

National Park Service
U.S. Department of the Interior

Catoctin Mountain Park
Thurmont, MD



Assessment of Effects
Cultural Resources Technical Memorandum
Catoctin Mountain Park Comprehensive Trail System Plan
Catoctin Mountain Park, Frederick and Washington Counties

Prepared for:

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1. INTRODUCTION

The National Park Service (NPS) is developing a Comprehensive Trail System Plan (Plan) for Catoctin Mountain Park ("the park") in Thurmont, Maryland. As a federal undertaking, the project is subject to Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and its implementing regulations [36 Code of Federal Regulations (CFR) Part 800] "Protection of Historic Properties" (Section 106). This technical memorandum has been prepared as part of the continuing consultation between the NPS, the Maryland Historical Trust (MHT), Maryland's State Historic Preservation Office (SHPO), the Delaware Nation Historic Preservation Office, the Seneca-Cayuga Nation, and the Tuscarora Nation. Section 106 consultation for the Plan was initiated with MHT in a letter dated January 11, 2021. Section 106 consultation for the Plan was initiated with the Delaware Nation Historic Preservation Office, the Seneca-Cayuga Nation, and the Tuscarora Nation in letters dated January 27, 2021 (**Appendix A**).

The NPS has developed this Technical Memorandum in support of the Plan to document the presence of historic properties, defined as those that are listed or eligible for listing in the National Register of Historic Places (NRHP), for the purposes of Section 106 review. Identification of historic buildings, structures, sites, objects, districts, and cultural landscapes was undertaken within the Area of Potential Effect (APE) established for this project. The NPS consulted with SHPO and interested parties regarding the APE. Work was directed and conducted by staff that meet *The Secretary of the Interior's Professional Qualification Standards* (36 CFR Part 61) in the disciplines of Historical Landscape Architecture, Archeology, and History.

As part of the National Environmental Policy Act (NEPA) process, the NPS developed one action alternative for the Plan. The focus of this memorandum is on the action alternative.

2. PROJECT SUMMARY

The approximately 5,760-acre project area is located within a rural landscape in Frederick County, Maryland (with the west edge of the park in Washington County) (**Figure 1**). The park is bordered by Route 77 (Foxville Road) and Cunningham Falls State Park to the south and agricultural and forested areas to the north, east, and west. The park is partially bordered by Route 550 (Sabillasville Road) to the north. The park comprises the easternmost ridge of the Blue Ridge Mountains and consists primarily of an eastern deciduous forest less than 100 years old, rolling hills, narrow ridgetops, valleys, and ravines.

The park provides a variety of outdoor active and passive recreation and education opportunities. Overall, the park contains trails for hiking, running, horseback riding, solitude, and wildlife viewing; park roads and trails for cross-country skiing; scenic overlooks and vistas; historical and interpretive exhibits; creeks for fishing; opportunities for rock climbing and bouldering; campsites; and picnic areas.

The park contains the following elements:

- Approximately 24.3 miles of hiking trails are located throughout the park, including approximately 0.5 miles of accessible trails and approximately 7.6 miles of trails open to horseback riding. Park roads provide opportunities for cross-country skiing when they are closed to vehicular traffic.
- Four scenic overlooks and vistas are on the east side of the park.
- Two cabin camps, Camp Misty Mount and Camp Greentop, were built during the 1930s through the Works Progress Administration and contain sleeping cabins, restrooms, dining halls, and other features. Individual cabins are available for rent at Camp Misty Mount. Cabins for groups are available for rent at Camp Greentop, which accommodates up to 140 individuals. The camps are listed separately in the NRHP as historic districts and contain resources that contribute to the NRHP-listed Catoclin Mountain Park (Catoclin Recreational Demonstration Area) historic district.
- Camp Round Meadow contains dorms for large groups, a dining hall, gymnasium, classrooms, a conference room, and other features. The camp is available to rent for groups of up to 120 people.
- The Owens Creek Campground, which is available to rent by individuals, families, and small groups, contains 50 campsites for tents and small RVs, including three accessible campsites.
- The Poplar Grove Youth Camp Site, which is open to rent by organized youth groups, contains tent campsites and accommodates up to 75 people.
- The park also contains a visitor center; interpretive exhibits; the Chestnut Picnic Area, which contains one accessible picnic site; the Owens Creek Picnic Area; Adirondack shelters for

backcountry camping; Big Hunting Creek; and natural features used for rock climbing and bouldering.

