this master plan is primarily narrative in nature. The precise locations of archaeological sites are recorded and managed by the Virginia Department of Historic Resources (DHR) which limits access to detailed data.

The information presented here is derived from the Machicomoco State Park Cultural Resource Management Areas Summary (Thacker-Gwaltney & McMillan, 2024) which was prepared in 2023 and summarizes information in the park's cultural resources inventory.

Overview of Cultural Resource Management Areas (CRMA)

Both the Main Unit and the West Unit have been divided into Cultural Resource Management Areas (CRMA). The boundaries for the CRMAs are based on several factors. At the Main Unit, the areas are largely based on the Unique Management Areas associated with natural resources management and on whether the area has been tested at Phase I level or not; this alignment will assist with Master Planning and general management of the park. At the West Unit, the CRMAs are largely based on natural topography and based on the intensity in which the area has been archaeologically tested.

It should be noted that neither the Main Unit nor the West Unit have been fully archaeologically tested. This means that just because an area currently does not have an identified archaeological site does not mean there is not one there, it just means no one has looked for one in that location; until that location has been tested, it cannot be written off.

Main Unit Cultural Resource Areas (Figure 16)

- **Area 1** – This area of the park has not been surveyed, however, based on the types of sites found in nearby areas and the rest of the park, it is likely that surveys of this Area 1 would identify small, short-term pre-colonial tribal settlements and procurement sites, and 18th- and 19th-century outbuildings association with the Timberneck Farm.
- **Area 2** – Overall, the predominant and clearest distinction for this area is that it had significant tribal activity during the Middle to Late Woodland periods and was utilized primarily for lithic processing and short-term habitation associated with the other sites

around the property. It is possible that across this area there were small historic dwellings, dating from the 1700s to the 1900s, likely associated with Timberneck Farm and the people who worked and lived there.

The sites in Area 2 were all located via Phase I surveys, so their presence is known but their eligibility for the National Register of Historic Places still needs to be evaluated by further Phase II and III surveys if there is going to be ground disturbance anywhere in the area. However, most of the sites identified in Area 2 were heavily disturbed through logging in the 1980s and likely do not retain integrity.

- **Area 3** – This area of the park has not been surveyed, however, based on the types of sites found in nearby areas and the rest of the park, it is likely that surveys of this Area 3 would identify small, short-term pre-colonial tribal settlements and procurement sites, and 18th- and 19th-century outbuildings association with the Timberneck Farm.

There is also evidence of a Woodland (1200BCE-1600CE) tribal occupation.

- **Area 4** – This area of the Main Unit is dominated by the Timberneck Farmhouse and its surrounding resources. There is archaeological evidence of historic occupancy from the late 1600s to the 1900s featuring all the developmental periods of Timberneck Farm. This area not only has Timberneck House but also the surrounding outbuildings like the extant smokehouse and agricultural resources as well as the Mann-Page and Catlett Family cemeteries. There is a possible indication of a European colonial house located on the Timberneck point on Augustine Herman's 1670 map of Virginia and Maryland that may be related to the occupation of the property by the Mann family.

Area 4 also has several Woodland period tribal sites, most of which are lithic procurement and processing sites and/or small camps likely associated with those of Area 2 and the other tribal occupation of the whole park, particularly the native village site in Area 7.



Figure 17 Catlett Cemetery

Given the highly significant nature of the sites in this area and the location's high potential for more archaeological data, ground disturbance should be avoided. If ground disturbance cannot be avoided, any development should be accompanied by further archaeological testing.

- **Area 5** – This area of the park has not been surveyed, however, based on the types of sites found in nearby areas and the rest of the park, it is likely that surveys of this Area 5 would identify additional pre-colonial tribal sites and those associated with the 18th- and 19th-century occupations at Timberneck Farm.

MACHICOMOCO STATE PARK CULTURAL RESOURCE AREAS (MAIN UNIT)

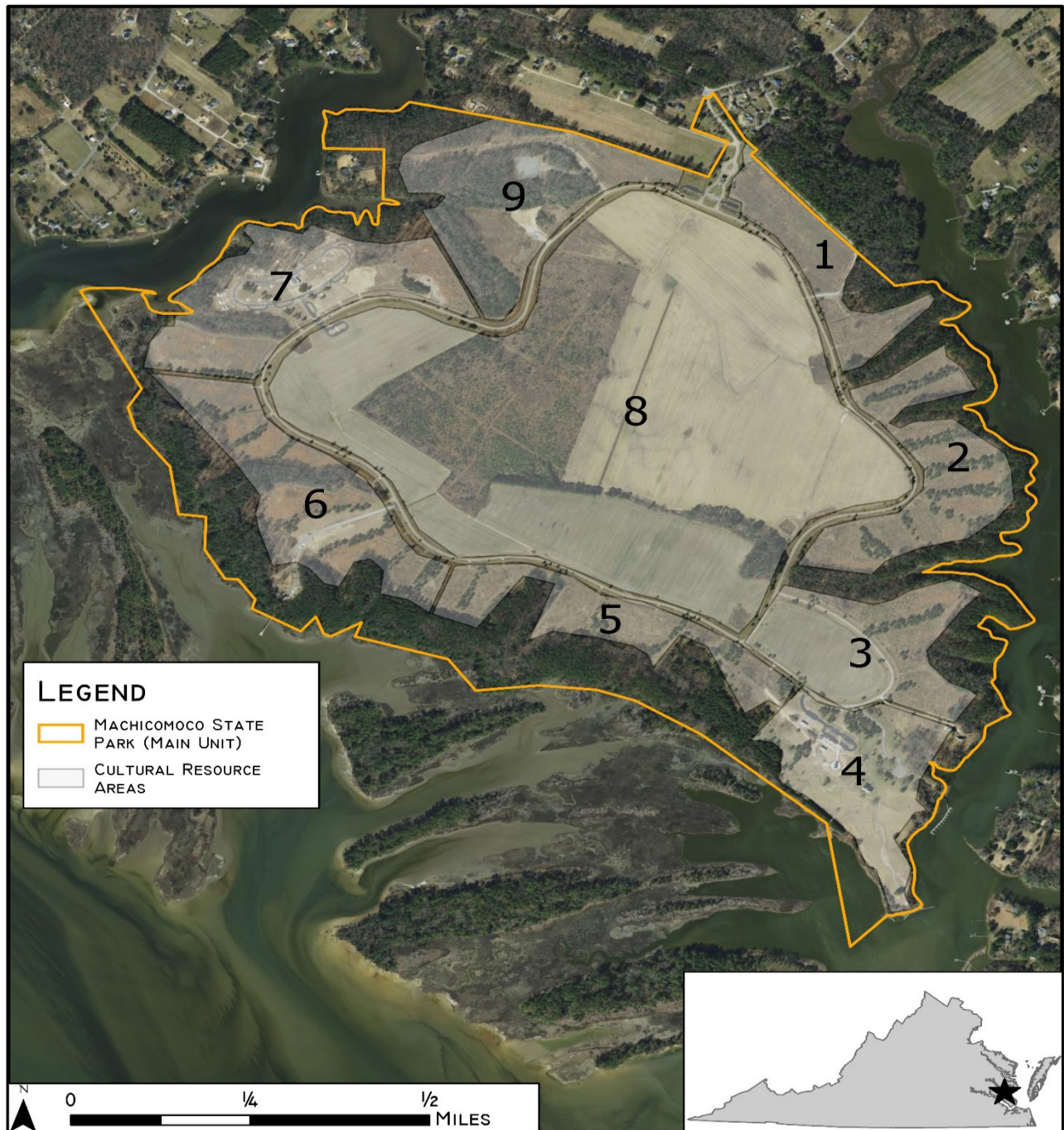


Figure 18 Main Unit Cultural Resource Areas

- **Area 6** – This area is a large tract of the park that has scattered archaeological sites mostly consisting of Woodland era (1200 BCE – 1600 CE) tribal lithic procurement and processing sites as well as one or more historic structures from the 1800s. Resources in this indicates that tribes likely had small, short-term camps or tool processing centers around the area that are most likely connected to the large tribal village site in Area 7. The primary historic use of the area seems to be related to a small domestic structure that was occupied for a short period of time in the 19th century.

If ground disturbance cannot be avoided, any development should be accompanied by further archaeological testing.

- **Area 7** – This area has a high density of sites dominated by the Cedarbush Creek site, which is a large tribal village/town with many shell middens and smaller sites associated with it scattered throughout the area. There is also evidence of 17th-, 18th-, and 19th-century historic domestic structures in Area 7. The Woodland period tribal village at Cedarbush Creek is likely the central hub through which the rest of the Native Woodland era sites in the park are connected.

The historic components of Area 7 are likely related to the Timberneck plantation landscape. Some of the sites were tested at Phase II and one site was partially tested at the Phase III level. Any ground disturbance in the area should be accompanied by further surveys.

- **Area 8** – This area of the park has not been surveyed, however, based on the types of sites found in nearby areas and the rest of the park, it is likely that surveys of this Area 8 would identify additional sites. Since this area is the large central part of the park, it is close to all the other areas and therefore has the potential to have several different site types. Phase I testing is recommended prior to any development of this area.
- **Area 9** – This area of the park has not been surveyed, however, based on the types of sites found in nearby areas and the rest of the park, it is likely that surveys of this Area 9 would identify additional sites.

West Unit Cultural Resource Areas – Figure 17

The West Unit has been surveyed many times over the past 40 years, for both mitigation work and for research; however, the West Unit has not been tested nearly as much as the Main Unit and therefore far less is known about the sites. Additional testing is recommended in any place proposed for development and ground disturbance.

- **Area 1** – Area 1 contains three archaeological sites. These sites have not been intensively tested, but appear to be largely Woodland era occupations, with smaller Archaic and colonial period components. These sites are all located directly on the river's shore. The most commonly identified artifact type in this area is oyster shell, with smaller quantities of tribal ceramic, and small amounts of colonial era brick.
- **Area 2** – The fields located in Area 2 have been tested at the Phase I level through pedestrian surveys and through shovel test pit surveys revealing three archaeological sites. These sites all retain integrity and are recommended for additional testing prior to any ground disturbance. This area is dominated by 18th-century artifacts, likely related to sites associated with the Rosewell Plantation.
- **Area 3** – Area 3 is characterized by wooded areas that have been logged in the past. This area is likely disturbed, but site integrity has not been evaluated at this time. Two sites have been identified. One site is the remains of an undated sawmill with evidence of recent use. The other is a historic trash scatter, likely related to the Rosewell Plantation landscape.
- **Area 4** – Area 4 is largely wooded with a few open fields. Large logging disturbances have greatly harmed the research potential of this area, but additional testing would be needed to assess its archaeological integrity. It is likely that further surveys would locate more sites of a similar nature to those already discussed.

MACHICOMOCO STATE PARK CULTURAL RESOURCE AREAS (WEST UNIT)

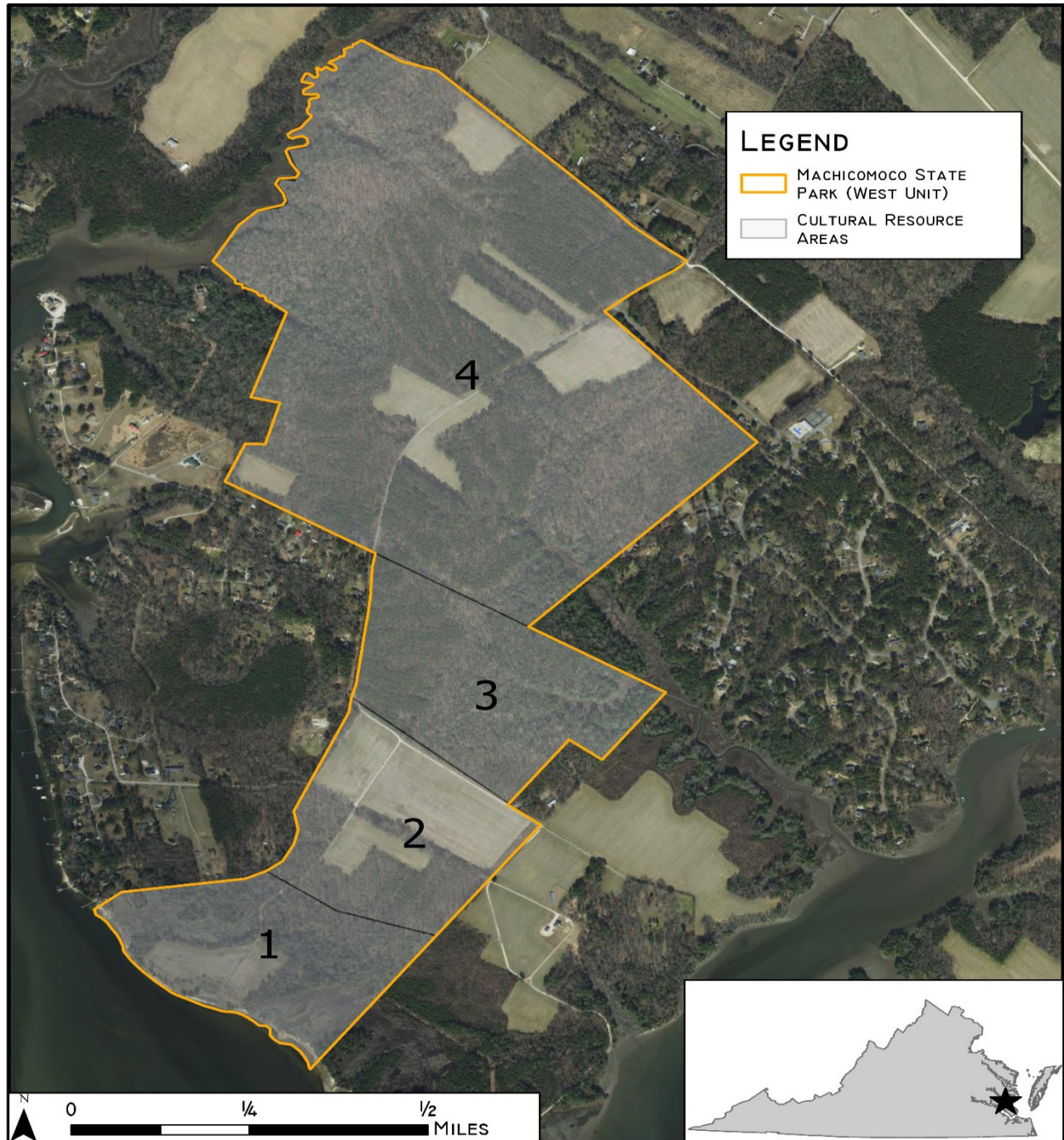


Figure 19 West Unit Cultural Resource Areas

PHYSICAL RESOURCES

Buildings, structures, and other physical resources at Machicomoco State Park are concentrated in the Main Unit. The West Unit is not open to the public yet and currently contains no physical resources. (Figure 22.)

Day Use Areas

The day use facilities include a boardwalk and boat slips (Figure 18) that were constructed in approximately 2008 before the park was formed. They were intended to be part of the proposed residential development. Today, they are the only spot in the park where visitors can fish – with the required saltwater fishing license.

An important feature of the park is the interpretive area in the southeast part of the Main Unit. This area was developed as part of the mitigation for the Dominion Energy project impacts to the Jamestown Island-Hog Island-Captain John Smith Trail Historic District. (Virginia Electric and Power Company, Virginia State Historic Preservation Office, U.S. Army Corps of Engineers, and The Advisory Council on Historic Preservation, 2017) The interpretation of the history of tribes that lived on and used these lands includes an open-air pavilion rendition of a yehakin (Algonquin term for longhouse structure). This pavilion (Figure 19) contains interpretive signage and a timeline providing information about the culture, landscape, and movement of the Virginia native tribes. Another aspect of the interpretive area is the stone map (Figure 20). Completed in 2020, it is a raised topographic map of the area and names significant tribes and locations.



Figure 20 Boat Slips w/Boardwalk



Figure 21 Yehakin Pavilion

The symbols on the map correspond to the interpretive signage in the yehakin. Other elements in the interpretive area include a boardwalk with Algonquin language plaques and views to the Catlett Islands, a picnic shelter, and rest rooms. (Virginia Department of Conservation and Recreation, 2017) (Nelson Byrd Wolz Landscape Architects, 2018) (Virginia Department of Conservation and Recreation, 2025)

The Timberneck House is also an important facility for the interpretation of the history of this land. Originally constructed by the Catlett family as a residence in 1797, it is currently being renovated by the Fairfield Foundation to become an exhibit space. The area around the house also includes two cemeteries and outbuildings. (Fairfield Foundation, 2025)

There are a little over 6 miles of trails in the Main Unit. The main loop around the West Unit follows the loop road and is paved. Hiking trails along the southern part of the unit access the forests along the York River and are popular with birders and other nature enthusiasts. These are unpaved, natural surface trails.

A cartop boat launch was completed in 2020 and provides an opportunity to launch kayaks and canoes in the river. It is accessed by a driveway off the main loop road. There is also a toilet facility available here that has connection to the hiking trail.



Figure 22 Stone Map

Other day-use facilities around the unit are two picnic shelters, an outdoor classroom, and an outdoor stage built by Eagle Scouts in 2022.

Overnight Facilities

The campgrounds, located off the loop road in the western part of the unit, were constructed in 2020 and are the only overnight facilities at the park. There are 31 sites including 1 host site and 3 yurts. Water and electricity are supplied to 13 sites and 14 are tent pads. The campground includes a bathhouse, water, supplied by a well, and septic system.

Staff and Management Facilities



Figure 23 Park Office/Entrance Building

The entrance building was originally built in 2007 by the housing developer as the gate house to the community. Currently it is being used as office space, gift shop, and welcome center. This is the location where campers check in and day-users pay the parking fee.

The ranger residence was built in 1981 as a private residence; it is the current residence of the park manager. The kitchen and laundry were renovated in 2023. The accompanying garage serves as a maintenance shop. A carport and two conex boxes are also used for equipment storage. The building was renovated in 2021 with new windows, lighting, work benches, and a new rear door.

A maintenance area has been designated for a new maintenance shop to include 3 bays, storage, pole barn, and offices for maintenance and housekeeping.

MACHICOMOCO STATE PARK PHYSICAL RESOURCES (MAIN UNIT)

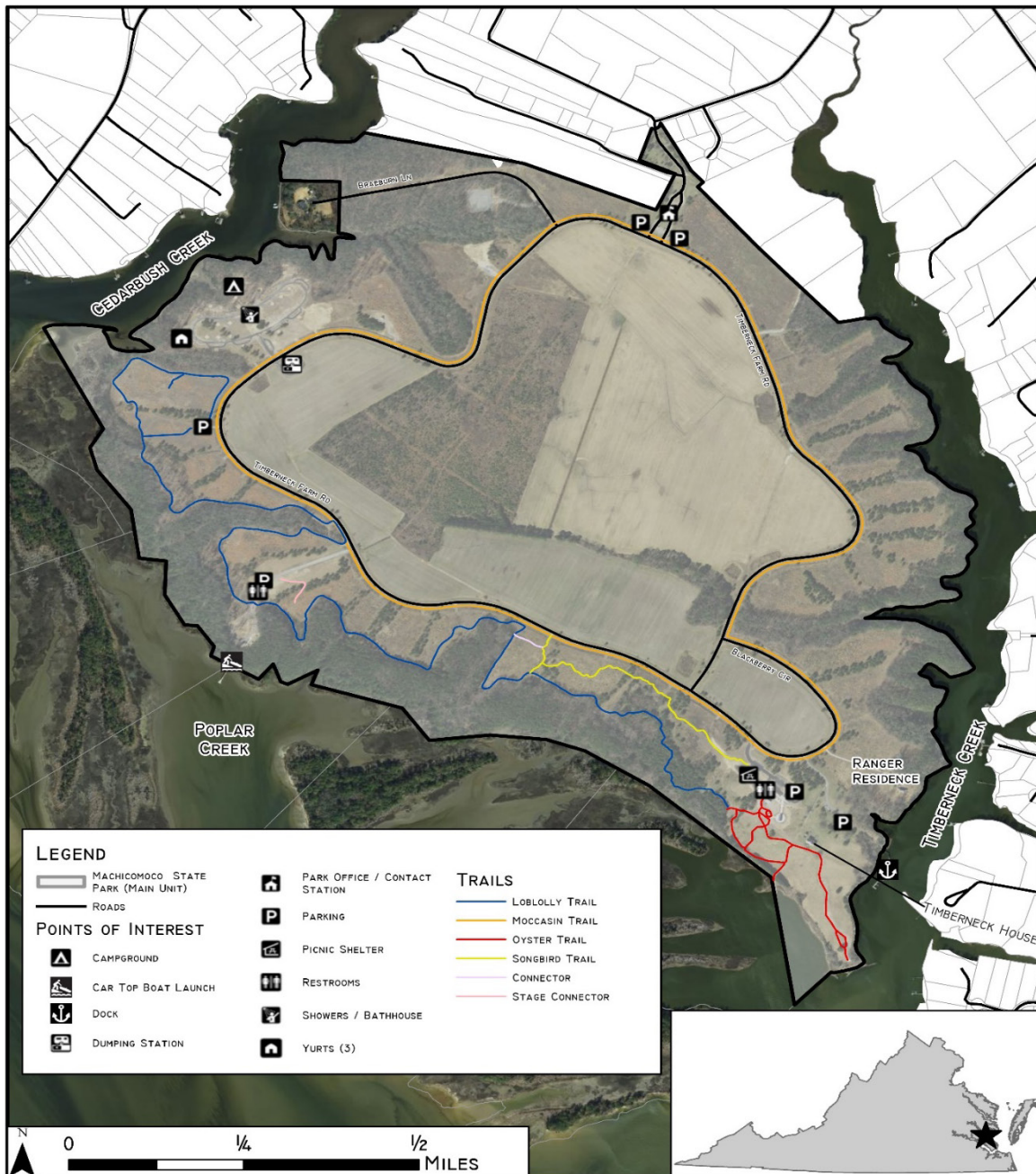


Figure 24 Main Unit Physical Resources



Figure 25 Boardwalk and Canoe Launch

VISITOR EXPERIENCE

INTRODUCTION

The primary purpose of the Visitor Experience section is to define the following as a solid foundation for the master plan as well as future interpretive efforts of the park.

- Audience Types
- Visitor Objectives
- Park Purpose
- Themes and Subthemes
- Essential Experiences
- Experience Areas
- Future Visitor Needs

These topics were initially discussed and developed in a March 2024 Visitor Experience Workshop with the Master Plan Team. Further refinement came with additional input from DCR leadership.

The park will consist of two administrative units under the unified name of Machicomoco State Park. The former Middle Peninsula State Park will be known as the West Unit of Machicomoco State Park. The area currently called Machicomoco State Park will be referred to as the Main Unit.

AUDIENCE TYPES

Staff first listed out the wide variety of audiences that routinely utilize the park, then grouped the audiences into categories based on similar characteristics, and ended with a discussion of each group's wants, needs, and expectations when visiting Machicomoco State Park. The following audiences were identified:

- Anglers
- Bicyclists
- Birders
- Canoers
- Event Visitors
- Families (Overnight and Day Use)
- Herpetology Fans
- Hikers
- History and Culture Lovers
- Homeschool Groups
- Native Tribal Citizens
- Retirees
- Scout Groups
- School Groups
- Locals
- Kayakers
- Walkers
- Water Enthusiasts
- Wildlife Enthusiasts

VISITOR WANTS, NEEDS AND EXPECTATIONS

These identified audiences can be further grouped according to their key wants, needs, and expectations at the park. While there are individual visitors that may fall within multiple groups, the following five groups capture most audiences in one or more ways.

Curriculum-based Users:

- **Included Audiences** – Homeschool Groups, Scout Groups, School Groups
- **Wants** – These users desire curriculum-based programs or activities provided by the park that are in line with the Virginia Standards of Learning, commonly referred to as SOL. These visitors come specifically to access and learn about the diverse natural and cultural resources that they can find in the park. They desire immersive experiences with accurate, balanced interpretation led by staff interpreters or in the form of signage and exhibits. In the case of Boy and Girl Scout Groups, they also want opportunities to support the park through small, hands-on projects.
- **Needs** – These visitors need facilities that can handle large group sizes, with enough space for their planned activities at the park. They often picnic and thus need picnic shelters, picnic tables or flat, dry, open lawns where they can spread out towels or blankets. Additionally, since these visitors typically arrive in large groups, they need places to park a multitude of vehicles, or that are large enough to park and maneuver school buses. They are also looking for affordable opportunities at low or no cost, with

pre-trip engagement and post-trip follow-up. Finally, there is also a need for highly skilled interpretive staff due to the complex nature of the natural and historic resources at the park.

- **Expectations** – These users desire safe and clean facilities that are appropriate for use by children of all ages and differing abilities. They expect access for hydration and restrooms at more than one location in the park, as well as other basic comfort needs. Well-maintained trails and wayfinding at the park are critical for this group to avoid lost child situations. Similarly, a public safety presence is important, especially if there is a need to seek out a lost child in the park. While numerically the primary make-up of these groups is typically children or teenagers, these groups are typically led by a teacher or Scout Master that provides oversight and guidance to the group. This leader typically requests advanced information from the State Parks website or directly from staff or park volunteers, which also provide added value to the group's visits. A primary contact "point person" at the park is often expected to assist with planning and executing their visit. Finally, these groups often bring petty cash for spending in a gift shop on snacks or exciting merchandise offerings.

History and Culture Enthusiasts:

- **Included Audiences** – Event Visitors, History and Culture Lovers
- **Wants** – These enthusiasts typically come to Machicomoco to see cultural and historic resources, to learn, and get information about what they are seeing. Accurate, balanced historical interpretation is particularly important to these visitors. Many are content to be able to observe resources and read interpretive signs, panels and other displays in quiet solitude, while others want staff-led immersive experiences.
- **Needs** – Typically these enthusiasts desire a wide variety of physical infrastructure, including interpretive signs, panels and other displays, as well as well-designed facilities, that enable learning-based activities. Interaction with engaged, knowledgeable staff is often needed to facilitate the interpretation of cultural and historic resources. This group often seeks out opportunities for a quiet chance to read and reflect away from crowds, which should be reflected in park design. Additionally, after this group has learned what they desire at the park, they often desire information regarding where they can continue to learn and build upon what they saw and heard at the park.
- **Expectations** – The number one thing that these guests expect is high-quality interpretive information in a diversity of forms. More generically, these users expect safe and clean facilities, restrooms, hydration stations, and a public safety presence. They expect well-maintained trails and wayfinding at the park that will guide them to the historic, cultural and interpretive resources that they want to visit. As this group is typically full of readers, advanced information on websites (pre-visit) is critical for them to prepare their trip. This pre-arrival information can then be further enhanced by knowledgeable and engaging staff, or volunteers. Exciting merchandise offerings, especially relevant books, may add to their experience by providing take-home memories.

Tribal Citizens:

- **Included Audiences** – Native Tribal Citizens.
- **Wants** – Tribal citizens, and the nations that they represent, want Machicomoco visitors to know that they still exist, and that they have stories, customs and history to share in the present day that can help shape a collective future. They also want people to understand the diversity between tribes; each has their own unique culture, history and stories that they desire to share from their own perspective, and in their own voice, in partnership with the park. A representation of various language groups has also been expressed (e.g. Algonquin, Iroquoian, Siouan).
- **Needs** – Tribal citizens, and the nations that they represent, need consultation in partnership with the park and the greater Department of Conservation and Recreation, on issues related to cultural and historic resources at the park, including their interpretation. They often need an understanding of park operational standards, and what can and cannot be done on site in the long run. In terms of development needs, tribal citizens often desire to utilize the park for events, and thus need adequate space and facilities, including meeting space, restrooms, and parking. They also may desire overnight facilities to meet and gather on occasion. Finally, they need trustworthy, transparent park staff that actively partner to tell their story, and direct park visitors to their cultural centers and museums to learn more (where appropriate).
- **Expectations** – Tribal citizens attending the park have similar expectations to other guests, such as safe and clean facilities, accurate wayfinding and interpretive elements, and engaged staff. More broadly, they expect ongoing consultation and transparency in the process of the development and interpretation of the park from now and into the future.



Figure 26 Yehakin and Interpretive Area

Outdoor Recreation Enthusiasts:

- **Included Audiences** – Anglers, Bikers, Birders, Canoers, Families (Day Use), Herpetology Fans, Hikers, Retirees, Locals, Kayakers, Walkers, Water Enthusiasts, Wildlife Enthusiasts
- **Wants** – This diverse group of enthusiasts typically come to the park to explore and enjoy the plethora of natural resources, on the land and water. Depending on the level of adventure they are seeking, they want sidewalks, trails, and water access, all to provide quality experiences. Many of these users want to enjoy their visit along with a small group of friends or family members, whereas others value the peace, quiet and serenity of a solo adventure.

- **Needs** – These visitors need quality facilities that enable the activity that they are pursuing, i.e. trails, to meet their abilities, overlooks, viewpoints, benches, interpretive exhibits, and signs. While many bring their own equipment to the park, others may need equipment such as kayaks or bikes for rent in addition to the facilities where these may be utilized. Additionally, a subset of these outdoor enthusiasts may need specific events or programs to provide them encouragement in “new” adventures such as kayaking. Assuming that they have the physical abilities, this group typically enjoys visiting areas that are untouched by development where they can immerse themselves in nature and are willing to walk there. They also typically have a strong outdoor ethic and need to see high quality habitat and associated wildlife, meaning that they value the conservation practices and resource management efforts put into place by park staff.
- **Expectations** – As with many of the other groups, these users expect safe and clean facilities, restrooms, hydration stations, and a public safety presence. They expect well-maintained trails and wayfinding at the park that will help facilitate a safe, enjoyable trip. Advanced information on website (pre-visit) is critical for them to prepare their trip. This pre-arrival information can then be further enhanced by knowledgeable and engaging staff, or volunteers. Exciting merchandise offerings, especially with scenic or wildlife themes, may add to their experience by providing take-home memories.

Overnight Users:

- **Included Audiences** – Families (Overnight)
- **Wants** – Overnight family visitors typically like their own private spaces where they can enjoy a vacation in relative peace and quiet. They desire separation and privacy from other campers, when possible, as well as shade (especially for tent campers). Amenities such as electricity and water are increasingly popular for this group, even for families that are tent or yurt camping. Many also desire Wi-Fi internet to maintain connectivity even when away from home or work. Clean bathhouse facilities with modern design standards, hot water, showers and flush toilets are a must. In addition to their camping activities, families often include children and desire corresponding activities throughout the park such as trails, exhibits and a playground.
- **Needs** – An intuitive, reliable reservation system is critical for this group, as is clear and abundant pre-arrival information. Upon arrival at the park, this group also needs a clear place to check in and is also the most likely to seek out resources that were forgotten at home, i.e. camp store supplies such as fire-starters, flashlights, sunscreen, etc. Since visitors that stay multiple nights may desire to go off site and explore the local area, they often need more information about the local area in comparison to day users. They also need a playground, programs, etc., to address the children’s needs.
- **Expectations** – As with many of the other groups, these users expect safe and clean facilities, restrooms, hydration stations, and a public safety presence. In particular, safe and clean campsites, including flat RV sites and well-drained tent sites, and a bathhouse are critical for this group. Increasingly, campers also expect cellular service. These users also expect a smooth check-in, access to firewood, a firepit, engaged camp host and friendly, interactive staff.

PARK PURPOSE

“Machicomoco State Park, recognized as a special meeting place by the Virginia Indian Tribes, seeks to understand and share the intertwined history, culture, and stories of indigenous peoples, Europeans, and enslaved Africans, ensuring their persistence into a collective future.”

THEMES AND SUBTHEMES

Machicomoco’s Main Unit Theme

“Machicomoco features the culture and stories of the indigenous peoples who first called this land home, later intertwined with Europeans and enslaved Africans that each left their mark on the landscape’s rich soils, water-ways, and abundant wildlife.”

Main Unit Subthemes:

- Indigenous culture and history,
- European plantations and farming, including the Timberneck House,
- Agricultural history,
- Enslavement of Africans for plantation labor,
- Interpretation of the dynamics and interactions among the various types of inhabitants,
- Diverse ecosystems from wetlands to upland longleaf pine forests,
- Abundant birdlife,
- Unique species such as the northern bobwhite quail and diamond-backed terrapin,
- Invasive species awareness,
- Saltwater intrusion and the “ghost islands”,
- Longleaf pine restoration.

Machicomoco’s West Unit Theme

“On the northern shore of the York River, the patchwork landscape of the West Unit features continual cycles of disturbance and renewal of the region’s rich natural resources.”

West Unit Subthemes:

- The value of wetlands,
- Shoreline erosion and protection,
- Diverse ecosystems from marches to seepage swamps to upland hardwood forests,
- Invasive species awareness,
- Rosewell ruins.

ESSENTIAL EXPERIENCES

Essential experiences are the most unique opportunities at the park that truly allow the guest to get a full experience of all that Machicomoco has to offer. They are opportunities for visitors to immerse themselves in the park, its resources and stories. The following essential experiences are primarily focused on the Main Unit of Machicomoco State Park:

Interpretive Area Experience – Visitors should visit the Interpretive Area of the park and immerse themselves in stories of Indigenous culture. They should start at the oyster midden, walk the timeline, observe the native wildflowers and materials (i.e. part of the story), view the exhibits in the modern rendition of a yehakin, and view the location stone of key areas in the region of Tsenacommacah. Afterwards, if time and abilities permit, they should walk down to the interpretive boardwalk with language interpretation between Algonquin and English.

Timberneck House Experience – Visitors should tour the Timberneck House and see restoration in action while they learn about this historic home on the National Register of Historic Places. They may observe historic construction, hear about the Catlett family and their legacy, learn about 19th Century domestic life, as well as the interwoven history of farming and enslavement. Afterwards, visitors can enjoy the best sunset in the park by sitting in the chairs under the oak, immersed in the beautiful landscape overlooking the Catlett Islands and York River.

Cartop Boat Launch Road Experience – Starting at the cartop boat launch turnoff from the main loop, visitors should experience a series of diverse, changing habitats from active agriculture and old fields to hardwood and pine forests, and on to marshes and open water. This experience provides a transect of ecosystems with a wide diversity of associated birdlife that will bring a smile to all nature enthusiasts.

Experience the Waters Around Machicomoco – Visitors should enjoy a paddle around the Catlett Islands. Though the islands themselves are protected and off limits, paddlers can still enjoy abundant habitats and wildlife including waterfowl, otters, eagles, osprey, turtles, terrapins, etc. They should start their adventure by launching a kayak at the cartop boat launch. From there, they can enjoy the quiet, protected marsh habitats, or float further out to see the York River.

The Campground Experience – Visitors should come enjoy an overnight visit with great opportunities for stargazing, taking in the sounds of the night, viewing the pollinator field campground in all its glory, and observing wildlife interactions.

Experience Easy Access to Unimpaired Natural Areas – Visitors should enjoy a relaxing drive, bike or walk along the Loop Trail or Forest Trail, viewing unimpaired natural areas with limited development for peaceful views, enjoyment and periodic wildlife sightings.

The following essential experiences are primarily focused on the West Unit of Machicomoco State Park:

North River and Associated Marsh Views – Visitors should walk to the scenic York River, observe diverse tidal marshes, sit and enjoy the landscape, all while enjoying low impact recreational opportunities (e.g. picnicking and fishing).

Immersive Passive Recreation – Visitors should immerse themselves in the wide diversity of upland and lowland habitats at the West Unit by hiking on minimally developed and remote trails, observing wildlife and enjoying peace and quiet.

EXPERIENCE AREAS

The Experience Areas of a state park are portions of the park with distinct characteristics, resources, and landscapes. These divisions also have corresponding stories and interpretive values. Once the essential experiences were defined, the experience areas for both units were mapped. The discussion included each area's character, audiences, current and future needs in preparation for the Machicomoco Master Plan Needs Assessment.

The Experience Areas were defined as follows for the Main Unit, and have been listed in a relatively clockwise loop starting with the Arrival Corridor (Figure 24):

Arrival Corridor:

Audiences – All.

Current Structures – Gatehouse.

Future Development Needs – Visitors will need orientation and wayfinding signage, a welcoming view that adequately represents native meadows, and adequate parking (including ADA). The gatehouse will be remodeled to provide better entry and information services and more staff office space.

Interpretive Opportunities – This area of the park will provide visitors with orientation, as well as an introduction to the park's theme and mission. Turning left behind the gatehouse will lead visitors towards most of the day use activities, whereas turning right will lead visitors to the campground. Either way, visitors will all be introduced to the unique natural resources at the park as they are met with the sights and sounds of a beautiful wildflower meadow, with associated wildlife, just behind the gatehouse in the arrival corridor. While additional meadows will be developed in time throughout the park as time and funding allows (as described later), this entry piece is the top priority.

Potential Capital Development Area #1:

Audiences – All.

Current Structures – None.

Future Development Needs – A visitor center including public restrooms, hydration opportunities, meeting and education space, exhibit space, parking (including ADA), and storage is a top priority here. Staff offices should be included yet separated from the public facing parts of the facility, i.e. different entrance and/or different story of the building and include adequate storage space for routing operations and interpretive work at the park. This visitor center will be located within sight of the arrival corridor, optimally, and would overlook the eventual meadows at the center of the park. Short trails may provide an overlook of Timberneck Creek, but due to development across the creek it may be best to have the visitor center design (e.g. windows) focused on the internal part of the park. Further southeast in this potential development area, an Outdoor Classroom and Education Area would provide additional day use and interpretive opportunities. Finally, the southernmost end of this potential development area would be the most logical location for the placement of 10 modern cabins and/or 1 full-size lodge, tucked away out of the sight lines of day use visitors with a new in-and-out or loop road for access, plus associated utilities.

Interpretive Opportunities – The future visitor center will complement yet not compete with the Interpretive Area, which provides and will continue to provide the key essential experiences in the park. Instead, the visitor center will have rotating exhibits and the opportunity for tribes to tell their own stories through interactive, digital displays. It can also provide interpretation for the native ecosystems found throughout the park, from meadows to marshes to longleaf pine forests, as well as the species that call these areas home, especially since natural resource interpretation is currently underrepresented throughout the park.

Service Area #1:

Audiences – None, Staff Only.

Current Structures – Ranger residence (old home) with a garage currently being utilized as a Maintenance Area.

Future Development Needs – None.

Interpretive Opportunities – None.

Interpretive Area:

Audiences – All, but with a focus on Native Tribal Citizens as well as History and Culture Enthusiasts.

Current Structures – Timberneck House, boat slips, modern yehakin, interpretive exhibits, two picnic shelters, one comfort station, parking, and trails.

Future Development Needs – For the most part, this area of the park is fully developed. The main need is additional parking, particularly for special events. Currently a mowed field is utilized just west of the picnic shelters; this area could be targeted for additional, permanent parking. Permeable parking may be an option here.

Interpretive Opportunities – This area is largely built out with interpretive experiences and should remain focused upon Indigenous history and culture first and foremost, followed by the Colonial/European story at the Timberneck House, and associated stories of agriculture and enslavement. The state park should focus on the Indigenous stories, as the Fairfield Foundation has a lease on the Timberneck House, outbuildings and two cemeteries and as such will be the primary messengers. More broadly, the Interpretive Area provides unique opportunities to focus on natural and scenic resources, including open meadows, marshes, the Catlett Islands, and sunset over the York River.

Transition Area – An “Add-on” Experience Area:

Audiences – All, but with a focus on History and Culture Enthusiasts as well as Outdoor Recreation Enthusiasts.

Current Structures – None.

Future Development Needs – This area will serve as a transition area between the highly developed Interpretive Area to the east and the Passive Recreation and Habitat Management Area #1 to the west. It will feature a Discovery Nature Play Area or Playscape that will serve as a mission-oriented playground. This may also be a place to focus on invasive species management and native tree species restoration. This is an “add-on” experience area for those visitors who have been to the more heavily trafficked areas to the east and west.