The purpose of the proposed project is to provide comprehensive guidance for enhancing Catoctin Mountain Park's trail system and visitor experience throughout the park in a manner that is sympathetic with the natural and cultural surroundings and balances resource protection with intended trail uses and long-term management. The proposed project is meant to provide park managers with a framework by which they can manage and maintain existing trails; close/realign existing trails when needed; add new trails and access points where appropriate; and, where feasible, create trails that are universally accessible to meet the Architectural Barriers Act Accessibility Standards (ABAAS).

The Plan is needed to address the following concerns and ongoing issues affecting the park's trail system:

- Over the years, trail segments were added incrementally, without cohesive planning. The resulting trail system has connection issues and is difficult to maintain.
- Many trails have eroded and degraded due to poor design and alignment, resulting in safety and environmental concerns.
- Some features of interest (e.g., rock climbing) and overnight facilities within the park are not connected to the trail system, which forces visitors to drive to trailheads or walk along roadways to access trails.
- The park does not provide adequate accessible trails to points of interest.
- Visitor use of the park's trails and parking lots is not evenly distributed throughout the park. A majority of visitors utilize the parking lots in the east side of the park, which lack connections to trails in the west side of the park.
- Trail orientation signage and naming conventions within the park are not standardized.
- The park lacks formal connections to, and integration with, local and regional trail systems.
- Some trail crossings of roadways, including Route 77, are unsafe for pedestrians.

The proposed action alternative includes the following:

- New hiking trails
- Realigned trail sections
- New accessible trails and accessible amenities
- Use of bikes on an existing administrative road
- Fly Fishing Heritage Trail
- Road crossing improvements

- Potential future external trail connections
- New parking areas
- Improved existing parking areas
- Visitor wayfinding improvements
- Trail maintenance activities