Interpretive Opportunities – Just as this area serves as a transition between developed and undeveloped area, it should tell the overlapping stories of the Indigenous-focused areas to the east and the natural resource-focused areas to the west. A prime example is the play area or playscape which should not be a normal, out-of-the-box, standard metal playground. While there may be some “normal playground elements” such as swings and slides, this area should primarily focus on the natural and cultural resources that make the park special. A dugout canoe for picture opportunities would be a good example. A similar example of a playscape can be found at High Bridge Trail State Park. The outdoor stage and associated benches built by the local Boy Scouts troop may eventually be moved to this location where it is a better fit for the experience area. Lastly, this area should include a picnic area with tables for families to utilize, as well as some open, mowed areas for families to enjoy traditional recreational activities. Extra shelters are not needed here; family groups wanting a shelter can utilize the nearby shelters at the Interpretive Area.

Passive Recreation and Habitat Management #1:

Audiences – Outdoor Recreation Enthusiasts.

Current Structures – Outdoor stage and associated benches built by local Boy Scouts troop, cartop boat launch, boardwalk, vault toilet, and associated parking.

Future Development Needs – Consider moving the existing outdoor stage and associated benches to the transition area. This area will primarily be focused on resource management with associated trails, benches, as well as interpretive and wayfinding signage.

Interpretive Opportunities – Interpretive experiences in this area will largely be through the form of signage or programming focused on natural resources, habitats, birds, and particularly the northern bobwhite quail and diamond-backed terrapins that frequent this area of the park.

Primary Overnight Area:

Audiences – Overnight Users.

Current Structures – Full-service campground with E/W RV sites, primitive tent sites, yurts, modern bathhouse, dump station, wellhouse, septic system, and pollinator meadow.

Future Development Needs – The main need in the existing campground is to upgrade (e.g. electricity and climate control) or replace the three existing yurts. The area to the east of the existing campground, behind the well house, should be further developed for a group campground, including potable water and a primitive restroom facility. Visitors wanting a shower can utilize a trail to the main campground bathhouse. Meanwhile, across the main road from the campground a second campground loop with full bathhouse should be developed, and the dump station should be upgraded to reflect the increasing load. This loop will go back to the Longleaf Pine Management Area.

Interpretive Opportunities – Interpretive experiences in the campground should focus on a roving ranger or other staff-led programming geared towards campers.

Longleaf Pine Management Area

Audiences – Outdoor Recreation Enthusiasts.

Current Structures – None.

Future Development Needs – This area should be circled and potentially bisected by trails (that could double as firebreaks for future resource management).

Interpretive Opportunities – Interpretive experiences in this area will largely be through the form of signage or programming focused on natural resources, habitats, birds, and particularly the northern bobwhite quail that frequent this area of the park.

Service Area #2

Audiences – None, Staff Only.

Current Structures – Maintenance lot.

Future Development Needs – This area needs and is currently funded and scheduled to receive a full-service maintenance facility with associated material storage. The area will also need a well and space for a firewood operation to be run by the Friends Group. Finally, this area needs an additional ranger residence, currently funded for building north of Braeburn Lane.

Interpretive Opportunities – None.

Passive Recreation and Habitat Management #2:

Audiences – Outdoor Recreation Enthusiasts.

Current Structures – None.

Future Development Needs – This area is currently dominated by active agriculture in a corn and soybeans rotation. Over time, this area should be converted to a large-scale meadow of native plants (perhaps with widely disbursed native hardwoods) representative of open landscapes pre-1607, managed periodically by prescribed fire. This area will primarily be focused on resource management but will allow visitor access and exploration via associated trails and benches, as well as interpretive and wayfinding signage. Pull-offs from the interior loop trail with boardwalk overlooks should also be planned to give visitors a sweeping look across the meadows.

Interpretive Opportunities – Interpretive experiences in this area will largely be through the form of signage or programming focused on natural resources, habitats, birds, and particularly the northern bobwhite quail and diamond-backed terrapins that frequent this area of the park.

The Experience Areas were defined as follows for the West Unit (Figure 25):

Service Area #3:

Audiences – None, Staff Only.

Current Structures – None

Future Development Needs – Ranger residence, small maintenance facility

Interpretive Opportunities – None.

Passive Recreation and Habitat Management #3:

Audiences – Outdoor Recreation Enthusiasts.

Current Structures – None.

Future Development Needs – This area includes a complex mosaic of habitat types, including a diversity of upland hardwood forest types, pine forests, agricultural fields, creeks, wetlands and water views. As such, this area will primarily be focused on resource management with associated trails, trailhead parking hubs, benches, as well as interpretive and wayfinding signage.

Interpretive Opportunities – Interpretive experiences in this area will largely be through the form of signage or programming focused on the unique natural resources that make the park special.

Day Use Waterfront Area:

Audiences – All.

Current Structures – None.

Future Development Needs – Needs for this area include a standard arrival corridor with signage, trails, trailheads, and a contact station including a small gift shop and office space. The contact station should have an attached public bathroom. A paved parking lot should be able to accommodate buses and small RVs, with ADA spaces, and should be connected to the waterfront via an ADA trail. A turnaround loop will be needed, and a gate in front of the lot for when the park is closed. At the waterfront, multiple picnic shelters are needed. A pit toilet, or) should be included, unobtrusively along the forest line. Shoreline stabilization will be required along the waterfront, and a fishing pier is suggested. Much of the future of the shore itself depends on the results of an ongoing U.S. Army Corps of Engineers study.

Interpretive Opportunities – Interpretive experiences in this area will largely be through signage or programming focused on the unique natural resources that make the park special.

MACHICOMOCO STATE PARK MAIN UNIT EXPERIENCE AREAS

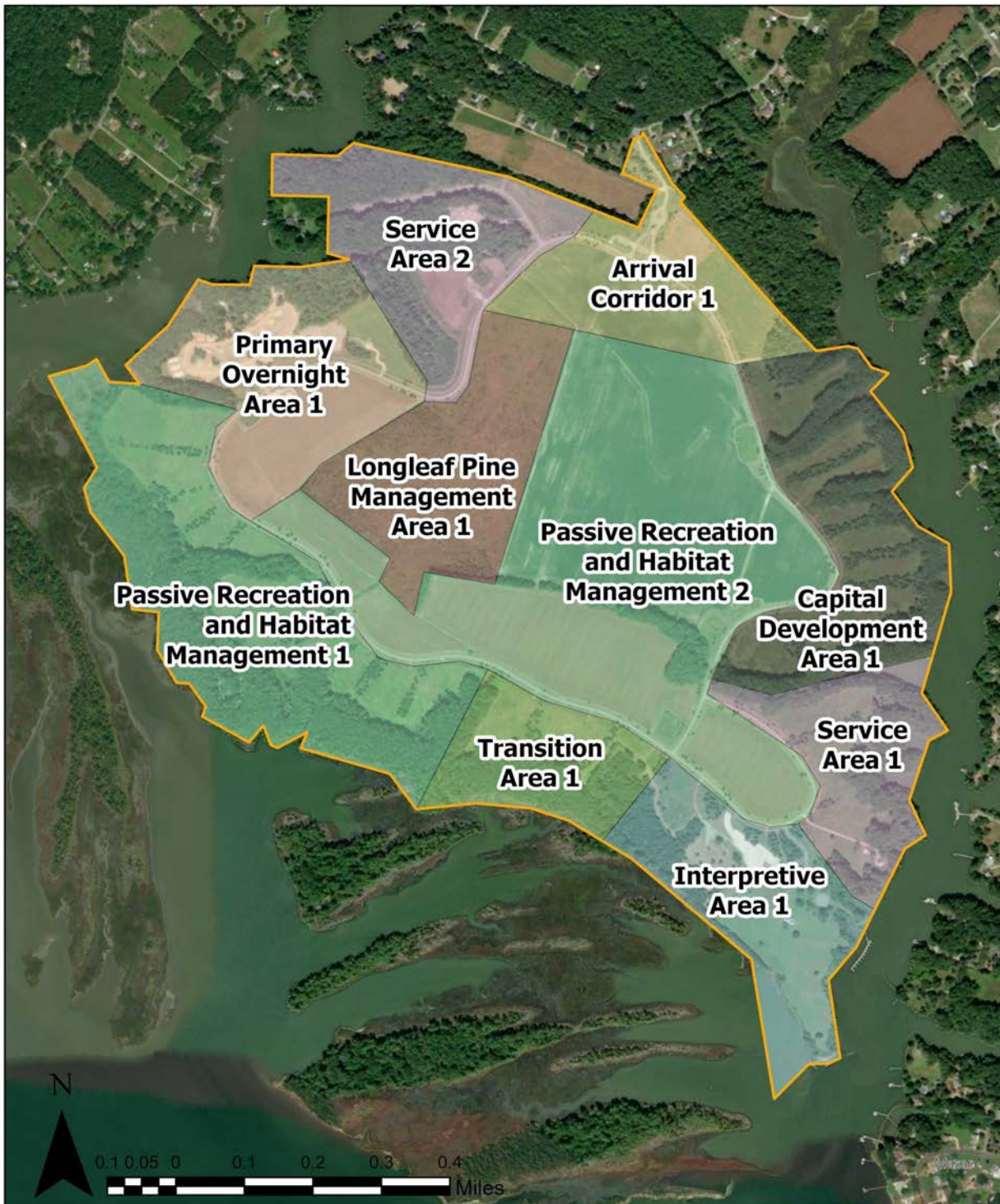


Figure 27 Main Unit Experience Areas

MACHICOMOCO STATE PARK WEST UNIT EXPERIENCE AREAS

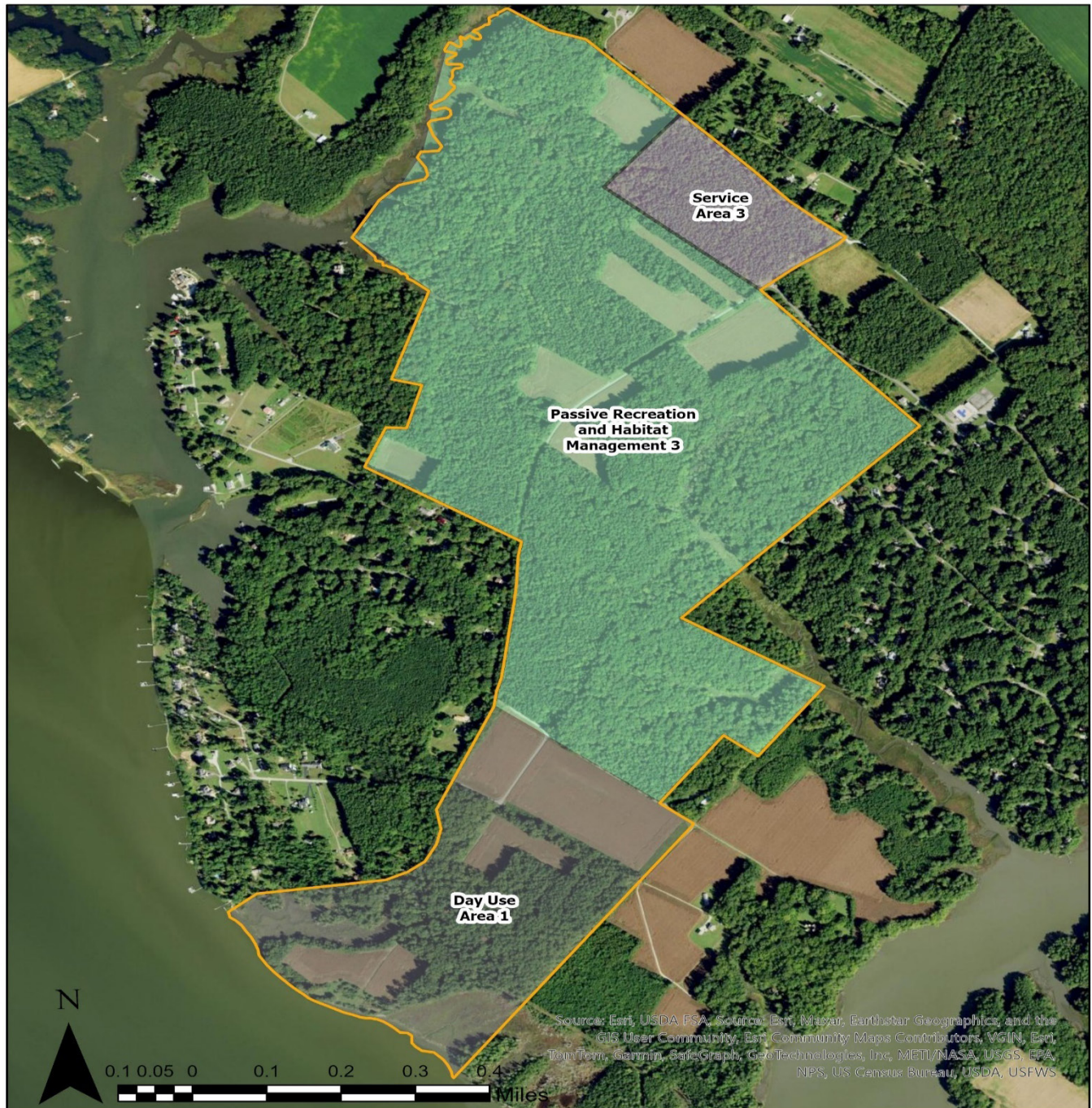


Figure 28 West Unit Experience Areas



Figure 29 Interpretive Area Timeline

MARKET ANALYSIS

A key component of the planning process is a market analysis. This tool identifies important geographic, demographic, and economic aspects of the primary and secondary service area relevant to DCR's priorities for the development and operations of Machicomoco State Park.

For this master plan, the service areas were defined using the ESRI Community Analyst Tool with primary and secondary service areas identified as 1-hour and 3-hour drive times (Figure 26). These service areas are the primary regions from which visitors to Machicomoco State Park will most likely originate. The parameters reflect the unique nature of Machicomoco State Park, with a primary attraction being the connection to tribes and the associated attraction of early settlements and the Tidewater history.

In the development of the Master Plan, it was evident that the Community Analyst Tool service area analysis has limitations. These limitations are primarily because the resources that make up the park hold not only local and regional significance but also provide opportunities for visitors traveling from significant distances to seek specific experience, or who are interested in specific subject matter. With its location in the Tidewater area, the park may attract visitors from well beyond these service areas seeking a place to stay while visiting other shore destinations.

The primary service area includes Gloucester County and parts of the surrounding counties extending to Newport News and Norfolk. It also includes the historic towns of Williamsburg and Yorktown. The secondary service area covers a large swath of eastern Virginia and North Carolina. Because the I-95 corridor extends through this area it also includes Washington District of Columbia, Richmond, Virginia and Greenville, North Carolina.

SERVICE AREA DEMOGRAPHICS

A demographic analysis describes the population within the primary and secondary service areas that were evaluated in the development of this master plan. The assessment is reflective of the region's total population and its key characteristics such as age segments, race, ethnicity, income levels and gender. The data available through ESRI's Community Analyst Tool are summarized in Figures 27 and 28 for both drive times. The business plan also provides additional context.

In 2020 the primary service area for Machicomoco State Park has a population of almost 575,000 people. This area has experienced an annual growth rate of almost 0.5% over the previous ten years. These growth rates declined during COVID-19. The Gloucester County Comprehensive Plan states that the projected growth for the county is 9% by 2040. This number is expected to be slower than surrounding localities but does indicate a general growth in the primary service area.

At the same time, the 2020 population in the secondary service area was just over 6.3 million people and grew by .81%. The population is projected to reach just over 6.6 million people by 2030. These increases will contribute to park visitation and demand for recreational opportunities in the coming years.

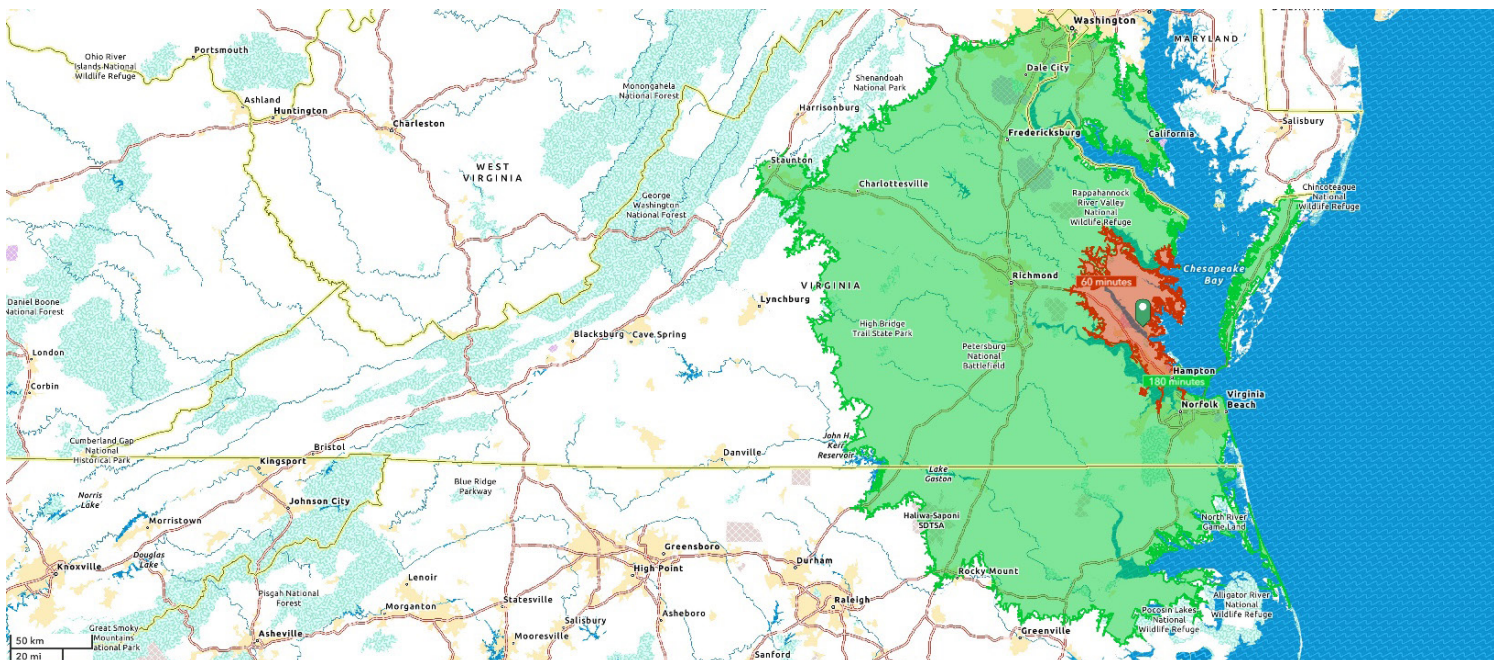


Figure 30 Primary and Secondary Service Areas

In addition to the overall population increase in both the primary and secondary service areas, the population segment of people over the age of 65 is expected to increase at a greater rate. This will have the effect of a noticeable change in recreation demand to more trail related activities and the need for accessible design in all aspects of accommodations.

ADAPTING TO CHANGING CONDITIONS

Changing environmental and climate conditions could have an influence on the park in future years. Consequently, the park/park system should consider the following measures:

- Installing more shaded picnic areas and adding more shade to existing picnic areas.
- Having robust plans for invasive species control and removal.
- Anticipating increased demand for water-based recreation.
- Pursuing funding to make its facilities more energy efficient.
- Actively marketing its lodging options year-round to take advantage of shoulder seasons. This recommendation serves as the most significant revenue growth opportunity for the park.
- Developing a park plan for dealing with sea level rise based on the aspects of the Virginia Coastal Resilience Master Plan that apply to this section of the York River. (Virginia Department of Conservation and Recreation, 2025)



Figure 31 Interpretive Area Picnic Shelter

2020 Census Summary

Machicomoco State Park
Drive time band of 0 - 60 minutes



The 2020 Census data includes information on population and housing as well as detailed data on age, sex, race, Hispanic origin, household and family type, relationship to householder, group quarters population, housing occupancy, and tenure.