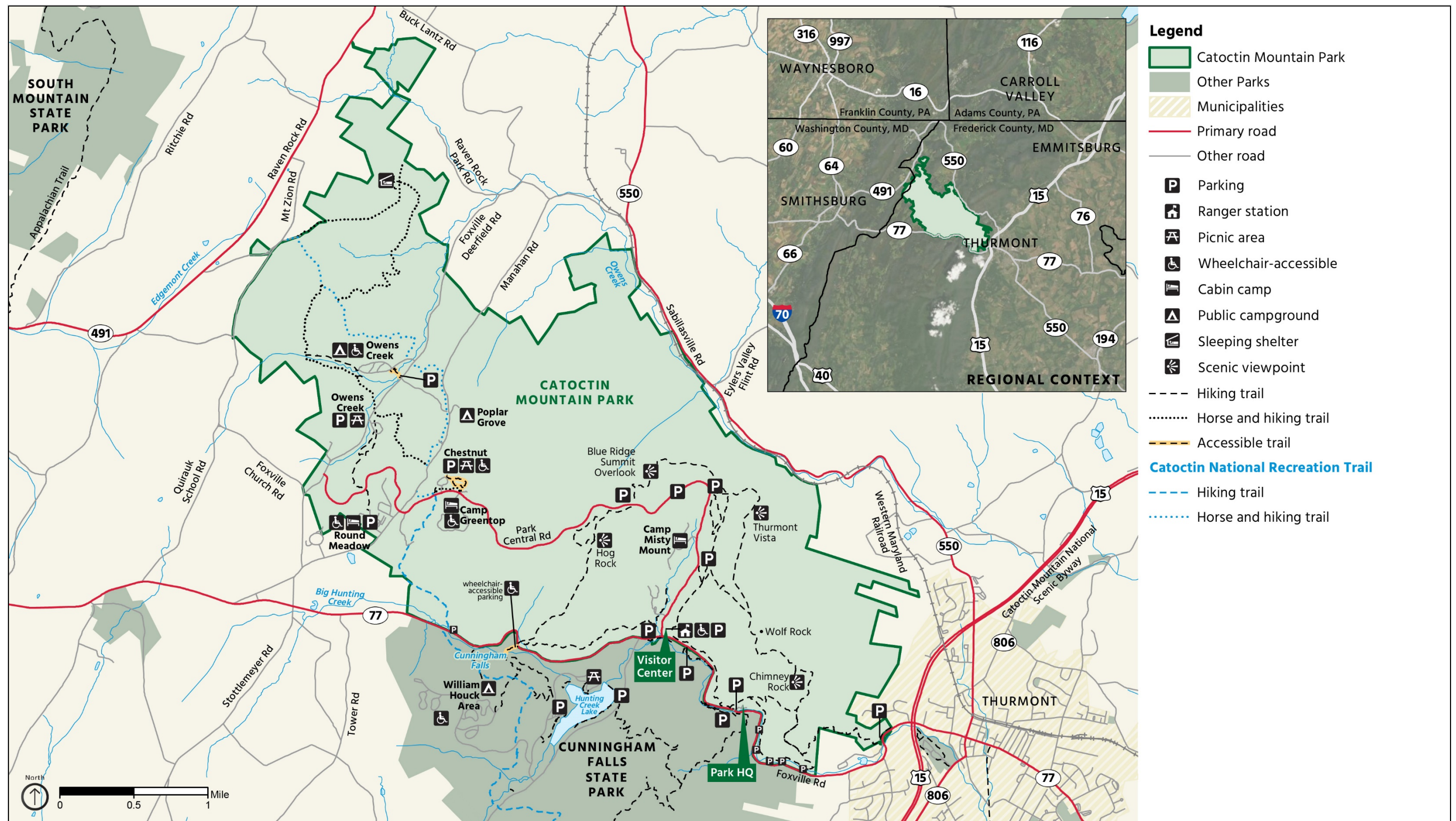


Figure 1: Catoclin Mountain Park Project Area and Regional Context

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3. HISTORICAL SUMMARY OF THE PROJECT AREA

The following historical summary is composed of excerpts or information taken from the Catoctin Mountain Park Cultural Landscapes Inventory, completed by the NPS in 2002; the 2014 Catoctin Mountain [Catoctin Recreational Demonstration Area (RDA)] Historic District NRHP registration form; Angela R. Sirna's *Human Conservation Programs at Catoctin Mountain Park: A Special Resource Study* (2015); and Elise Elder-Norquist's *Catoctin Mountain Park Administrative History Update* (2020). All information presented herein is drawn directly from these documents.

Prehistoric Period to 1730

Native American activity in the vicinity of Catoctin Mountain Park dates to about 9,000 years ago, beginning in the Early Archaic period (8000 to 6000 BC). The mountains were a procurement zone, particularly for rhyolite, a stone that was processed into projectile points. The mountains were also used for hunting and the gathering of other materials.

1730 to 1770

Exploration and settlement of western Maryland by Europeans and those of European descent began during the first decades of 1700. Land began to be patented in the foothills outside the future park by 1738. Among the preferred mountain sites were the gaps cut by streams, the gentler slopes and the flat tops of mountain knobs—sites where fields could be made and mills located. The future park incorporated some of these early areas of settlement. One of the first occurred along the east/west route that followed Hunting Creek—almost certainly the same route used by Native Americans to reach mountain rhyolite sites, and the same road that would later be called Route 77.

1770 to 1903 - The Catoctin Iron Furnace

Iron furnaces began to be built in western Maryland in the 1760s and 1770s. The Catoctin Furnace, located in the foothills south of Mechanicstown, was in operation prior to or just after 1776 and exerted a defining influence on the area of the future park. The location was chosen because all the necessary ingredients for a furnace were present—iron ore banks, fast-flowing streams, limestone beds, and extensive forests. A portion of Mountain Tract, which was acquired for the furnace, was located north of Route 77 and lies within Catoctin Mountain Park.

Typical of most eighteenth and early-nineteenth century furnaces, its main output was pig iron which was further refined at a forge. The original furnace was replaced in 1787 with another that was closer to the ore banks. This second furnace remained in use for much of the next forty years, during which time the American iron industry expanded and contracted largely in response to the nation's iron import policy. The furnace was blown out permanently in 1903.

The primary impact of furnace operations on mountain land came from cutting its forests for the production of charcoal. Most of the furnace workers supplied cut wood to a small number of

colliers who burned the cut wood in hearths—leveled clearings in the forest measuring about 40 feet in diameter. Another group hauled wood and charcoal using a network of trails and roads for sled and wagon to bring the wood to the hearths and to funnel the resulting charcoal off the mountain to the furnace. Sites of charcoal hearths have been found on both sides of Catoctin Mountain Park. Other industries related to mountain resources included sawmills, tanning, and other lumber products.

1770 to 1903 - Development of the Mountain Community

European settlement began by the mid-eighteenth century, primarily on the west side of Catoctin Mountain along the north/south running valley drained by Owens Creek. The first settlement in meaningful numbers in the mountains came after the start of the furnace. There was no distinct separation between the farming district and furnace-related lands, except that agricultural land was found almost exclusively on the west side, which was the only area conducive to it. Farmland in the mountains existed in patchy openings surrounded by forest. Mountain farmers in the vicinity of the future park grew a variety of grains, cut hay, kept livestock, made butter, sheared wool, harvested apples, and sometimes peaches and berries.

The railroad also introduced a new form of economic activity into the area—tourism. The Western Maryland railroad had two stops in the vicinity of the future park, at Mechanicstown, which at the instigation of the railroad changed its name to Thurmont in 1894, and at Deerfield Station at the foot of Harbaugh Valley.

1903 to 1934

Charcoaling in the mountains declined with the sporadic production of iron during the late 1880s, and ceased completely sometime before the furnace closed in 1903. Although the furnace owned large quantities of land along the east side of the mountain, there were also private timber lots on the east side, generally owned by people from the foothill communities. During the early twentieth century, some lots continued to furnish such owners with fuel and fence rails, others may have been leased for logging, and some parcels may have remained untouched.

Although resort communities had been established northwest of Catoctin with the arrival of the railroad circa 1872, tourism in the Catoctins did not begin in earnest until after the turn of the twentieth century. The Catoctin mountains had several favored day-trip destinations such as the falls on Hunting Creek and Chimney Rock

1934 to 1942

In late December 1934 the Catoctin mountains were proposed as the site for a recreational demonstrational area (RDA) and the federal government began to purchase land. By the end of 1934, the state of Maryland had selected the Catoctins as a potential RDA area, deeming the mountain farms unsustainable and recognizing the timbered-out former furnace lands as a candidate for conservation. NPS approved the preliminary proposal in January 1935. The land

that was actually purchased for the Catoctin RDA was 9,869 acres (corrected to 9,878.42 acres in 1942). The northern section of the land purchase became Catoctin Mountain Park in 1954.

From 1936 to 1939, workers hired under the Works Progress Administration (WPA) built the central maintenance buildings and project offices, the three organized group camps (including Camp Misty Mount and Camp Greentop), and a picnic area. They also cleared debris, created fire trails, repaired roads, built what eventually became Park Central Road, rebuilt existing vehicular bridges, and marked the corners of park boundaries with stones.

Camp 1 (Misty Mount) was completed in 1937. The Maryland League for Crippled Children had petitioned for a camp at Catoctin. Although Camp 1 occupied unsuitable terrain for the League's children, the League camped there the first year, but made suggestions for the construction of the second group camp. Camp 2 was opened in the summer of 1938 and operated by the Maryland League for four summers through 1941. The third camp was to be for boys, called Hi-Catoctin. The camp was opened in the summer of 1939.

Trails were constructed—partially to serve as fire protection—during the first year of park development. The trails incorporated existing farm roads, charcoal/logging roads, and earlier sightseeing trails, along with new sections, which were added to develop an interconnected trail system.

In April 1939 a Civilian Conservation Corps (CCC) camp was established at the Catoctin RDA. Although the CCC was one of the earliest New Deal programs, it was a fairly late arrival at Catoctin, and much of the work of building the RDA had already been accomplished by the WPA-funded workforce. The primary work of the CCC was in conservation, which included stream improvements and revegetation projects. At Catoctin, they also worked on trails, water lines, electrical wiring, and construction projects.