2010-2020 ANNUAL GROWTH RATE



0.46%

Population



0.34%

Group Quarters



0.77%

Households

KEY FACTS

574,699
Total Population

254,483
Housing Units

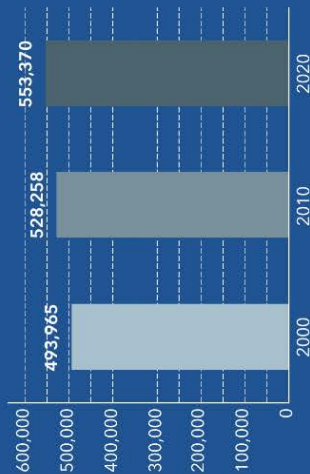
578.2
Population Density

2.39
Average Household Size

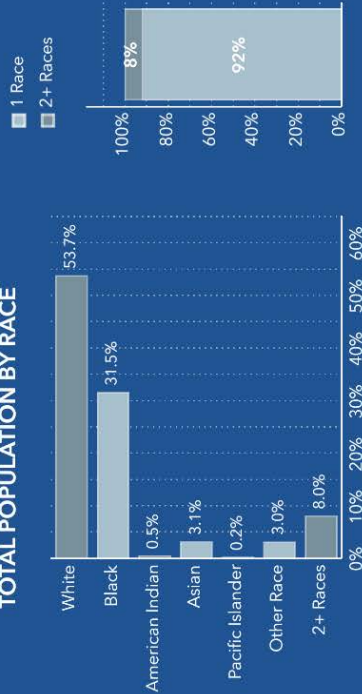
231,909
Total Households

65.9
Diversity Index

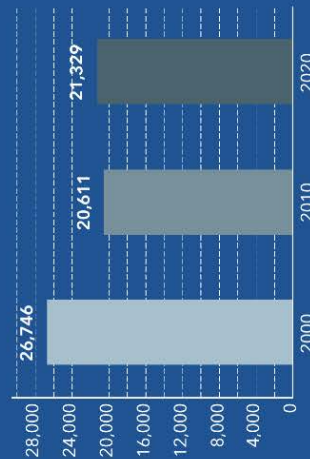
HOUSEHOLD POPULATION



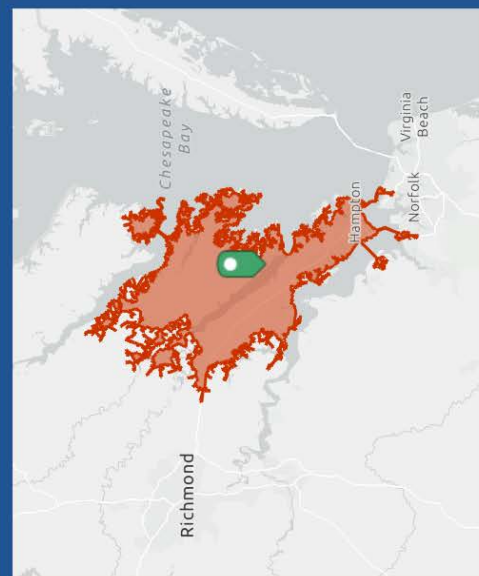
TOTAL POPULATION BY RACE



GROUP QUARTERS



POPULATION BY AGE AND RACE		Less Than 18 Years	18 Years and Older
Total		120,010	454,689
1 Race		102,359	426,411
White		52,365	256,362
Black		40,839	140,128
American Indian/Alaska Native		581	2,023
Asian		3,255	14,749
Pacific Islander		257	725
Some Other Race		5,061	12,423
2 or More Races		17,651	28,279



Source: This infographic contains data provided by U.S. Census (2000, 2010, 2020). © 2025 Esri

Figure 32 Primary Service Area (0-60 minute drive time)

2020 Census Summary

Machicomoco State Park
Drive time band of 60 - 180 minutes

The 2020 Census data includes information on population and housing as well as detailed data on age, sex, race, Hispanic origin, household and family type, relationship to householder, group quarters population, housing occupancy, and tenure.

2010-2020 ANNUAL GROWTH RATE



0.81%
Population



-0.62%
Group Quarters



0.93%
Households



KEY FACTS

6,307,089
Total Population

2,606,060
Housing Units

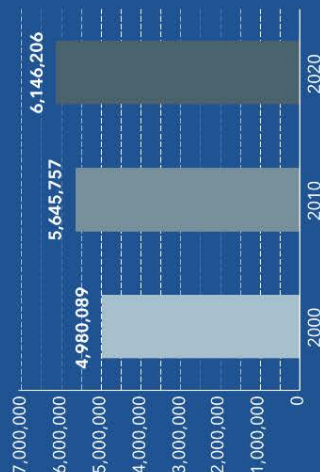
269.1
Population Density

2.55
Average Household Size

2,408,859
Total Households

71.6
Diversity Index

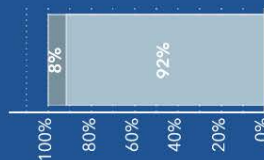
HOUSEHOLD POPULATION



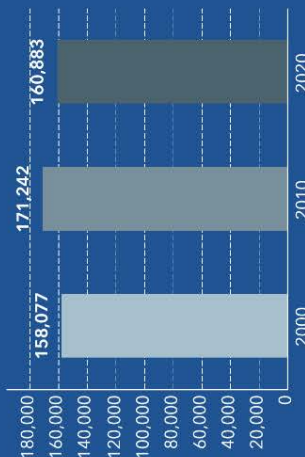
TOTAL POPULATION BY RACE



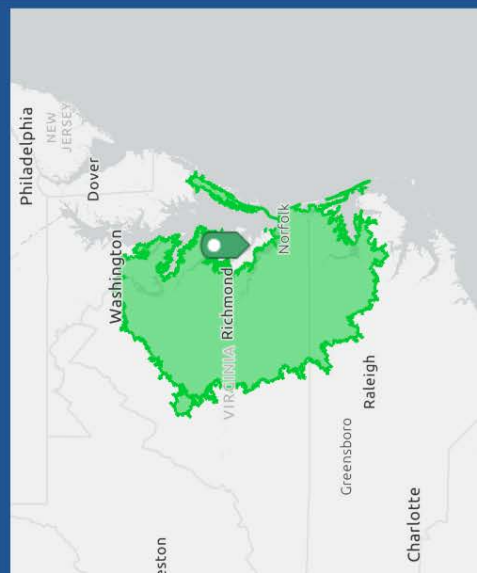
■ 1 Race
■ 2+ Races



GROUP QUARTERS



POPULATION BY AGE AND RACE		Less Than 18 Years	18 Years and Older
Total		1,388,250	4,918,839
1 Race		1,192,671	4,582,061
White		613,031	2,679,920
Black		373,577	1,286,648
American Indian/Alaska Native		8,313	27,552
Asian		81,673	328,290
Pacific Islander		1,420	4,278
Some Other Race		114,658	255,374
2 or More Races		195,579	336,778



Source: This infographic contains data provided by U.S. Census (2000, 2010, 2020). © 2025 Esri

Figure 33 Secondary Service Area (60-180 minute drive time)



Figure 34 Detail of Stone Map

NEEDS ASSESMENT AND PROPOSED DEVELOPMENT

The master plan has been developed in stages. The first stage included assessments made of the existing conditions, natural and cultural resources, and existing physical resources. Those assessments are presented in the previous sections of this plan and are used to inform decisions made on the development of new physical resources for the park.

After those assessments are completed, the master plan team analyzes the types of experiences that are available at the park at a Visitor Experience workshop. These experience areas are identified on park maps and include interpretive areas, recreation areas, habitat management areas, park service areas, and more. Each of these areas will have significance to a segment of the population that visits or works at the park.

NEEDS ASSESSMENT WORKSHOP

Following the Visitor Experience work; the agency conducted a Needs Assessment workshop for Machicomoco State Park to identify opportunities for expanding the park's recreational offerings. The goals of the workshop are to identify the evolving needs of users and solutions to meet those needs while protecting the park's natural and cultural resources. The workshop discussions were guided by survey results and other public input collected at the state, local, and park level regarding user preferences, visitation trends, and recreational activities pursued at the park.

The plan also considers both present and future development, operational and maintenance costs, and staffing to determine how best to address the specific needs of various user groups. To prioritize these improvements, a three-phase development plan is used to ensure that the facilities most needed for public safety, or to protect park resources, are constructed earliest during implementation of the proposed development plan.

These requirements for the Machicomoco State Park master plan were evaluated through:

- A market analysis
- Working meetings with:
 - DCR Planning and Recreation Resources (PRR) staff, Virginia State Parks Staff,
 - A stakeholder Advisory Committee, and,
 - Public comment – public meetings and surveys

PUBLIC INPUT

Advisory Committee

An important aspect of public input in the Machicomoco State Park plan is an Advisory Committee made up of a variety of local stakeholders. Included in the committee were members of local user groups, tribal citizens, local and county elected officials and the Friends group. The members of the committee were consulted at several points during the plan development, beginning with the initial scoping and kickoff, and continuing through the surveys, the needs assessment, and the draft plan comments. Their input and suggestions were important in the development of planned facilities.

Virginia Outdoors Survey

The Virginia Outdoors Survey (VOS) is conducted every five years to inform DCR's statewide strategy for outdoor recreation contained in the Virginia Outdoors Plan. The most recent survey was fielded between June and September 2022 utilizing both a statistically significant probability sample, designed to allow for generalizations of the statewide population as well as within four geographic regions of the state, and a second crowd-sourced approach to understand the perspectives of more motivated user groups. The results of the survey provide feedback from Virginians regarding which types of recreation activities are most popular, ways in which outdoor recreation can be improved, and how respondents' perspectives varied depending on demographic as well as other differences, including the region of the state where they reside.

**Table 3 Activities Occurred Mostly In Virginia,
Probability and Crowd-Source Surveys, 2022 VOS**

Activity	Percent (%) Response Probability Sample	Percent (%) Response Crowd-Source ²
Walking for pleasure	70.4	61.4
Visiting parks (local, state, national)	38.5	61.4
Viewing the water	37.9	51.5
Swimming/outdoor pool	35.2	33.4
Outdoor festivals	34.7	29.1
Visiting working farms, etc.	33.0	30.5
Nature-based tours/trails	30.5	48.1
Visiting natural areas	29.6	48.9
Fresh water fishing	28.8	33.8
Driving for pleasure	28.1	37.4
Visiting historic areas	27.1	38.4
Music festivals	26.1	23.3
Canoeing/kayaking	23.8	50.2
Hiking/backpacking day trips	23.3	46.1
Sunbathing/ relaxing on the beach	23.2	29.6
Pools	23.0	16.9
Viewing scenery	22.9	42.3
Swimming beach, lake, river (open water)	22.7	35.7
Jogging/running	22.0	24.9
Picnicking away from home	20.8	32.3

Table 3 compares the statewide results of questions aimed at respondents' preferred activities. This includes both the probability sample and crowd-source surveys. Probability sample respondents were statistically sampled and are therefore more representative of the views of the broader state population. Crowd-sourced respondents, whether they had a basic interest in outdoor recreation or belonging to a specific recreation-interest group, were self-selected individuals who chose to participate in an online survey. The crowd-source effort is helpful for understanding the perspectives of more motivated users and groups that may not have been included in large numbers in the probability-based survey. Crowd-source survey participants tended to be slightly younger, slightly more affluent, more active, and more likely to engage in outdoor recreation for exercise or simply to experience nature than people in the probability sample.

² Other Activities receiving a response of at least 20 percent for the crowd-source survey included visiting gardens/arboretums, paddling on scenic rivers, paved or gravel bicycle trails, nature study/programs, bird watching away from home, and tent camping.

**Table 4 Activities Needed Probability
and Crowd-Source Surveys, 2022 VOS**

Activity	Percent (%) Response Probability Sample	Percent (%) Response Crowd-Source
Walking for pleasure	48.0	53.7
Outdoor festivals	40.6	36.0
Visiting working farms, etc.	36.9	30.9
Music festivals	35.5	29.7
Visiting parks (local, state, national)	35.1	47.1
Swimming/outdoor pool	35.1	27.2
Nature-based tours/trails	34.1	52.1
Visiting gardens/arboretums	30.2	36.8
Visiting natural areas	28.9	42.8
Driving for pleasure	28.7	25.1
Viewing the water	28.4	35.6
Canoeing/kayaking	28.1	47.4
Fresh water fishing	26.7	24.8
Visiting historic areas	26.1	29.6
Stargazing, dark skies, astronomy	25.9	29.6
Swimming beach, lake, river (open water)	24.8	32.4
Pools	24.8	16.7
Picnicking away from home	24.3	25.1
Sunbathing/ relaxing on a beach	23.8	24.8
Hiking/backpacking day trips	22.9	40.0
Nature study/ nature programs	21.3	36.4
Archery	20.7	14.9
Paved or gravel bicycle trails	20.7	29.9
Staying in cabins and/ or yurts	20.1	26.4

Table 4 includes respondents' answers only for activities participated in the past 12 months and for which state parks offer facilities and that received at least a 20% response rate.

These results demonstrate statewide differences between the responses received from the probability sample and crowd-source surveys for each group surveyed. Many of the most popular activities offered at Machicomoco State Park such as visiting the park, viewing the water, nature-based tours/trails, visiting natural and historic areas, canoeing/kayaking, hiking, and picnicking received significantly higher responses on the crowd-source survey. Other prominent activities offered, or potentially offered, at Machicomoco State Park that received a significantly higher percentage of responses on the crowd-source survey compared to the probability sample included bicycle trails (paved or gravel), nature programs, bird watching, and tent camping. Visitors to parks and outdoor areas seeking these activities are highly motivated and more likely to be frequent users whose repeated use of trails and other facilities may result in greater impacts than their numbers would otherwise indicate.

Master Plan Survey

The agency developed and deployed an online public survey designed to obtain input on a variety of user preferences for the park. The survey was launched at the Public Information Meeting and was available for the 30-days following. The survey was well received, eliciting 126 responses. Seventy percent of the respondents were frequent or occasional visitors to the park.

Results indicated that outdoor recreation (hiking, biking, water-based) were the most popular activities followed by public events, educational programming, and other overnight stays. When asked to describe what words or phrases best described what participants most valued or connected to at Machicomoco State Park the overwhelming majority indicated “nature” and “natural.” These were followed by history, beautiful, peaceful, water, outdoors and indigenous in descending order of frequency.

Tribal responses were tabulated as well. These responses included statements of tribal history on this land, signatories of the 1677 Woodland Plantation Treaty, the continued existence of these tribes to the present day, and celebration of their leading role in the management of cultural and natural resources.

Your Comments Count

In addition to the public input survey, Virginia State Parks solicits public input for individual state parks on its website via the Your Comments Count (YCC) survey, responses for which are compiled quarterly. Although the survey has a different purpose than the one deployed specifically for the master plan in that it focuses on visitor satisfaction, parallels exist between the two with respect to certain questions about user demographics, activities, and preferences. Due to its high participation rate, the Your Comments Count survey represents a valuable supplement to the public input survey and an excellent mechanism for gauging public opinion generally.

The results of the YCC survey for Machicomoco over 2024 received 361 responses. The results indicated that hiking, bicycling, birding, picnicking, and educational programming were the activities participated in most frequently mentioned. Additional activities included camping, interpretive programs, and RV camping among others.

The park ranked excellent in all user categories including cleanliness, safety, staff assistance, facilities, fees, and activities.

NEEDS ASSESSMENT APPROACH

Park needs vary significantly depending on a variety of factors including the purpose of the park, existing conditions, user characteristics, desired visitor experiences, and proposed and existing infrastructure in both the park and the surrounding community.

DCR utilized the following approach for conducting the Needs Assessment for Machicomoco State Park:

- Staff compiled and evaluated the results of the Visitor Experience Workshop, the Master Plan Public Input Survey, and responses to relevant questions on the Your Comments Count survey. Information from the market area analysis and visitation data within the

larger context of statewide and regional outdoor recreation preferences and trends as identified in the 2022 Virginia Outdoors Survey. When available, updated summaries of these results were presented to the Master Plan Team at the Visitor Experience and Needs Assessment workshops as well as to the public at the Public Comment Meeting. Staff utilized public input and Advisory Committee input throughout the planning process as a basis for identifying future development needs and the locations and details for proposed developments at the parks.

- Staff conducted an internal Needs Assessment workshop at the Virginia Institute of Marine Science involving the Master Plan Team and additional park staff. Participants discussed the locations of new, expanded, and renovated facilities within the Experience Areas of the park. Participants then prioritized developments into one of three phases whereby Phase 1 represented the most immediate and significant development needs and Phases 2 and 3 corresponded to intermediate-term and long-term needs, respectively.
- DCR also conducted a virtual Needs Assessment workshop with the Advisory Committee members. The procedure was similar; the internal workshop and was designed to gather comments from the committee regarding the development plans.
- Staff presented the map of proposed developments and phased development plan to the public at the Public Comment Meeting and reviewed comments received during the following 30-day period to ensure that the needs and concerns of visitors and the Machicomoco community were reflected in the recommendations.

PROPOSED 30-YEAR PHASED DEVELOPMENT PLAN

Proposed development for both administrative units are combined in the phases. MU indicates the Main Unit and WU indicates the West Unit. Figures 29 and 30 provide maps of the proposed locations of proposed development items. Tables 31 through 33 provide details of the cost estimates.

Phase 1

Phase 1 addresses the following critical needs at the park to respond to visitor use trends, new development in the West Unit, and issues identified by the public and park staff:

- **Main Unit Maintenance Facility (MU)** – The current maintenance garage , which is immediately adjacent to the existing ranger residence does not have adequate space for current and intended park operations. A new three-bay facility of approximately 30' x 36' will include areas for maintenance equipment, storage, custodial equipment and storage, office, and staff areas for break times.
- **Waterfront Safety Improvement (WU)** – The waterfront of the York River at the West Unit currently presents a safety hazard. The water's edge is a precipitous drop-off with the remains of the old sea wall exposed. The proposed wood fencing along the top of the drop-off will provide a visual and physical barrier to prevent accidental falls. Approximately 1,200 linear feet of fencing is proposed

- **Parking with Self-Pay and Trailhead (WU)** – Because the West Unit is currently not open to the public, there are no parking or payment facilities there. This proposal is for an 80-parking space asphalt parking lot with a self-pay station.
- **Trails in the Day Use Waterfront Area (WU)** – Approximately 7,000 linear feet of trails. The trails will be located on-site to avoid sensitive resources.
- **Picnic Area (WU)** – Picnic facilities to be developed in the southern areas of this unit. Four pea gravel surfaced picnic pads at 12'x12' and one accessible pad at 16'x16' will be constructed along with one pit toilet.
- **Bury Existing Power Line (WU)** – An existing Dominion Energy power line near the water's edge on the West Unit will be relocated underground to improve safety and to eliminate the view of the power lines from the park. Discussions will need to be held with Dominion Energy and with local residents served by the line.
- **ADA Trail to Picnic Area (WU)** – An ADA-compliant concrete path will be constructed from the new parking area to the new picnic area.
- **Renovations to Existing Ranger Residence (MU)** – Interior renovations necessary to improve residential conditions. Roof and gutter repairs to the house and garage roof were completed in April 2025.
- **Longleaf Pine Management Area Trail (MU)** – Approximately 5,280 linear feet of asphalt trail will be located and developed within the longleaf pine management area. This will improve access and provide a venue for interpretation of this area.
- **Native Meadow Viewshed in Arrival Corridor (MU)** – The large central area of the Main Unit is currently in an agricultural lease. The proposal is to convert it from agriculture to a native meadow that will recreate the native field ecosystem. The first stage of this conversion will be approximately 30 acres that is visible when visitors first arrive at the park. This area is identified as the Arrival Corridor in the Experience Areas of the Main Unit.
- **Electrify Yurts (MU)** – This will provide electricity to the three existing yurts in the Main Unit campground.
- **Additional Short Trails (MU)** – Provide approximately four trails totaling 3,960 linear feet to connect the existing Forest Trail to the river shore. The trails will be located on site to avoid any sensitive resources.
- **West Unit Maintenance Facility (WU)** – A new maintenance facility in the West Unit will reduce the need for constantly moving equipment and supplies between the two units. This two-bay facility will include a staff restroom, storage, office space for two members, and laundry facilities.
- **Expanded Parking at the Interpretive Area (MU)** – The current parking will be expanded by 80 additional spaces. This area will be an overflow area constructed to be permeable. The suggestion would be to use Grasscrete (a reinforced permeable paving surface) or similar product.