1942 to 1956

The most significant wartime use of the Catoctin RDA was the selection of one of its camps as the site for President Franklin D. Roosevelt's retreat. It was also used for various military training programs. The War Department was given jurisdiction over almost the entire section of the RDA north of the Thurmont-Foxville Road (Route 77). The area was closed to the public for the war's duration. The northern half of the RDA, under the War Department's jurisdiction since 1942, was reopened to the public by mid-1947.

In 1953, the southern half of the RDA, comprising 4,447 acres, was given to the state of Maryland and named Cunningham Falls State Park. The name Catoctin Recreational Demonstration Area was abandoned and the national park side, containing approximately 5,760 acres, became Catoctin Mountain Park in 1954.

1956 to the Present

The division of the park into national and state park sides in 1954 took place just before the initiation of a major NPS improvements program called Mission 66. Use of the national parks had increased after World War II, but little work on facilities had occurred since the onset of the war. The NPS requested and was granted a higher level of funding to refurbish and expand its facilities with an emphasis on visitor services. The nationwide project began in 1956, with completion projected for 1966, the 50th anniversary of the establishment of the NPS. Although Catoctin Mountain Park was not officially a national park, it received Mission 66 funds. With these funds, Catoctin Mountain Park renewed buildings, resurfaced roads, paved utility areas, rehabilitated old trails and built new ones, installed interpretive signs, and created park brochures for visitor information. During the Mission 66 program's ten-year span, the park also began, and generally completed, the construction of new picnic areas, the Poplar Grove Campground, the Owens Creek Campground, trailhead parking, and trailside exhibits.

Since 1964, the park has revised the use and arrangement of buildings and paved areas at the area now known as Camp Round Meadow several times. In 1965, the first Job Corps Conservation Center (JCCC) in the United States was established at Camp Round Meadow. The JCCC was a vocational training program developed as one of President Lyndon B. Johnson's signature programs in his "War on Poverty" initiative. Catoctin Mountain Park's JCCC was one of nine JCCCs hosted by the NPS between 1964 and 1969. Training was focused on conservation projects, although the program also provided educational and job training opportunities. Between 1965 and 1969, the park's JCCC enrollees refurbished trails, worked on trailhead areas, and built small structures, signs, trash receptacles, and fireplaces throughout the park. Enrollees also built 150 picnic tables for National Capital Parks in Washington, DC.

Camp Round Meadow also hosted programs for African American youth from the Washington, DC area with opportunities for outdoor recreation and environmental education. Camp Round Meadow hosted the "Summer in the Parks" program in 1969 and 1970. This summer camp program provided trips exclusively for Washington, DC youth to the region's national parks. The Summer in the Parks program continued annually until 1976 in the region's other national parks, although it is unclear if it continued to operate at Catoctin Mountain Park during those years. Camp Round Meadow also hosted the Washington, DC public school system's "Environmental Outdoor Laboratory" program from 1970 to 1981.

In 1971, the Youth Conservation Corps (YCC) was introduced to the park as a summer residence program at Camp Round Meadow. The YCC selected Camp Round Meadow as one of several pilot residential programs in the United States. The YCC was open to high school-aged children and paired environmental education with park maintenance activities. The YCC continued to be a popular program and expanded throughout the 1970s. In 1980, funding for the program was cut by Congress, but the U.S. Department of Agriculture and Department of Interior tried to fund

the YCC program with their own budgets. The YCC program continues at the park today and receives support through a regional NPS fund.

There has been little construction of facilities in the park since 1980. The most recent land additions to the park include the Braestrup farm property (2010) and Lewis property (2012), located in the northwest and southeast corner of the park, respectively.

3.1 Area of Potential Effect

The APE for historic resources and archeological resources is identical with that defined in the project's Environmental Assessment (EA) for these resources (**Figure 2**). The APE encompasses the project area. The APE for archeological resources is the area of ground disturbance within the APE for historic resources.