Phase 2

Intermediate needs for the park are included in the development of Phase 2. An adequate visitor center has been a desire of park staff since the park opened. New facilities for staff and visitors address needs for expanded overnight opportunities and day use activities which align with the responses from the public surveys and comments:

- **New Ranger Residence (WU)** – A ranger presence in the West Unit is very important for public safety and park management. A new 1,600 square foot residence will be constructed near the entry road.
- **Visitor Center with Staff Offices (MU)** – The new visitor center of approximately 5,500 square feet near the entrance to the Main Unit will improve visitor services as well as provide needed office and storage space. The center will include interpretive areas as well as a meeting room that can be used by the community and class groups. A 40-space asphalt parking area (including two bus and three RV spaces) will also be developed.
- **Gatehouse Renovation (MU)** – The existing gatehouse, now used as the contact station, will be renovated to better serve the needs of staff and visitors.
- **Second Campground (MU)** – A new campground will be developed across the main road from the existing one. The facility will provide 25 additional campsites with water and electricity. The new site will also include a new bathhouse.
- **Trails in the Passive Recreation Area (WU)** – Approximately 3.5 miles of trails will be developed in this area. These trails will need to be located on site to avoid disturbance of sensitive resources.
- **Three Parking Hubs and Trailheads (WU)** – The main road into the West Unit provides several opportunities for trailheads that lead to trails headed west towards the shoreline. The proposal is to develop three of these trailheads and trails, locating them on site to take advantage of the best visual experiences.
- **Contact Station (WU)** – Once the West Unit is open to the public and facilities from Phase 1 have been developed, a contact station will be constructed in conjunction with the parking area. This facility will include an employee toilet and two public toilets.
- **Group Camp Site (MU)** – A new group campsite will be developed just north of the existing campground. The campsite will include four 24'x24' tent sites and a vault toilet.
- **Nature Playground (MU)** – A naturalistic playground will be constructed west of the interpretive area.
- **Native Meadow Development (MU)** – The continuation of the conversion of the agricultural area to native meadow plantings will begin with the approximately 300 acres of the central fields.
- **Shoreline Stabilization and Restoration (WU)** – This project is being developed in conjunction with the United States Army Corps of Engineers (USACE). The plan is to construct weirs and revetments that will diminish the erosion caused by wave energy along 3,000 linear feet of the York River shoreline. Negotiations between DCR and USACE are ongoing.

- **First Phase of Trail System in Converted Meadow (MU)** – Approximately 7,920 linear feet of trail will be constructed in the converted meadow area. These trails will be located on site to take advantage of views and to create appealing trail experiences.
- **Meadow Boardwalk Overlooks (MU)** – Two ADA accessible overlooks will be constructed for observing the new native plant meadow. These will be constructed in a boardwalk style and be approximately 16'x16'. A second pair of overlooks will be constructed as part of Phase 3.

Phase 3

Long range plans for Machicomoco State Park continue the recreational developments of earlier phases that increase recreational opportunities for park visitors. They also provide more overnight accommodations and educational opportunities.

- **Fishing Pier (WU)** – The fishing pier will extend perpendicularly into the York River off the West Unit shoreline. The length will be approximately 115' with an 8' width. The length is restricted due to an existing offshore oyster lease in the York River.
- **Cabins (MU)** – A development of ten 3-bedroom cabins and one 6-bedroom lodge will be constructed off the eastern side of the loop road in an area previously cleared for a proposed but never built, residential development. As part of the cabin area, a separate loop road, parallel to the main road, will be developed. The cabins will be sited to avoid further resource disturbance and to provide privacy for the users.
- **Native Meadow Development (MU)** – The final phase of this development will encompass the remaining 96 acres of agricultural fields.
- **Second Phase of Trail System in Converted Meadow (MU)** – An additional approximately 9,600 linear feet of trails will be constructed to complete this part of the development.
- **Meadow Boardwalk Overlooks (MU)** – Two more boardwalk type 16'x16' overlooks will be constructed to provide observation of the native meadows.
- **Outdoor Education Space (MU)** – A programmable space dedicated to outdoor education will be developed in conjunction with the new visitor center.



Figure 35 Main Unit Master Plan

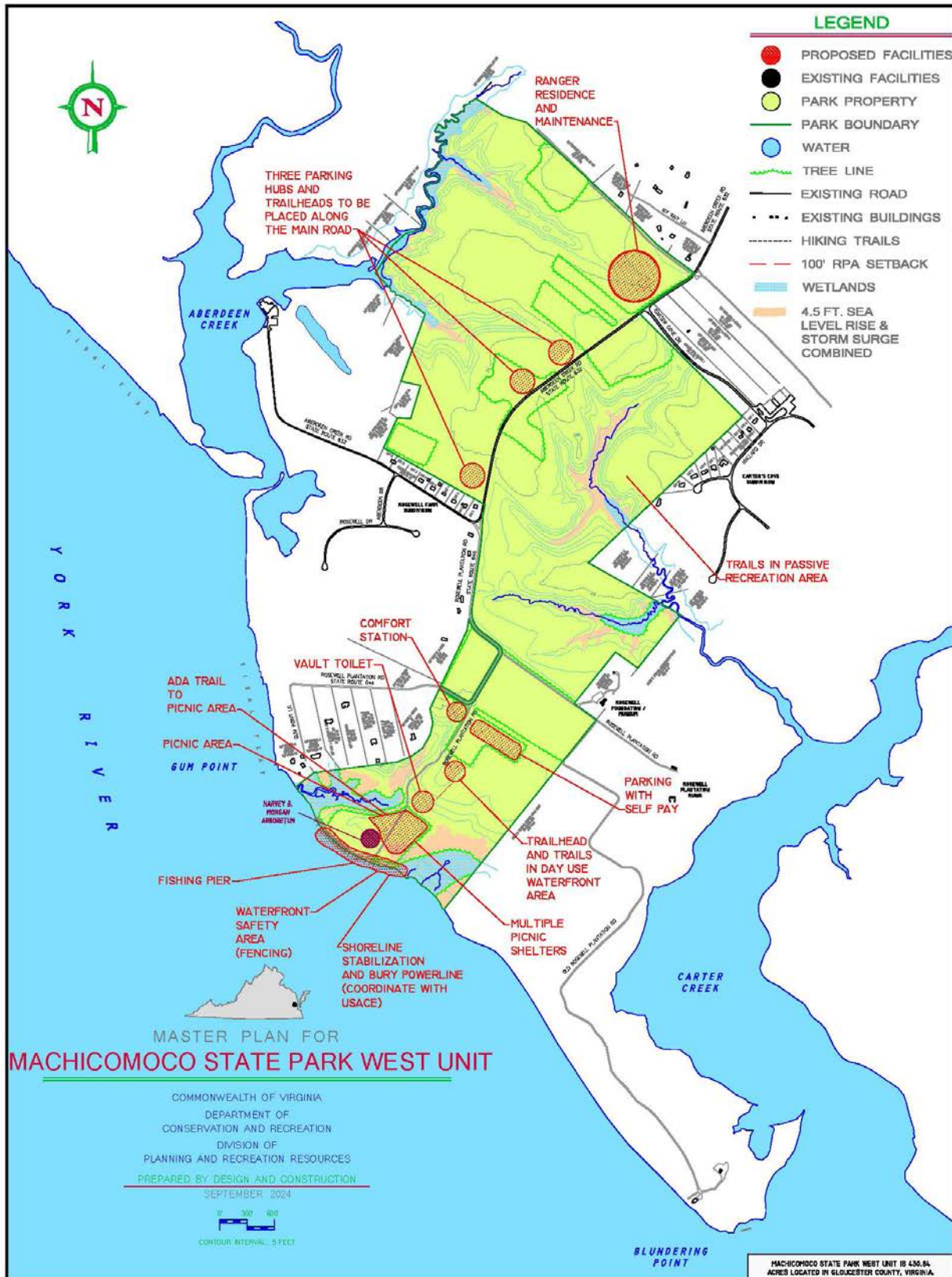


Figure 36 West Unit Master Plan

CONSTRUCTION COST ESTIMATES PER PHASE

All cost estimates are given in FY 2025 dollars.

Phase 1 Cost Estimate

PLANNING BUREAU COST ANALYSIS - estimated cost

Machicomoco State Park Master Plan - Phase 1 - 1/22/2025 - DRAFT

Description	Quantity	Unit	Unit Cost	Total
Phase 1				
Maintenance Facility(MU) - 2 bays, restrm,storage, office for 2 members and laundry	1800	SF	\$ 400	\$720,000
Pole Shed - 3 bay (30' x 36')	1080	SF	\$ 200	\$216,000
Paving	355	SY	\$ 150	\$53,250
Water	100	LF	\$ 50	\$5,000
Electric	200	LF	\$ 50	\$10,000
Sewer	1	LS	\$ 50,000	\$50,000
Waterfront Safety Improvement (WU) - wood fencing	1200	LF	\$ 50	\$60,000
Parking with Self Pay and Trailhead (WU) - 80 parking spaces asphalt	4000	SY	\$ 150	\$600,000
Trails in the Day Use Waterfront Area (WU)	7,000	LF	\$ 30	\$210,000
Picnic Area (WU)				\$0
Picnic Pads - pea gravel (4) 12'x12'	576	SF	\$ 50	\$28,800
Picnic Pads (1) 16'x16'	256	SF	\$ 60	\$15,360
Pit Toilet	1	LS	\$ 75,000	\$75,000
Bury Existing Power Line (WU)	2,800	LF	\$ 100	\$280,000
ADA Trail to the Picnic Area - concrete path(WU)	2,640	LF	\$ 100	\$264,000
LongLeaf Pine Management Area Trail (MU)	5,280	LF	\$ 30	\$158,400
Native Meadow Viewshed in Arrival Corridor (MU)	30	ACRE	\$ 1,300	\$39,000
Electrify Yurts (MU)	3	EA	\$ 10,000	\$30,000
Renovate Existing Ranger Residence(MU)	2,675	SF	\$ 250	\$648,750
Additional Short Trails - Forest Trail to Shore and Pine Area (MU)	3,960	LF	\$ 30	\$118,800
Maintenance Facility(WU) - 2 bays, restroom,storage, office for two members and laundry	1800	SF	\$ 400	\$720,000
Pole Shed - 3 bay (30' x 36')	1080	SF	\$ 200	\$216,000
Paving	355	SY	\$ 150	\$53,250
New Well and Well house WU development	1	LS	\$250,000	\$250,000
Electric	200	LF	\$ 50	\$10,000
Sewer	1	LS	\$ 50,000	\$50,000
Parking at the Interpretive Area(MU) - 80 spaces	4000	SY	\$ 150	\$600,000
PHASE 1 CONSTRUCTION SUBTOTAL				\$5,481,610
A/E Fee (17% see note 1) includes stormwater mgmt & E&S control measures				\$931,874
SUBTOTAL				\$6,413,484
Contingency (10% see note 2)				\$548,161
Other Project Costs (10% see note 3)				\$641,348
TOTAL				\$7,602,993

Phase 1 Total **\$7,602,993**

Figure 37 Phase 1 Cost Estimate

Phase 2 Cost Estimate

PLANNING BUREAU COST ANALYSIS - estimated cost Machicomoco State Park Master Plan - Phase 2

Description	Quantity	Unit	Unit Cost	Total
Phase 2				
New Ranger Residence (WU)	1,600	SF	\$ 300	\$480,000
Water and New Well	1	LS	\$ 100,000	\$100,000
Electric	200	LF	\$ 50	\$10,000
Sewer	1	LS	\$ 50,000	\$50,000
Visitor Center with Staff Offices (MU)	5,500	SF	\$ 400	\$2,200,000
Parking Area (40 spaces - includes 2 bus and 3 RV)	2,000	SY	\$ 150	\$300,000
Water	200	LF	\$ 50	\$10,000
Electric	200	LF	\$ 50	\$10,000
Sewer	1	LS	\$ 100,000	\$100,000
Gatehouse Renovation (MU)	1,300	SF	\$ 300	\$390,000
Trails in the Passive Recreation Area (WU) (3.5 miles)	18,480	LF	\$ 30	\$554,400
Three Parking Hubs and Trailheads - 3 parking spaces per Hub (WU)	450	SY	\$ 150	\$67,500
Contact Station with an employee toilet and 2 public toilets (WU)	300	SF	\$ 500	\$150,000
Water (the cost is based on water being at the site)	200	LF	\$ 50	\$10,000
Electric	200	LF	\$ 50	\$10,000
Sewer	1	LS	\$ 50,000	\$50,000
Second Campground with 25 sites with water and electric	25	EA	\$ 40,000	\$1,000,000
Roads - 3/4 mile	3,960	LF	\$ 250	\$990,000
Water (the cost is based on water being at the site)	3,960	LF	\$ 50	\$198,000
Electric	3,960	LF	\$ 50	\$198,000
Bathhouse	1	LS	\$ 600,000	\$600,000
Water	200	LF	\$ 50	\$10,000
Electric	200	LF	\$ 50	\$10,000
Sewer	1	LS	\$ 200,000	\$200,000
New Well and Wellhouse	1	LS	\$ 250,000	\$250,000
Group Camp site (MU)				
(4) tent sites 24' x 24'	2,304	SF	\$ 40	\$92,160
Vault Toilet	1	LS	\$ 100,000	\$100,000
Nature Playground (MU)	1	LS	\$ 50,000	\$50,000
Native Meadow Development (MU)	300	Acre	\$ 400	\$120,000
Shoreline Stabilization and Restoration (WU)	3,000	LF	\$ 5,000	\$14,703,000
First Half of New Trail System in Converted Meadow of Passive Recreation Area	7,920	LF	\$ 30	\$237,600
(2) Boardwalk Overlooks of the Meadow (TN) - (2) ADA 16'x16'	512	SF	\$ 200	\$102,400
PHASE 2 CONSTRUCTION SUBTOTAL				\$23,353,060
A/E Fee (17% see note 1) includes stormwater mgmt & E&S control measures				\$3,970,020
SUBTOTAL				\$27,323,080
Contingency (10% see note 2)				\$2,335,306
Other Project Costs (10% see note 3)				\$2,732,308
TOTAL				\$32,390,694

Phase 2 Total **\$32,390,694**

Figure 38 Phase 2 Cost Estimate

Phase 3 Cost Estimate

PLANNING BUREAU COST ANALYSIS - estimated cost Machicomoco State Park Master Plan - Phase 3

Description	Quantity	Unit	Unit Cost	Total
Phase 3				
Large Picnic Shelter (WU)	1	LS	\$ 150,000	\$150,000
Fishing Pier (SA) 350' long by 8' wide	2,800	SF	\$ 150	\$138,000
(10) 3 bedroom Cabins (MU)	14300	SF	\$ 400	\$5,720,000
Roads	4000	LF	\$ 250	\$1,000,000
Water	4000	LF	\$ 50	\$200,000
Electric	4000	LF	\$ 50	\$200,000
Sewer (5 drainfields for each 2 houses)	1	LS	\$ 250,000	\$250,000
(1) 6 bedroom Lodge (MU)	2500	SF	\$ 400	\$1,000,000
Roads	400	LF	\$ 250	\$100,000
Water	400	LF	\$ 50	\$20,000
Electric	400	LF	\$ 50	\$20,000
Sewer	1	LS	\$ 50,000	\$50,000
New Well and Well house for Lodge and Cabins	1	LS	\$ 250,000	\$250,000
Second Half of Native Meadow Development (MU)	96	Acre	\$ 400	\$38,400
Trails in Converted Meadow Area (MU) 1.75 miles	9,280	LF	\$ 30	\$278,400
(2) Boardwalk Overlooks of the Meadow (MU) - (2) 16'x16'	512	SF	\$ 200	\$102,400
Outdoor Education Space adjacent to Visitor's Center (MU)	1	LS	\$ 50,000	\$50,000
PHASE 3 CONSTRUCTION SUBTOTAL				\$9,567,200
A/E Fee (17% see note 1) includes stormwater mgmt & E&S control measures				\$1,626,424
SUBTOTAL				\$11,193,624
Contingency (10% see note 2)				\$956,720
Other Project Costs (10% see note 3)				\$1,119,362
TOTAL				\$13,269,706

Phase 3 Total **\$32,390,694**

TOTAL MASTER PLAN COST \$53,263,394

Figure 39 Phase 3 Cost Estimate

Notes:

Note 1 - A/E Fee - 17% includes site visits,code reviews,agency reviews,plan reviews, bidding,construction administration,project close out

Note 2 - Contingency - 10% due to minimal project scope and unknown site conditions

Note 3 - Other Project Costs - 10% includes project mgmt/inspection,equipment & furnishings, exhibits,site survey,abatement,geotech,materials testing,document printing / bid ads, utility connection fees - all as per the Construction & Professional Services Manual

STAFFING NEEDS AT BUILDOUT

The Virginia State Park Staffing Buildout outlined below identifies the staffing needs of the park, both currently and as the park development progresses in the future. Staffing is based on the evolving nature of visitor usage and park operations, characteristics and sizes of proposed facilities, frequency and types of educational programs and special events, and needs with respect to the protection of park resources. (See Table 5)

The immediate needs listed below are based on the Field Operations Staffing Matrix, which identifies the optimal staffing complement of a state park based on a combination of considerations regarding the park's size and resources, condition and character of recreational and other facilities, and types of programming needed to effectively deliver high-quality visitor experiences while optimizing public safety and protecting park resources. Additional staffing numbers per phase have been coordinated with the Phased Development Plan to optimize the efficiency of park operations and provide a best-in-class visitor experience.

Existing Staffing (FY 2025)

The park employs six full-time employees, excluding wage and seasonal staff:

- Park Manager (1)
- Office Manager (1)
- Chief Park Ranger – Visitor Experience (1)
- Supervisory Park Ranger (1)
- Park Ranger – Maintenance (1)
- Chief Park Ranger – Law Enforcement (1)

Immediate Needs

Virginia State Parks begins staffing a state park with four core full-time employees (FTEs). After that, staffing buildout follows the demands of the phased development plan. In 2019 Virginia State Parks completed the Field Operations Staffing Matrix (FOSM). This tool is designed to identify staffing levels needed to operate and maintain state park facilities. The FOSM is an internal study. It examines a variety of park operation factors to calculate the total FTEs recommended per park. Virginia State Parks staff utilize this recommendation to identify the gap between a park's current and optimal staffing level before proposed developments occur to determine which positions are most needed at the park today.

Utilizing the information generated by this tool combined with staff knowledge and expertise regarding Machicomoco State Park, a list has been developed for planning purposes representing the most urgently needed positions based on parks having similar infrastructure and visitation.

The following two full-time positions represent immediate staffing needs at the park to optimize resource management and operational efficiency.

- Park Ranger – Maintenance (1)
- Park Ranger – Resource Management (1)

Table 5 Staffing and Other Than Personnel Services

POSITION TITLE	EXISTING POSITION	IMMEDIATE NEEDS VIA STAFFING MATRIX	NEEDS WITH PHASE 1 BUILD OUT	NEEDS WITH PHASE 2 BUILD OUT	NEEDS WITH PHASE 3 BUILD OUT	TOTAL AT FULL BUILD OUT
Park Manager	1					1
Assistant Park Manager				1		1
Office Manager	1					1
Office Assistant				1		1
Chief Park Ranger (Visitor Experience)	1					1
Education Specialist					1	1
Supervisory Park Ranger	1					1
Park Ranger (Maintenance)	1	1			2	3
Park Ranger (Resource Management)		1 ³			1	2
Volunteer Coordinator				1		1
Park Ranger (Law Enforcement)	1				1	2
FTE SALARY WITH BENEFITS TOTAL						
---	\$544,944	\$167,026	\$0	\$281,076	\$430,014	\$1,425,060
WAGE TOTAL						
---	\$178,753\$2,	\$20,880	\$45,000	\$90,000	\$90,000	\$424,633
OTPS⁴ TOTAL (Based on FY25 budget projections)						
---	\$99,327	\$0	\$55,328	\$143,461	\$126,122	\$424,238
TOTAL CURRENT BUDGET						
---	\$823,024	\$187,906	\$100,328	\$514,537	\$646,136	\$2,271,931

³ Need for Park Ranger – Resource Management may also be fulfilled by additional full-time District Resource staff positions.

⁴ OTPS stands for “Other Than Personnel Services,” it covers all of the non-staffing expenses necessary to open and operate a Virginia State Park. This includes but is not limited to routine maintenance, equipment, supplies, utilities (E.G. power, sewer, water) and resource management. OTPS does not include costs for salaried employees, wage, and seasonal staff.

Phase 1

No new full-time positions are anticipated during Phase 1 of the development plan.

Phase 2

Three new full-time positions are anticipated to be needed during the buildout of Phase 2. These positions will fulfill the need for additional management and office staff necessary in the new visitor center. Increased volunteer activity is also expected.

- Assistant Park Manager (1)
- Office Assistant (1)
- Volunteer Coordinator (1)

Phase 3

Several new positions are anticipated at full build-out of the planned development. The following will provide educational program opportunities, facility and resource management, and increased public safety.

- Education Specialist (1)
- Park Ranger – Maintenance (2)
- Park Ranger – Resource Management (1)
- Park Ranger – Law Enforcement (1)

*Figure 40 West Unit Shoreline*

CONCLUSION

The Master Plan for Machicomoco State Park recommends a Phased Development Plan for the park's facilities over the next 30 years. The factors considered in developing this plan include an analysis and evaluation of the history of the land and the story it tells, the natural, physical and cultural resources of the park, the demographics of the park's service area, and the general trends in recreational demand in the commonwealth as illustrated in the Virginia Outdoors Plan. The considerations also include an analysis of the needs of park visitors based on current and anticipated usage trends and recommendations for upgrading staff facilities and operational capabilities.

The Phased Development Plan represents a comprehensive plan for the physical development and staffing of the park. Proposed developments are divided into three 10-year phases. Each development phase deals with specific aspects of park usage, such as day use, overnight facilities, staffing and recreation opportunities. The three phases are designed to be implemented during the initial and subsequent 10-year periods until the park's short-, medium-, and long-term needs are addressed in full. The phases of staffing needs are based on the additional development of the park.

As one of the newest state parks in the system, Machicomoco State Park has been supplying Virginians and visitors with recreational opportunities since 2021. This 2025 Master Plan acknowledges that contribution and opens the West Unit for expanded passive recreation.

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APPENDICES

APPENDIX A MACHICOMOCO BUSINESS PLAN 2020

Begins on next page.

Machicomoco State Park Business Plan



Machicomoco State Park Business Plan

Submitted to:

Virginia Department of Conservation and Recreation
Division of State Parks

Melissa Baker, State Parks Director

Prepared for the Director by:

Division of State Parks
Acting Park Manager and District Manager Ann Zahn
Business Management Working Group

Through an MOU between Virginia Tech and the DCR, the economic impact section of this report was produced by Virginia Tech's Pamplin College of Business.

Publish date: 20 July 2020



Map by Nelson Byrd Woltz Landscape Architects
Machicomoco will not have motorboat launching or the bike and boat share program
The map will be updated with the master plan map as soon as it is completed

Proposed Recreation and Circulation

- Hiking Trail or Boardwalk
- Bicycle Path
- Vehicular Road
- - - Kayak and Canoe Route
- - - Motorized Boat Access and Route
- Public Boat Ramp
- Pedestrian Rest and Overlook
- ◆ Campground Facility
- ⬡ Archaeological Site
- Bike and Boat Share Station

Figure 1. – Map of Machicomoco

Acronyms and Abbreviations

DCR	Department of Conservation and Recreation
FTE	Full Time Equivalent (Employee)
FY	Fiscal year
GA	General Assembly
GF	General Funds
MA	Machicomoco State Park
MOU	Memorandum of Understanding
NPS	National Park Service
RV	Recreational Vehicle
VDOT	Virginia Department of Transportation
VSP	Virginia State Parks

Table of Contents

	Page
Executive Summary/Introduction	7
Mission, Vision, and Objectives	7
Mission	7
Vision	7
Objectives	7
Park Description and Strengths, Weaknesses, Opportunities, and Threats	8
Description	8
Strengths, Weaknesses, Opportunities and Threats	13
Market Analysis	15
Demographics	15
User Characteristics	16
Market Trends	16
Marketing	17
Financial Analysis	19
Strategies, Work Plan, Milestones Summary	19
Financial Analysis/Projections	19
Annual Expenses	20
Economic Impact	21
Summary	27

Tables

Table	Page
1 Machicomoco State Park Facilities and Services (Phase I)	11
2 Personnel Plan	12
3 Machicomoco State Parks Partners	13
3.A Future Partners of Machicomoco State Park	13
4 Strengths, Weaknesses, Opportunities, and Threats	15
5 Demographic Information	15
6 Machicomoco State Park Users	16
7 VSP Social Media Growth	18
8 Machicomoco State Park Estimated Revenues	19
9 Machicomoco State Park Estimated Expenditures	20
10 Machicomoco State Park Estimated Financials	20
11 Year 1: Projected Economic and Fiscal Impacts of Machicomoco State Park	22
12 Year 2: Projected Economic and Fiscal Impacts of Machicomoco State Park	23
13 Year 3: Projected Economic and Fiscal Impacts of Machicomoco State Park	24
14 Year 4: Projected Economic and Fiscal Impacts of Machicomoco State Park	25
15 Year 5: Projected Economic and Fiscal Impacts of Machicomoco State Park	26
16 Total: Projected Economic and Fiscal Impacts of Machicomoco State Park	27

Figures

Figure

1 Map of Machicomoco State Park

Page

3 & 10

Attachments

Attachment

Appendix A: Glossary of Economic Terms

Page

27

Executive Summary/Introduction

The purpose of this business plan is to develop realistic expectations for concessions and service development at Machicomoco State Park. This includes facilities, revenues, and expenditures associated with the park's operations. Business plans assist park management, and staff at Machicomoco State Park in the decision making process regarding the management, operation, and development of park resources. The plan focuses on the financial impacts of management decisions as well as future expectations of new facilities. Information in the business plan can be used to inform DCR management and State legislators of financial and economic impacts at Machicomoco State Park.

Machicomoco's business plan will need to be reevaluated and updated on a five-year rotational basis.

Mission, Vision, and Objectives

The mission, vision, and objectives of the Department of Conservation and Recreation, and Machicomoco State Park are as follows:

Mission

To provide opportunities that encourage and enable people to enjoy, protect and restore Virginia's natural and cultural treasures.

Machicomoco State Park will provide an understanding of the cultural, historical and natural-past, present and future - of the land while providing recreational opportunities to the public.

Vision

DCR, with the cooperation of partners and customers, is a leader in: providing tangible and lasting improvements to the quality of Virginia's resource lands and waters; serving as a trusted steward of the outdoor recreational and natural resources placed under its' care; promoting the conservation and enjoyment of Virginia's diverse and unique environment and rich cultural legacy for future generations; protecting public safety through regulatory programs and conservation law enforcement; and recognizing the value of its dedicated and committed workforce.

Machicomoco State Park will provide access to the historic, cultural and natural resources of the eastern region of Virginia that was once the Tsenacommacah (densely inhabited lands) of the Powhatan Indian Chiefdom from the 15th Century until today.

Objectives

1. Protect and conserve the natural, cultural, archeological and historic resources of Machicomoco State Park.

2. Provide diverse recreational opportunities for day-use and overnight visitation.
3. Provide for educational and interpretive programming opportunities in the park highlighting natural, cultural, archeological, and historical elements found on site and in the Middle Peninsula region.
4. Provide for cooperative working opportunities between the National Park Service, Virginia's Native Tribes and other groups to further the understanding of the past, present and future of the land and region.

Park Description and Strengths, Weaknesses, Opportunities, and Threats

Description

Machicomoco, which loosely translates as 'special meeting place', will open in 2020 as Virginia's 40th state park. Machicomoco State Park is located in Gloucester County on the York River and sits just twelve miles from Werowocomoco, Chief Powhatan's primary residence, and across the river from York River State Park. Situated on 644 acres of land that was once part of the chiefdom of the Powhatan Indians and their chief Wahunsenacawh (also known as Powhatan). Machicomoco will provide visitors with a glimpse at the life of the people that settled the land even before the English arrived in 1607.

Powhatan was a powerful confederacy of tribes that dominated the South-Eastern region of Virginia from the mouth of the James River north to the south end of the Potomac River and the Eastern Shore. The Powhatan, also called Virginia Algonquians, spoke an eastern-Algonquian language. The Chief, Wahunsenacawh, built a mighty empire starting with six tribes and growing it to thirty or more by conquering or through agreements of affiliation from other tribes, between the late 1500s and 1607. Chief Powhatan's Chiefdom covered approximately one hundred square miles.

Most notably known as the father of Pocahontas, Powhatan was the first encounter with a chief that John Smith and his party had when they were mapping the Chesapeake Bay. There were many interactions between the Powhatan and English settlers, some friendly and others hostile. In one telling, John Smith was captured by Wahunsenacawh's younger brother Opechancanough and brought to Werowocomoco. According to the story, as Smith was being prepared for execution ten year old Pocahontas pleaded with her father to let Smith live. Historians have found writings by Smith in his diary about meeting the young princess when visiting with her father. Smith does not however mention Pocahontas in relation to his capture and it is believed he may actually have met her months later.

Relations with the English began to degrade in 1609 and Powhatan moved his primary residence from Werowocomoco to Orapax, at the head of the Chickahominy River. In 1614, he moved his residence once again to the north bank of the Pamunkey River. Wahunsenacawh died in 1618 and his chiefdom passed to his younger brother Opechancanough who ruled the tribe until he

was captured and killed in 1646. After Opechancanough's death, Chief Totopotomoi, the Pamunkey weroance, received 5,000 acres on the Pamunkey River. Today about two hundred Pamunkey Indians live on the Reservation which is now just 1,200 acres.

The Virginia Company began dividing areas of James Cittie for development in 1619. The land that was once home, fishing and farmland for the Powhatan was granted to the English settlers starting in 1639 to be farmed for tobacco. Formed in 1651, from part of York County, Gloucester County was established taking its name from Henry Stuart, the Duke of Gloucester.

Tobacco was the chief crop during the 17th and 18th century and brought many plantation owners significant wealth. Many of the old plantation houses and estates have been preserved and are open for public viewing during Historic Garden Week. Through the years, Gloucester has earned a reputation for its fertile farmland, plentiful oysters and fishing, and is known as the Daffodil Capital of Virginia.

In the mid-17th century, what became known as Timberneck Farm, was part of the Rosewell plantation. The land was sold to the Catlett family near the end of the 18th century and was operated as a farm until the early 2000s. At that time it was sold to developers for a forty-nine site subdivision. The plan to develop Timberneck Farms as a subdivision was never brought to fruition and in 2017 the Conservation Fund purchased the land from Timberland Farm, LLC. More information on the park's story will be available in the park Visitor Experience Plan, which is under development.

The Machicomoco State Park project was funded as a result of negotiations by the Commonwealth of Virginia and Dominion Energy, subject to the Army Corps of Engineers, approval of a multiparty Memorandum of Agreement as part of the mitigation package for the power line across the James River. The agreement includes development of a state park on the York River as part of the Captain John Smith Trail and Tribal negotiations. The purchase, protection, and development of this property as a park dedicated to the understanding of the Virginia Indian tribes' use of the area's natural resources mitigates for the transmission line's impacts to the Captain John Smith National Water Trail. Working in conjunction with the Department of Conservation – Division of State Parks and Nelson Byrd Woltz Landscape Architects, Machicomoco is the first Virginia State Park to be purchased and developed by an outside source. Typically DCR procures the land through purchases or donations and develops state parks with community input and a master plan that outlines each phase of development.

Machicomoco is scheduled to open in fall 2020 with trails for hiking and biking, picnic shelters, a car-top boat launch, day-use boat slips and overnight camping. As a new park, attendance figures are unknown so annual visitation for York River and Belle Isle State Park, which are similar in size and amenities, are being used for estimates at Machicomoco.



Map by Nelson Byrd Woltz Landscape Architects
Machicomoco will not have motorboat launching or the bike and boat share program
The map will be updated with the master plan map as soon as it is completed

Proposed Recreation and Circulation

- Hiking Trail or Boardwalk
- Bicycle Path
- Vehicular Road
- - - Kayak and Canoe Route
- - - Motorized Boat Access and Route
- Public Boat Ramp
- Pedestrian Rest and Overlook
- ◆ Campground Facility
- ⬡ Archaeological Site
- Bike and Boat Share Station

Figure 1. – Map of Machicomoco

A list of the facilities and services can be found in Table 1.

Table 1— Machicomoco State Park facilities and services

Feature/service	Description
Contact Station/Park Office	First point of contact and campground guest registration. Houses park offices and gift shop
Multi-use trails	Three miles of hiking and biking trails and two miles of hiking trails
Educational area/Interpretive area	Open-air educational building telling the story of the Native Tribes that first inhabited the land through current day. Includes two shelters and comfort station.
Car-Top Boat Launch	A hand carry boat launch with 125' pier
Boat slips	Ten daytime tie up slips for boat access to park
Campground	14 w/e sites, 13 tent only sites, 3 yurts and bathhouse
Catlett/Timberneck House	1800s farmhouse that is being restored and preserved by Fairfield Foundation. Fairfield Foundation will oversee the use of the house when it is restored

Machicomoco State Park will be staffed by three full-time employee, seasonal staff, and volunteers. Currently the park has no full-time park manager. The District Manager is serving as park manager. Staff at Machicomoco will be dedicated to maintaining the history of the park and surrounding areas and excel at customer service. Table 2 outlines the park's staffing plan. Table 2 is presented on the following page.

Table 2 — Machicomoco Personnel Plan

Position	Primary duties
Park Manager/Natural Resource Manager II	<ul style="list-style-type: none"> • Oversees all operations • Budgeting and purchasing • Financial reporting • Emergency response • Facility maintenance • Human Resources
Chief Ranger	<ul style="list-style-type: none"> • Law enforcement • Emergency response • Facility management
Park Ranger	<ul style="list-style-type: none"> • Facility Maintenance
Permanent part-time staff (3 6)	<ul style="list-style-type: none"> • Perform a variety of duties • Office Management • Interpretive Programs • Maintenance
Seasonal Staff (2 -5)	<ul style="list-style-type: none"> • 1500 hour staff hired to fill a variety of positions during the main season

Second number in parenthesis represents additional needs in future years.

The levels of dedication, commitment and professionalism of the Virginia State Park staff and volunteers are second to none and result in extraordinarily high customer satisfaction. Virginia State Parks are continually adapting to best practices, new technology, operational efficiencies and enhanced training. In fiscal year 2018, over 220,000 hours were provided through the state parks volunteer program as well as special programs such as the Youth Conservation Corps and AmeriCorps. These efforts equate to 107.5 full-time employees.

The largest volunteer support for Virginia State Parks comes from the Virginia Association for Parks (VAFP). Recognizing the potential to strengthen volunteer support organizations in the Commonwealth, The VAFP was launched at a statewide park volunteer training conference held in Fredericksburg in November 1997.

VAFP has grown to become the nonprofit umbrella organization for the respective citizen support groups (Friends Groups) and individual volunteers supporting the 38 parks, 63 state natural areas and the 22 national parks, monuments and historic sites located across the Commonwealth. In 2018, VAFP had over 4,000 members and continues to grow each year.

Machicomoco State Park has identified several partners or other organizations with a mutual interest in the park's operation and success. Table 3 specifies existing and potential partners and their roles in the operation and development of the park. Table 3 is presented on the following

page.

Table 3 — Machicomoco State Park partners

Partner	Potential or existing role
National Park Service	<ul style="list-style-type: none"> Assist with interpretation of the park Develop partnership involving Werowocomoco and the Captain John Smith Chesapeake National Historical Trail
Native Sovereign Virginia Tribes	<ul style="list-style-type: none"> Assist with interpretation and history of the land
Fairfield Foundation	<ul style="list-style-type: none"> Restoration of Catlett/Timberneck House Oversite of house after restoration
Virginia Institute of Marine Science	<ul style="list-style-type: none"> Assist cooperatively on protection and preservation of the wetland resources Assist in preservation of natural resources
Department of Historic Resources	<ul style="list-style-type: none"> Assist with preservation of historic resources
Virginia Association for Parks	<ul style="list-style-type: none"> Advocates for parks to federal, state and local elected officials for critical issues and funding

Table 3 A.—Future Machicomoco State Park partners

Partner	Potential or existing role
Friends of Machicomoco State Park	<ul style="list-style-type: none"> Perform fundraising for specific projects Advocate with federal, state and local elected officials for critical issues and funding
Volunteers	<ul style="list-style-type: none"> Assist park with projects
Gloucester County Parks and Recreation and Schools	<ul style="list-style-type: none"> Special programming and educational activities

Strengths, Weaknesses, Opportunities, and Threats

Nestled on the York River, between Cedarbush, Timberneck and Poplar Creeks, Machicomoco sits on a peninsula surrounded by a Riparian Forest. Once slated to become a subdivision, the

land will now be preserved for residents of the Commonwealth to enjoy a variety of day-use and overnight activities.

As a new park, Machicomoco is open to a realm of possibilities and opportunities. Steeped in the history of Virginia's Native Tribes as well as the English Settlers to the New World, Machicomoco will tell the story of life from the 15th century through today. Not only rich in the history of people that lived in the area prior to 1607, but the area is also rich in natural resources.

When Machicomoco opens in fall 2020, it will consist of an office/contact station/gift shop, trails, two shelters with an open air interpretive area, comfort station, Car-top boat launch, campground with tent, RV and yurt camping and a bathhouse. The property also contains the Catlett/Timberneck House that is currently being restored and will be operated by a non-profit foundation through an MOU with the DCR.

The strength of Machicomoco, besides being a new park with new facilities, is the location. The park allows access to the river for kayaks and canoes, and will provide day-use slips for those choosing to visit the park by boat. Sitting on the peninsula allows for stunning views, abundant waterfowl viewing, and great fishing.

As seen in Table 3, there are a number of strong partnerships already in place. These partners will enable the park staff to better tell the story of the rich history, cultural and natural resources of the park and will assist in preserving the land. Partnering with the Virginia Sovereign Tribes will allow them to tell their history/stories of the region.

Because Machicomoco is a new park there are only a few identified weaknesses. Attendance for the park is unknown so similar parks were used to develop estimates for revenues and expenditures. At the time of the writing of this business plan no staff have been hired, so interpretive and educational programs have not been developed. The biggest weakness is the possible conflict between neighbors and the park. The park is located in a large residential area, so there will be an increase in traffic that neighbors are not use to.

The park development team has identified the need for more hiking trails, a motorized boat launch and visitor center in the future. At this time there are no plans or funding to add additional facilities to the park within the next five years.

A master plan has not been developed for the park at the writing of this business plan. The master plan will include future phases of development, once it is complete. The business plan will be revised to include any additional revenue producing facilities or programs that may be developed as part of the master plan for the park.

Table 4 lists the current strengths and weaknesses of Machicomoco State Park, as seen by the development team and DCR, as well as potential opportunities and threats to its operations. Table 4 is presented on the following page.

Table 4 — Strengths, weaknesses, opportunities, and threats

Strengths	Weaknesses
<ol style="list-style-type: none"> 1. New park facilities 2. Community support 3. Water access 4. Partnerships with local groups 	<ol style="list-style-type: none"> 1. Location at end of residential streets 2. Unknown attendance 3. Lack of programs
Opportunities	Threats
<ol style="list-style-type: none"> 1. Develop programs 2. Motorized boat launch 3. Visitor Center 	<ol style="list-style-type: none"> 1. Complaints from neighbors on traffic 2. Public expectations on events

Market Analysis

Virginia State Park’s primary customers are families, school groups, and visitors from across the United States and around the world.

Demographics

The makeup of the population in Gloucester County that mostly comprises the local day use visitors at Machicomoco State Park is identified in table 5.