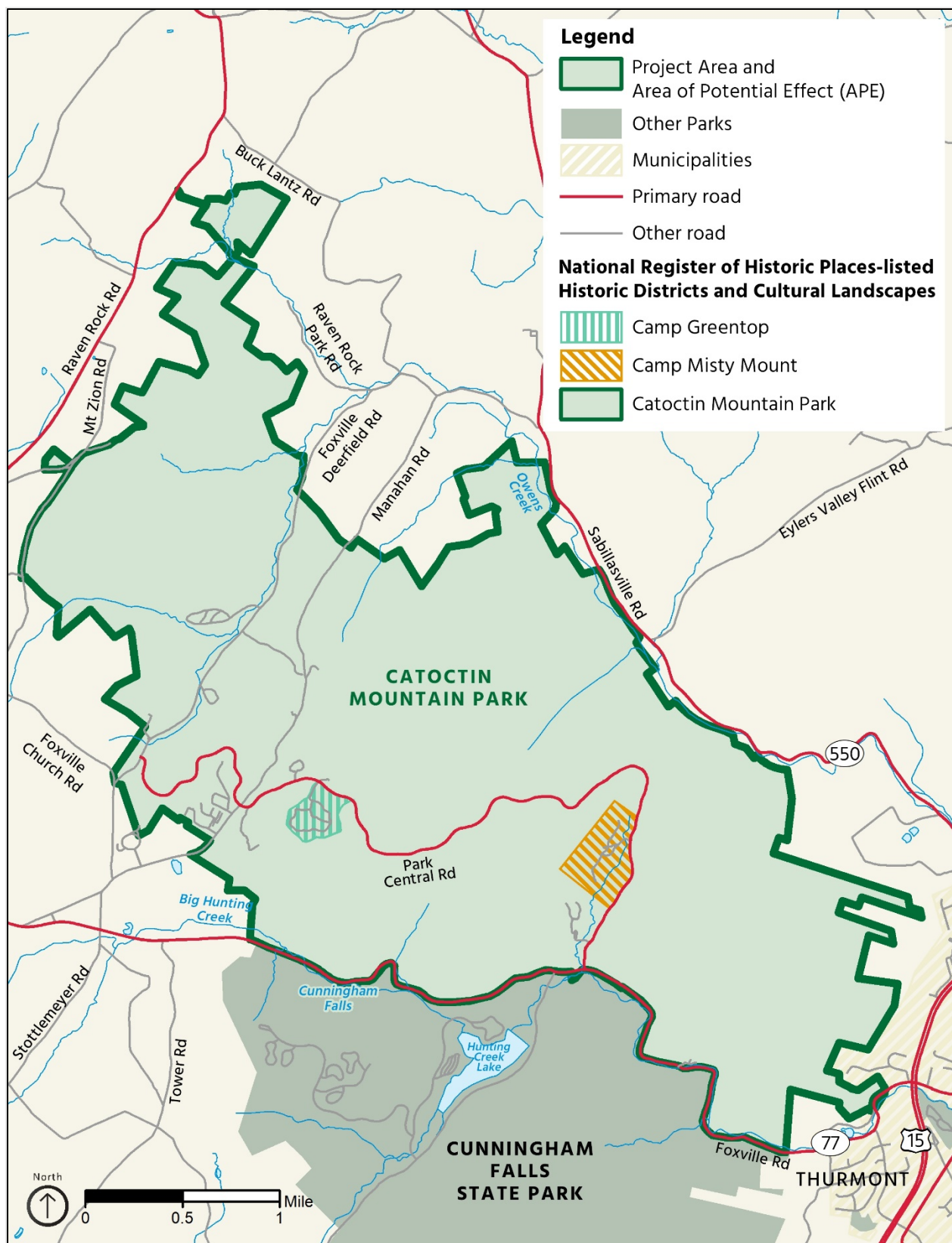


Figure 2: Area of Potential Effect

4. EXISTING CONDITIONS

The park offers multiple opportunities for recreation. The park has approximately 24.3 miles of hiking trails, including approximately 0.5 miles of accessible trails and approximately 7.6 miles of trails open to horseback riding, located throughout the park. Forested park roads provide opportunities for cross-country skiing when they are closed to vehicular traffic. Hiking trails are located throughout the park. The trail system is divided between the east and west sides of the park.