Table 5 — Gloucester County Demographic information for (2017)

Demographic	Local	State	National	World
Population	37,035	8,525,660	326,795,641	7,550,262,101
Average age	44.6	37	37.8	29.6
Income	\$63,881	\$68,114	\$57,230	\$9,733
Male	49.2%	49.1%	49.2%	50.4%
Female	50.8%	50.9%	50.8%	49.6%

Sources: Data USA Gloucester County and the US and World Census Bureaus.

The majority of visitors at Machicomoco will be from Gloucester County and the surrounding area. According to the 2017 population estimates for Gloucester County, the break down by race

is as follows: Caucasian 85.1%, African-American 8.15% and Hispanic 3.28%. Of the Gloucester County population 99.4% are citizens of the United States.

Gloucester County is the 46th most populated county in Virginia and is bordered by Mathews, King and Queen Counties and the York River and Chesapeake Bay. According to the VDOT Fredericksburg District, approximately 32,000 cars traverse Route 17, 2,500 turn onto Crews Road (Route 1307) and 430 travel Timberneck Drive, which ends at the park entrance, each day.

According to the Virginia Tourism’s Chesapeake Bay Region Travel Profile, of 274 visitors surveyed, 14% visited for rural sightseeing, 21% for historic sites/churches, and 17% for beaches. The top ten states that visitors come from are: Virginia, Maryland, New York, North Carolina, Pennsylvania, Ohio, Tennessee, Florida, Michigan, and South Carolina. Note: The Virginia Department of Tourism has changed its’ reporting from parks and recreation to urban and rural sightseeing.

User Characteristics

Virginia State Parks and Machicomoco State Park have identified the following users or target markets currently served by park facilities and programs in Table 6.

Table 6 – Virginia State Park User Characteristics

Customer	Description	Activities/Characteristics
Families	Virginia average was 3.2 persons per family in 2017	Visit the park, hike, attend events, and shop.
Boomers	Visitors ages 52-70	Visit the park, hike, attend events, and shop.
Water-use enthusiasts	Individuals and families	Visit the park to paddle the creeks and York River
Birders	Individuals and families	Visit the park to view the various bird populations and habitats.
Groups	Scouts and others	Visit the park, hike, fish, paddle, and attend events.
Children	School groups	Visit the park to attend events and interpretive programming
Hikers/bikers	Individuals and families	Visit the park to use the trails

Market Trends

General trends in outdoor recreation are as follows:

- Greater awareness of value of leisure – overall increased demand for leisure activities.
- Expectation of recreation facilities – more “comfort” oriented.
- Preference for individual or informal activities is increasing. People are looking for authentic “experiences.”

- Participation by older adults in active recreation and sport has increased.
- Average age of outdoor recreation participant is increasing (baby boomers).
- Number of minority participants is increasing (most notably Hispanic populations).

Marketing

Machicomoco State Park is included in a significant marketing benefit enjoyed by the 40 state parks and a supporting reason for the nearly 10 million visitors annually. Blog and Facebook post will be released to promote opening day of the park as well as local media announcements.

Virginia State Parks Website, Blog and E-newsletter

The Virginia State Parks website is designed to provide detailed information on the offerings of the Virginia State Park system. Information is provided so that visitors to the site can easily find the information they need. Over two million people visit the website annually, a number that continues to grow.

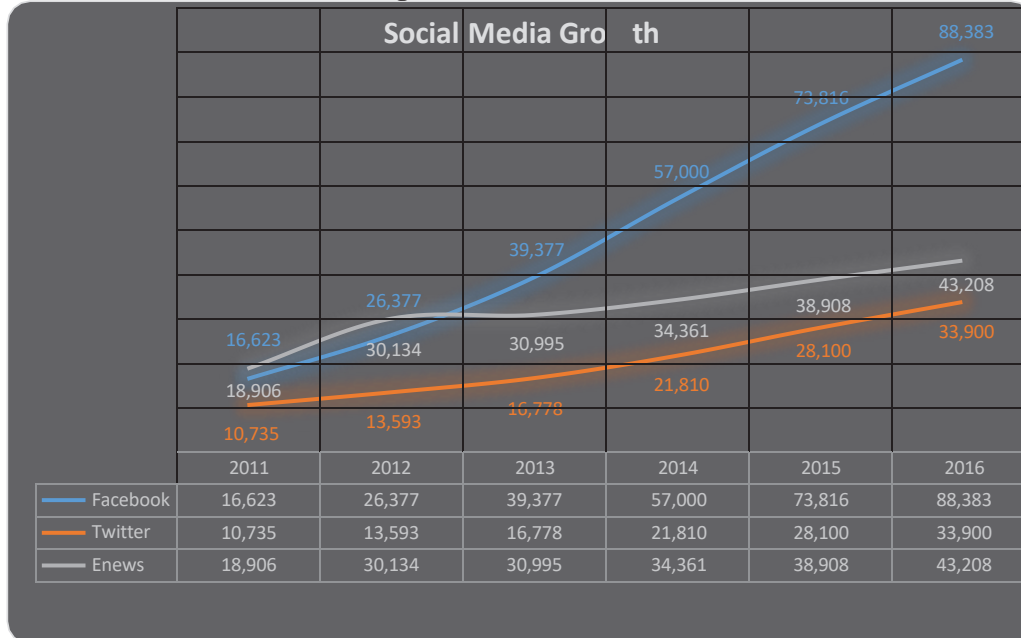
The site is responsive (mobile friendly) to take advantage of the 59% of visitors who search the web using their mobile devices or tablets. Website content is reviewed monthly to keep the information current. In 2017, the website had 9.3 million page views.

The State Park blog features frequent articles on current programming and events in the park as well as detailed information about facilities and park specific activities. The blog adds new and fresh content to the website. Similarly, the Virginia State Parks weekly e-newsletter is delivered to over 52,000 subscribers' and features news articles and fresh content as well as links to programs and events happening within the next ten days.

The State Park program and event database provides a tool for visitors to find programs and events in parks by date, type of event, and/or location. Upcoming events are also included at the bottom of every park's webpage.

Social Media

Virginia State Parks has been actively using social media sites to promote parks, facilities and programming for eight years. Currently Virginia State Parks is active on Facebook (112,000 followers), Twitter (34,400 followers), Google+, LinkedIn, Pinterest and Instagram. Table 7 contains a graph showing the growth from 2011 to 2016 in social media followers. Table 7 is presented on the following page.

Table 7 – Virginia State Park Social Media Growth


Statewide Advertising

Virginia State Parks has been aggressively challenging old marketing techniques to expand the effectiveness of advertising dollars and to reach a more mobile and technology-dependent traveling public. The statewide advertising budget focuses on television, radio, print, search, mobile and digital advertising in Virginia, North Carolina and the DC Metro area.

A \$100,000 annual partnership with the Virginia Association of Broadcasters and Virginia Tourism offers statewide television and radio ads. Short seasonal nature break television and radio commercials have enabled State Parks to reach a greater market saturation level in Tidewater, Richmond, Roanoke and North Carolina. In 2017, Virginia State Parks launched its first large scale search and display, and weather.com advertising campaigns. With a budget of \$420,000 the statewide marketing budget supports the State Park system well.

Regional and Local Advertising

Virginia State Parks receives \$60,000 per region (eastern and western) to be used for local and regional marketing with an emphasis on local programming and offerings and co-op opportunities with other Tourism partners. Cooperative ads will also be possible with other nearby districts.

Virginia State Parks participates in local and regional community events and festivals as a way to reach potential customers. This year staff will be attending RV/Camping Shows and big outdoor festivals.

Financial Analysis

Strategies, Work Plan, and Milestones Summary

An outline of the strategies used to effectively manage Machicomoco State Park is presented below.

Financial Analysis and Projections

As a brand new park, Machicomoco does not have historical data that can be used to forecast future revenues. Upon opening, revenues will be generated through parking, camping, shelter rentals and merchandise sales. Once interpretive programs are developed, revenues will be realized from them as well.

Revenues for FY21 take into account the fall opening timeframe and were developed using October 3, 2020 as opening day. The date was selected based on opening dates for other new parks and is subject to change.

Table 8 contains estimates of the revenues for the next five years of operation. Besides parking, revenues are also anticipated from interpretive programs, sales of merchandise, reservations of campsites and yurts, and reservations of picnic shelters

Table 8 — Machicomoco Estimated Revenues

Revenue Type	FY2020	FY2021	FY2022	FY2023	FY2024
Camping	\$0	\$45,208	\$100,000	\$106,00	\$111,300
Parking	\$0	\$27,375	\$36,500	\$37,595	\$38,723
Resv Fees	\$0	\$1,700	\$2,450	\$2,475	\$2,499
Interpretive EDU	\$0	\$1,000	\$10,000	\$10,500	\$11,025
Merchandise	\$0	\$15,000	\$25,000	\$27,500	\$28,325
Shelter	\$0	\$1,200	\$2,500	\$2,550	\$2,601
Land Leases	\$0	\$3,750	\$5,000	\$5,000	\$5,000
Other	\$0	\$250	\$253	\$255	\$258
TOTAL REVENUE	\$0	\$95,483	\$181,703	\$191,875	\$199,731

FY20 ends June 30, 2020

Annual Expenses

Through the development of the park by Dominion Power, Machicomoco State Park will not have expenditures for the first two years of operation. Expenditures for the park from state funds will begin in FY23.

Contractual Services include but are not limited to: postal services, telephone service, employee training, maintenance and repairs to equipment, and vector services. Supplies and materials include but are not limited to: staff uniforms, office supplies, gasoline and/or propane, and building custodial needs. Continuous charges include but are not limited to: equipment rentals, electrical, internet, refuse, water, and sewer services.

The estimated annual expenses to operate Machicomoco State Park are shown in Table 9.

Table 9 — Machicomoco Estimated Expenses

Expense type	FY20	FY21	FY22	FY23	FY24
Salaries and benefits	\$0	\$279,544	\$282,339	\$285,162	\$288,014
Wages	\$0	\$81,276	\$81,276	\$81,276	\$86,152
Contractual Services	\$0	\$38,500	\$39,000	\$40,000	\$45,000
Supplies & Materials	\$0	\$80,000	\$70,000	\$72,000	\$73,000
Merchandise	\$0	\$8,000	\$10,000	\$10,000	\$10,000
Continuous Charges	\$0	\$25,000	\$25,000	\$26,000	\$26,000
Site Improvements	\$0	\$10,000	\$10,000	\$12,000	\$12,000
Equipment	\$0	\$75,000	\$10,000	\$10,000	\$10,000
TOTAL EXPENSES	\$0	\$597.320	\$527.615	\$536.438	\$550.166

Table 10 contains the estimates of the net revenues, and expenditures for the next five years of operation. Overall, general and non-general funds make up the deficits at Machicomoco State Park once Dominion Power's financial support concludes. Business plans will be on a five year review and update cycle.

Table 10 — Machicomoco Financials

Fiscal Year	FY20	FY21	FY22	FY23	FY24
Anticipated Rev.	\$0	\$95,483	\$181,703	\$191,875	\$199,731
Anticipated Exp.	\$0	\$597.320	\$527.615	\$536.438	\$550.166
TOTAL NET	\$0	(\$501,837)	(\$345,912)	(\$344,563)	(\$350,435)

Economic Impact

The Economic and Fiscal Impacts of Machicomoco State Park

Through a memorandum of understanding (MOU) between the Virginia Department of Conservation and Recreation and Virginia Tech, the economic and fiscal impacts portion of Virginia's State Parks' business plans are estimated in Virginia Tech's Pamplin College of Business. The economic models are built and calculated using IMPLAN software, a widely used software package for economic modeling. The most recent commercially available IMPLAN multipliers were purchased and uploaded into the software.¹

While physical and health-related benefits associated with visiting parks are widely known, the economic impacts associated with park operations are also important. Understanding these economic impacts, for example, aids in informing decisionmakers within the context of resource allocation and investment decisions. Therefore, the economic and fiscal impacts of the next five years of Machicomoco's operations are partitioned by year in Tables 11-15. As will be seen, these Tables report a host of metrics such as jobs supported (direct, indirect, and induced) and forecasted state and local tax revenue generation. In addition, Table 16 provides a summary of all five years (combined) and also offers more detailed visitor spending calculations. For instance, forecasted Virginia resident versus non-resident spending is parsed-out.

For ease of interpretation, Appendix A contains a glossary of economic impact terminology.

{Year 1 begins on next page}

¹ IMPLAN multipliers typically do not change significantly from year-to-year. Nevertheless, it is important to note the further out forecasts span in this section (e.g. YEAR 5), the higher the likelihood that items such as tax rate changes are not reflected in the IMPLAN multipliers used in this modeling.

YEAR 1 Economic Estimations:

As seen in the previous section of this report, Machicomoco was not operational during the first year of this business plan.

TABLE 11:
YEAR 1: PROJECTED ECONOMIC AND FISCAL IMPACTS OF MACHICOMOCO STATE PARK

Year 1	Attendance Forecasted by Park Management:	0 day visitors 0 camping guests 0 cabin guests			
	Economic Activity:	\$0 (Unadjusted = \$0; Adjusted = \$0)			
	Park Visitors' 4 Largest Spending Categories:	0			
	Jobs:	Total: 0	Direct: 0	Indirect: 0	Induced: 0
	Labor Income:	Total: \$0	Direct: \$275K	Indirect: \$95K	Induced: \$90K
	State and Local Tax Revenues:	\$0			
	Value-Added Effect:	\$0			
	Economic Impact:	\$0 (Unadjusted = \$0; Adjusted = \$0)			

{Year 2 Economic Impacts Presented on Next Page}

YEAR 2 Economic Estimations:

In terms of Year 2 of this business plan, as listed in Table 12, approximately 35,300 day visitors and 5,000 camping guests are forecasted by park management. These visitors are expected to spend an estimated \$258K in restaurants and an additional \$200K on groceries around the state as they travel to and from Machicomoco. The spending associated with these park visits will support approximately 27.2 jobs around the Commonwealth which equates to about \$1.2M in labor income.

In sum, the total economic activity in Year 2 of this plan supported by Machicomoco State Park is estimated at \$2.7M. This economic activity will generate approximately \$143K in state and local tax revenues and contribute roughly \$1.7M to the gross domestic product (GDP) of Virginia through value-added effects. Lastly, IMPLAN modeling indicates that the fresh money generated by Machicomoco State Park during Year 2 will be roughly \$1.9M. It is relevant to note that this forecasted economic impact is driven largely by park visitation because no capital improvements are scheduled for Year 2.

TABLE 12:
YEAR 2: PROJECTED ECONOMIC AND FISCAL IMPACTS OF MACHICOMOCO STATE PARK

Year 2	Attendance Forecasted by Park Management:	35,000 day visitors 5,000 camping guests 0 cabin guests			
	Economic Activity:	\$2.7M (Unadjusted = \$2.8M; Adjusted = \$2.7M)			
	Park Visitors' 4 Largest Spending Categories:	Restaurants: \$258K	Groceries: \$200K	Hotels: \$199K	Gas: \$180K
	Jobs:	Total: 27.2	Direct: 19.7	Indirect: 2.9	Induced: 4.6
	Labor Income:	Total: \$1.2M	Direct: \$771K	Indirect: \$170K	Induced: \$229K
	State and Local Tax Revenues:	\$143K			
	Value-Added Effect:	\$1.7M			
	Economic Impact:	\$1.9M (Unadjusted = \$2.1M; Adjusted = \$1.8M)			

YEAR 3 Economic Estimations:

Regarding Year 3, as seen in Table 13, park management forecasts an estimated 39,000 day visitors and 15,000 camping guests. This visitation will drive roughly \$3.7M in economic activity and support approximately 37.0 jobs in Virginia. The majority of these jobs (26.6) are where visitors spend their money directly (gas stations, restaurants, and the park itself) and the remainder of jobs are indirect and induced.

TABLE 13:
YEAR 3: PROJECTED ECONOMIC AND FISCAL IMPACTS OF MACHICOMOCO STATE PARK

Year 3	Attendance Forecasted by Park Management:	39,000 day visitors 15,000 camping guests 0 cabin guests			
	Economic Activity:	\$3.7M (Unadjusted = \$3.8M; Adjusted = \$3.6M)			
	Park Visitors' 4 Largest Spending Categories:	Restaurants: \$423K	Hotels: \$365K	Groceries: \$312K	Gas: \$299K
	Jobs:	Total: 37.0	Direct: 26.6	Indirect: 4.4	Induced: 6.0
	Labor Income:	Total: \$1.5M	Direct: \$954K	Indirect: \$260K	Induced: \$296K
	State and Local Tax Revenues:	\$208K			
	Value-Added Effect:	\$2.3M			
	Economic Impact:	\$2.9M (Unadjusted = \$3.1M; Adjusted = \$2.6M)			

The economic activity forecasted for Year 3 is predicted to make an estimated \$2.3M contribution to Virginia's GDP (value-added effect) and generate approximately \$208K in state and local tax revenues. Like in previous years, these effects are mostly driven by park visitation as no large capital improvements are currently scheduled for Year 3. When the IMPLAN model is calculated excluding the spending of local residents, the fresh money economic impact of Machicomoco State Park during Year 3 is estimated at \$2.9M.

YEAR 4 Economic Estimations:

For Year 4, park management forecasts approximately 45,000 day visitors and 20,000 camping guests (see Table 14). These visitors will likely spend about \$512K in restaurants and \$436K in hotels around the state traveling to/from Machicomoco. The economic activity in the Commonwealth supported by these visits is modeled to be \$4.4M contributing approximately \$2.7M to the GDP of Virginia (value-added effect) and about \$1.8M in labor income. State and local municipalities are projected to collect a total of \$248K in tax revenues resulting from Machicomoco State Park's economic activity. Fresh money economic impact stimulated by the park during Year 4 is forecasted at \$3.4M. Lastly, it is important to point out that these economic impacts are driven by park visitation as no major capital improvements are anticipated during Year 4.

TABLE 14:
YEAR 4: PROJECTED ECONOMIC AND FISCAL IMPACTS OF MACHICOMOCO STATE PARK

Year 4	Attendance Forecasted by Park Management:	45,000 day visitors 20,000 camping guests 0 cabin guests			
	Economic Activity:	\$4.4M (Unadjusted = \$4.5M; Adjusted = \$4.3M)			
	Park Visitors' 4 Largest Spending Categories:	Restaurants: \$512K	Hotels: \$436K	Groceries: \$386K	Gas: \$365K
	Jobs:	Total: 43.9	Direct: 31.5	Indirect: 5.4	Induced: 7.0
	Labor Income:	Total: \$1.8M	Direct: \$1.1M	Indirect: \$315K	Induced: \$349K
	State and Local Tax Revenues:	\$248K			
	Value-Added Effect:	\$2.7M			
	Economic Impact:	\$3.4M (Unadjusted = \$3.7M; Adjusted = \$3.1M)			

{Year 5 begins on next page}

YEAR 5 Economic Estimations:

In terms of Year 5, as detailed in Table 15, an estimated 46,000 day visitors and 25,000 camping guests are forecasted by park management. The forecasted economic activity during Year 5 tallies to roughly \$4.9M. This economic activity is predicted to support approximately 48.1 jobs which translates into about \$1.9M in labor income. This Year 5 economic activity is also forecasted to generate \$273K in state and local tax revenues. Like with Years 2-4, no major capital improvements are forecasted.

It is prudent to note that items such as tax revenues cannot be precisely estimated five years in advance due to various factors such as potential changes in tax rates. With this caveat stated, the estimates in Table 15 are the best possible using the current IMPLAN multipliers.

TABLE 15:
YEAR 5: PROJECTED ECONOMIC AND FISCAL IMPACTS OF MACHICOMOCO STATE PARK

Year 5	Attendance Forecasted by Park Management:	46,000 day visitors 25,000 camping guests 0 cabin guests			
	Economic Activity:	\$4.9M (Unadjusted = \$5.0M; Adjusted = \$4.8M)			
	Park Visitors' 4 Largest Spending Categories:	Restaurants: \$560K	Hotels: \$464K	Groceries: \$433K	Gas: \$404K
	Jobs:	Total: 48.1	Direct: 34.6	Indirect: 5.8	Induced: 7.7
	Labor Income:	Total: \$1.9M	Direct: \$1.2M	Indirect: \$346K	Induced: \$382K
	State and Local Tax Revenues:	\$273K			
	Value-Added Effect:	\$3.0M			
	Economic Impact:	\$3.7M (Unadjusted = \$4.0M; Adjusted = \$3.4M)			

{Years 1-5 combined begin on next page}

YEARS 1-5 COMBINED:

The combined totals of Years 1-5 are presented in Table 16. As can be seen, the total economic activity across the 5-year span is forecasted at \$15.7M. Of this total, a significant portion of it derives from \$4.1M of spending inside Virginia by out-of-state visitors to Machicomoco State Park. With the most recent statewide tax rates used to estimate, the projected state and local tax revenues across five years are predicted to sum to roughly \$872K. The fresh money economic impact in this 5-year window is forecasted to be \$11.9M. On average, across the 5-years of this plan, the economic activity stimulated by visitation to this park supports an average of 39.0 jobs (direct, indirect, and induced) each year in the Commonwealth.

**TABLE 16:
TOTAL 5-YEAR PROJECTED ECONOMIC AND FISCAL IMPACTS OF MACHICOMOCO STATE PARK**

Total: Years 1-5	Economic Activity:	\$15.7M			
	5-Year Spending by Park Visitors:	VA resident visitors: \$5.2M Out-of-state visitors: \$4.1M			
	Park Visitors' 4 Largest Spending Categories:	Hotels: \$1.5M	Restaurants: \$1.8M	Groceries: \$1.3M	Gas: \$1.2M
	Jobs (Average per year):	Total: 39.0	Direct: 28.1	Indirect: 4.6	Induced: 6.3
	Labor Income:	Total: \$6.4M	Direct: \$4.0M	Indirect: \$1.1M	Induced: \$1.3M
	State and Local Tax Revenues Generated:	\$872K			
	Value-Added Effect:	\$9.7M			
	Economic Impact:	\$11.9M			

Summary

As a new park, Machicomoco has endless opportunities and will be a great asset to Virginia's state park system. The park's competitive edge is its access to the York River and historic significance to Virginia. Being located in close proximity to residential areas gives neighbors the opportunity to visit the park often for relaxation and recreation.

Steeped in history that predated Native American Indian residents, and the early English settlers, the close proximity to Werowocomoco and Powhatan's Chimney Machicomoco will be a mecca for history buffs as well as nature lovers. Water enthusiasts will enjoy fishing, and boating

along the creeks and river, while hikers and bikers will enjoy the flat land trails that encircle the peninsula.

The role of State Parks is wide and varied. Not only do they preserve natural, cultural and historic resources, they provide programming and recreation that enhances the lives of visitors as well as serve as an economic stimulator for the region. The addition of Machicomoco to the Tidewater region will help to provide unique recreational opportunities to a visitor base that lives and works in one of the busier areas of the Commonwealth. The peacefulness of Machicomoco State Park within this region will serve thousands of guests looking for a respite from the stress of everyday life. The opening of Machicomoco State Park will provide this respite for many years to come and will undoubtedly become one of Virginia's destination recreational locations.

APPENDIX A: GLOSSARY OF ECONOMIC TERMS²

Direct effects – the changes in sales, income and jobs in an area as a result of first-round visitor spending.

Economic impact – economic output modeling that includes all visitor spending and consequent multiplier effects by 1) in-state residents traveling more than 50 miles one-way to visit the park; and 2) all out-of-state visitors. In addition, economic impact models include capital construction and operation expenditures not derived from visitor spending. Thus, economic impact figures reflect all of the “fresh money” entering an area’s economy as a result of a given state park.

- **Unadjusted economic impact** - economic impact output figures computed using statewide IMPLAN multipliers.
- **Adjusted economic impact** – calibrated economic impact output figures based upon whether a given park’s county(ies) has economic activity above or below the state average. Adjusted economic impact figures are also reduced by 12% to account for spending by park visitors who would have traveled and spent money in the state regardless of whether the park existed.

Economic activity – economic output modeling that includes all visitor spending and consequent multiplier effects by both locals and non-locals as well as any money spent by parks that was not supported by visitor spending. Consequently, economic activity figures represent all of the economic activity stimulated by a park location within the state.

- **Unadjusted economic activity** - economic activity output figures computed using statewide IMPLAN multipliers.
- **Adjusted economic activity** – calibrated economic activity output figures based upon whether a given park’s county(ies) has economic activity above or below the state average.

Indirect effects – the changes in sales, income and jobs to businesses that supply goods and services to the park location.

Induced effects – the changes in economic activity in the region stimulated by household spending of income earned through direct and indirect effects of visitor spending.

² Many of these definitions are adapted directly from: Stynes, D. J., Propst, D. B., Chang, W., & Sun, Y. (2000). Estimating national park visitor spending and economic impacts: The MGM2 model. *Report to the National Park Service. East Lansing, MI: Department of Park, Recreation and Tourism Resources, Michigan State University.*

IMPLAN – a computer-based input / output economic modeling system. With IMPLAN one can estimate 528 sector input / output models for any region consisting of one or more counties. IMPLAN includes procedures for generating multipliers and estimating impacts by applying final demand changes to the model.

Multipliers – these estimates express the magnitude of the secondary effects in a given geographic area and are often in the form of a ratio of the total change in economic activity relative to the direct change. Multipliers reflect the degree of interdependency between sectors in a region’s economy and can vary substantially across regions and sectors.

Secondary effects – the changes in economic activity from subsequent rounds of re-spending of dollars. There are two types of secondary effects: indirect and induced (see above).

Value-added (also termed ‘gross regional product’) – the sum of total income and indirect business taxes. Value-added is a commonly used measure of the contribution of a region to the state/national economy because it avoids the double counting of intermediate sales and incorporates only the ‘value-added’ by the region to final products.

APPENDIX B – PUBLIC COMMENT SUMMARY AND AGENCY RESPONSES

A public comment meeting for the Machicomoco Master Plan was held on November 20, 2024. The meeting was a hybrid meeting with both in-person and online attendance. Approximately 35 members of the public attended in-person with several more attending online. The draft master plan, including the phased development and staffing plan, were presented by various staff members and park planners. Results of the public survey and internal planning workshops were also presented. The presentation is available to download as a PDF at <https://www.dcr.virginia.gov/recreational-planning/document/ma-masterplan-presentation11-20-24.pdf>.

At the end of the presentation, the public was invited to comment and ask questions at the meeting as well as by email during a 30-day comment period, which ended on December 20, 2024. The comments below are summaries of those received both at the meeting and during the comment period.

The comments have been edited and summarized and, in some cases, several comments concerning the same topic have been combined. Attempt has been made to not personally identify commenters or to present the comment in the first person.

Master Plan General

COMMENT:

The current master plan is incorrectly represented as a “10-year master plan” and is an initial plan for the park under the Code of Virginia. A request was made to change wording on the website to better match this aspect of the plan and provide clarity to the public.

RESPONSE:

The site came with a “master plan” that was developed by NBW Group and was accepted at the time as a base to build on. In the interim, the West Unit was added to the park and several development projects have been proposed. This changed the initial charge of the master plan to what can now be characterized as an initial master plan rather than a 10-year update. Upon approval, the website will be updated.

COMMENT:

Commenter is excited about this park’s future after reading the 10-year master plan. The commenter further expressed that they are looking forward to seeing the additions of picnic shelters and hopes to see future guided kayaking and historical educational opportunities and events.

RESPONSE:

Thank you for your comment.

COMMENT:

Comment was received regarding timing. The commenter agrees with many in the community that additional initial efforts should be dedicated to the eradication of invasive species throughout the park. It is understood that money is always a factor, and that the master plan cannot commit resources that the State cannot guarantee will be available. The commenter recommends a few statements about flexibility in the master plan to change priorities if the

commitment of third-party money and/or volunteer efforts are made available. Commenter pointed out that the volunteer efforts from the Friends Group, Master Naturalists and State Volunteers are well documented at Machicomoco. These groups will remain a reliable resource to advance some of the more labor-intensive aspects of the master plan elements such as invasive species eradication. Other opportunities include corporate and government Community Service/ Environmental, Sustainability and Governance goals that can be realized at the park.

The commenter also notes that text for flexibility in the master plan is also required to reflect ever evolving federal and state regulations, noting rule changes from the United State Fish and Wildlife Service (USFWS) for elevating the status of the monarch butterfly (*Danaus plexippus*) from Candidate to Threatened which represents an interesting and easy opportunity for Machicomoco State Park given the monarch's relationship with milkweed species (*Asclepias* spp.) which have been located in the park. If there is flexibility in the master plan, some areas could be targeted to propagate milkweed to enhance monarch habitat. One or two of the existing stormwater management ponds can be planted with milkweed and other pollinator species. This is a no to very low-cost opportunity. The stormwater management ponds are periodically mowed thereby precluding the need for additional dedicated operational funds. There are several volunteer organizations that can contribute planning and planting efforts: Master Gardeners, Native Plant Society, Master Naturalist, Virginia Butterfly Society, and Friends of Machicomoco. Planning, harvesting seed pods, germinating seeds, planting and monitoring are all activities that are generally less labor intensive and can be accomplished by a wide variety of ages and capabilities, thereby making it an easy hands-on community event. New pollinator beds in the park enhances the park experience, creates new wildlife photography opportunities and meets the conservation goals of the master plan. However, this type of opportunity only works if there is flexibility in the master plan to reflect these federal changes and implement a change at the park.

RESPONSE:

Thank you for your comment.

It is possible that the stormwater pond project could be done in house; it is a very interesting idea. A scope will need to be developed and a project proposal for it would happen outside of the planning process.

Treating Callery pears is a high priority for park resource management, and activities have been incorporated into the natural resources management plan. Due to budget and staffing, prioritization is key.

While some of this language may indeed be touched on tangentially in the master plan, a lot of the key invasive species and conservation issues are actually covered in a separate natural resource management plan (which is included in this master plan by reference) – and yes, pear management is one of the top priorities! Machicomoco is such a special place for birdlife, the terrapins, and monarchs as well, DCR does want to see the habitat conditions continue to improve in the coming years.

Regarding funding, typically resource management projects come out of park operational budgets or District-level resource management budgets. Occasionally, the

park will have very large habitat creation projects included in the master plan estimates, such as the proposed meadows, but the master plans are primarily focused on the key capital development pieces that will (hopefully) be funded in time as one-time budget items from the General Assembly.

COMMENT:

There are several undeveloped parcels near the entrance to the park. I would urge you to consider purchasing these whenever possible before they become developed, to add more buffers to the park and help preserve the natural setting.

RESPONSE:

Thank you for your comment. DCR is always interested in appropriate land acquisition from willing parties.

Phased Development Plan

COMMENT:

A comment was made to express the opinion that the classroom should be moved up in the process in order to provide a space for nature education sooner.

RESPONSE:

The visitor center, which is planned for Phase 2 of the plan, includes classroom and education spaces. The outdoor classroom is in addition to that and therefore will be in phase 3.

COMMENT:

Comment made that aside from hiking and camping, there is nothing for kids to do.

RESPONSE:

The master plan calls for several types of activities geared toward interpretation, education and recreation that young people could take part in, in addition to the more family-oriented camping and hiking activities. Additionally, a new nature-based playground is planned near the interpretive center.

COMMENT:

The park needs an education or nature center. The park has a lot of campers, kayakers, bicyclists, and walkers. By not having an education center, we are missing many opportunities to influence and educate the public. Without a dedicated center the park is less appealing to teachers and students.

RESPONSE:

The proposed visitor center, a project in Phase 2 of the Phased Development Plan, will include an education center as well as exhibit space and, in Phase 3, an outdoor classroom.

COMMENT:

The commenter expressed the opinion that in the case of the proposed visitor center, every effort should be made to shrink the footprint of this disturbance to as small a space as possible and shift it closer to the park entrance, so as to maximize the conservation of resources and

efficient use of space, taking advantage of existing parking and the ability to add to those areas more easily.

Comment was also made that for any future building projects, but in particular the visitor center and cabins, it is urged to use the best practices to make these green and sustainable buildings. This starts with design, minimizing impacts whenever possible, and through to the construction materials, utilities and systems, and through to use. This will set a great example and be an educational opportunity for visitors, as well as being the most responsible use of natural resources.

RESPONSE:

All future development, such as a visitor center and cabins, will consider impacts to natural and cultural resources at the park.

COMMENT:

Opinion was expressed by one commenter that the master plan provides excessive acreage in the service areas of the Main Unit.

The comment goes on to say that the two service areas account for approximately 12.4% of the Main Unit area and this amount is not necessary for servicing the park. The commenter is of the opinion that only 9 acres are necessary in Service Area 1 to buffer and that the existing ranger residence and surroundings should be converted to public use. (The commenter claims that this should happen after 2 new residences are built in service area 2.)

Commenter feels that Service Area 2 contains an area approximately 15 acres should not be included in the service area but rather should be used as trailhead parking for a proposed trail.

RESPONSE:

Thank you for your comment. DCR does not feel that the Experience Areas mapping needs to be changed. The residence in Service Area 1 will remain as residence and 1 new residence is already in the process of being constructed.

Service areas do not preclude trails which are routed responsibly and in concert with resource management staff with a buffer from existing and planned facilities.

Community Context

COMMENT:

A comment was made to express the opinion that surrounding community is not being served well by this master plan. The town wants to have a boat ramp at this location and other recreational amenities that the park is not providing.

RESPONSE:

A boat ramp at this park was discussed; however, in the initial surveys for this master plan, it was one of the primary items spoken against. The plans for the park are to provide the types of recreational amenities that serve the park's goals and mission.

COMMENT:

Comment made that the entry road to the West Unit is also used by surrounding residents and

after the park is developed there will be an impact to access to people's houses around the park.

RESPONSE:

DCR will work closely with VDOT to plan various road improvements that will mitigate impacts to access for the surrounding residents.

COMMENT:

Given the interest by the community in helping manage resources at the park, it would be great to see increased collaboration with volunteers on things like invasive tree removal, trail maintenance etc.

RESPONSE:

Thank you for your comment. Volunteer groups are an integral part of the workings of this and all state parks.

Resource Management

COMMENT:

Comment made that according to sources from The Nature Conservancy (TNC), the former wetland in the meadow area in the Main Unit could easily be restored to a natural native wetland state.

The expansion of freshwater wetlands through reclamation projects would enhance habitats for wildlife, benefit soil and water conservation, provide an exceptional outdoor learning experience for visitors of all ages, and improve nature-based recreation opportunities for visitors. Additionally, restoring the proposed area back to the pre-colonization wetland conditions of this land would be the appropriate measure given the park's focus on Virginia Indians.

RESPONSE:

Noted. Currently, there are other higher priority resource management issues, such as invasives to tackle (given limited Resource Management budget and staff).

Park Mission and Goals

COMMENT:

The mission of the park reflects indigenous history and culture, but it ranked low in terms of how the public viewed and talked about the park (per the surveys).

RESPONSE:

DCR acknowledges this comment. Since its inception, Machicomoco has been devoted to the history and culture of indigenous peoples as its core purpose. Previous documents, such as "Gateway to Werewocomoco" and the plan for the interpretive area identified this concentration.

COMMENT:

Comment was made to commend the State of Virginia for its dedication to preserving and promoting the history and culture of Indigenous Peoples through Machicomoco State Park.

The commenter stated that the park’s proposed Main Theme Statement, which highlights the culture and stories of Indigenous Peoples as well as the influences of Europeans and enslaved Africans, reflects a meaningful recognition of the historical complexity of this land. The commenter also provided feedback regarding how the Main Theme Statement aligns with the park’s usage and the broader community vision.

Commenter noted that the data collected by DCR through the Public Information Survey suggests a need to broaden the park’s thematic focus. Survey results show that recreation, such as hiking, biking, walking, and water-based activities, is the primary reason visitors come to the park. Additionally, “nature” and “natural” are the most commonly associated terms when people describe the park, further emphasizing the importance of highlighting the park’s natural value. These findings illustrate that visitors connect deeply with the park’s natural beauty and recreational opportunities.

Furthermore, the commenter noted, the park has become a cherished hub for community events and festivals like Music in the Park, Brew’s & Brines, Fun Runs, and the Indigenous Peoples Celebration. In the commenter’s opinion these activities enrich the visitor experience and foster a sense of community. The commenter expressed concern that the proposed Main Theme Statement may unintentionally narrow the park’s focus and exclude some of these beloved events that are central to how the community engages with the park.

The belief was expressed that the Main Theme Statement should reflect a more inclusive vision—one that celebrates not only the rich cultural and historical narratives but also incorporates the park’s role in recreation, nature conservation, and community engagement.

Alternative themes were proposed to wit:

“Machicomoco State Park celebrates the culture and stories of Indigenous Peoples, alongside the history of Europeans and enslaved Africans who shaped the land. The park also serves as a vital space for recreation, community connection, and the appreciation of nature’s beauty, offering opportunities for discovery, citizen science, and the enjoyment of its abundant wildlife and natural resources.”

This revised statement embraces the diverse ways people experience and value the park, ensuring the theme remains inclusive and relevant to the community.

RESPONSE:

Thank you for your comment. Since its inception, Machicomoco has been devoted to the history and culture of indigenous peoples as its core purpose, which is reflected in the Main Theme Statement, which highlights what makes the park special and unique in comparison to other Virginia State Parks.

However, the proposed master plan does recognize and reflect the nature-based recreation needs of the community as seen in the development plan. Additionally, the mission does not preclude recreation; rather, the master plan encourages development pieces consistent with the mission. More broadly, the DCR and Virginia State Parks Mission Statements provide for a balance between the conservation of natural and cultural resources and recreational offerings consistent with those resources.

Invasive Species

COMMENT:

Several Comments were made expressing concern that Callery pears are a major issue at the park, causing environmental degradation, displacement of native trees, and habitat loss for diamondback terrapins.

RESPONSE:

Treating Callery pears is a high priority for park resource management, and activities have been incorporated into the natural resources management plan. Due to budget and staffing, prioritization is key. Callery pear removal and control has been, and continues to be, an ongoing important part of the resource management program at Machicomoco State Park. The natural resource plan for this park is included by reference in the master plan.

Shoreline Erosion and Restoration

COMMENT:

Concern was expressed that shoreline erosion is a major issue at the West Unit and should be quickly addressed.

RESPONSE:

The challenge is known and acknowledged. Currently USACE is developing a plan to mitigate the shoreline erosion at the west unit. This plan will be presented to DCR. A cost estimate for the proposed work is included in Phase 2 of the Phased Development Plan.

COMMENT:

Comment received expressing concern that both sections of the park have extensive shorelines, and problems with erosion. The commenter urged DCR to use best environmental practices when dealing with these shorelines, and in particular, including oyster reefs into your designs. The benefits of these are well-documented and would have tremendous positive repercussions for the watershed.

One area in particular that could benefit from shoreline protection is the native site on the western side of the main park. Active erosion is damaging archaeological resources. Protecting them with a living shoreline would help ensure these limited resources survive. There may be other archaeological sites suffering similar damage to other parts of the park, so that should be investigated.

RESPONSE:

Thank you for your comment. Shoreline erosion is a high priority, especially at the West Unit, and is currently being reviewed by the Army Corps of Engineers as noted in the previous answer. Other shorelines may be reviewed in time according to need.

Staffing

COMMENT:

Comment was made that it is good that DCR sees the need to immediately add a Resource Manager position to the park staff to address critical and extensive resource management

needs at the park. The opinion was expressed that the position should be full-time and dedicated to the park and not shared within the district.

Also mentioned was that the position needs to be empowered without burdensome and excessive oversight. An important aspect of this would be control of the invasive Callery pear.

RESPONSE:

Thank you for your comment. Yes, DCR recognizes the immediate need for Resource Management staff to serve Machicomoco. Additional staff positions for Resource Management, whether at the park or District level, would need allocation by the General Assembly. A major part of that position's workload would be the invasive Callery pear and related issues.

It is important to note (as has been stated above) that Callery pear removal and control has been, and continues to be, an ongoing important part of resource management at Machicomoco State Park.