- No trails connect the east and west trail systems. The east trail system is popular with visitors and provides access to the park's overlooks and vistas and the Visitor Center and Cunningham Falls. This system includes a trail parallel to Big Hunting Creek and trails with interpretive exhibits.
- The west trail system connects to picnic areas and campgrounds; passes through remnants of former farms; and includes horseback riding trails and accessible trails. The west trail system provides a more remote and quiet hiking experience where visitors are more likely to see wildlife, wetlands, and an up-close view of nature.

Circulation within the park comprises paved roads, maintained gravel roads, and natural surface trails. The primary entrance to the park is from Route 77, leading to the Visitor Center and Park Central Road, the main roadway within the park that provides east-west circulation within the park. Visitors may also enter the park by vehicle through Manahan Road and Foxville Deerfield Road, which connect to Park Central Road and provide north-south circulation within and through the park.

Multiple camping opportunities exist within the park. The Owens Creek Campground offers tent and small RV camping. The Poplar Grove Youth Camp Site provides organized youth groups tent campsites.

Two Cabin Camps within the park are available to individuals and families or groups. Camp Round Meadow contains dormitories and other facilities for large groups.

Other recreation opportunities within the park include picnicking, wildlife viewing, enjoying scenic overlooks and vistas, learning about the park's history through interpretive exhibits, fishing, and rock climbing and bouldering.

5. PROJECT DESCRIPTION

The Action Alternative proposes to provide new trails and accessible trails and amenities, realign existing trail sections with design problems, improve trail crossings of Route 77, and provide opportunities for trail connections to local and regional trail systems. The Action Alternative also proposes to allow the use of bikes on the administrative road connecting Manahan Road and Foxville Deerfield Road, designate a Fly Fishing Heritage Trail, add two new parking areas, and improve four existing parking areas, which would support connections to the existing and planned trail network. These changes to trail connectivity, access, and parking would augment ongoing trail maintenance and resources management practices. These elements are described below and shown in **Figure 3** to **Figure 5**.

Methodology and Design Parameters

Under the Action Alternative, the alignment of new and realigned trails, as well as the location of new parking areas and improved parking areas, would be carefully sited to avoid archeological sites, sensitive habitats, and steep and unsustainable slopes, and minimize crossings of water resources and wetlands to the extent feasible.

New and realigned trails would also be designed, constructed, and maintained according to appropriate trail design standards, including recommendations for tread width, surface, grade, cross slope, clearing, and turn parameters. All accessible trails would be designed and constructed to comply with the 2015 Architectural Barriers Act Accessibility Standards (ABAAS).

New Trails

The Action Alternative would provide approximately 10.3 miles of new trails, which would be a 42.3 percent increase to the park's trail system if fully realized. The new trails would connect existing trails on the east and west sides of the park; generate links between existing trails to create shorter and longer loop options; connect the Cabin Camps to the trail system; connect to new areas and features of interest in the park, such as the northern area of the park, bouldering sites, and a "stone stream" near the Park Headquarters; and create new pedestrian access points into the park. All new trails would allow hiking. New foot bridges would be installed as needed cross wetlands and streams. New interpretive waysides would be installed to educate visitors about resources along the new trails.

Realigned Trails

Sections of existing trails that suffer from moderate or severe erosion or other condition problems due to heavy use or poor design and alignment would be closed and realigned. Realigned trails would improve visitor experience; provide for safer road crossings; alleviate unsafe conditions; reduce erosion, which has contributed to streambank failures; and create more sustainable trails. Approximately 2.7 miles of existing trails would be realigned. Natural groundcover vegetation would be allowed to grow into the closed trail section, but the closed

trail section would be maintained to include a trace so that the alignment is legible in the landscape. Ongoing trail maintenance would rehabilitate existing trails not realigned to minimize erosion and reduce drainage issues.

Accessible Trails and Amenities

Approximately 1.3 miles of existing trails would be converted to trails that are universally accessible. These new accessible trails would provide loop routes, create access to points of interest in the park, and connect to parking areas. Existing parking areas that provide access to these new accessible trails would be updated to comply with ABAAS.

The Action Alternative would provide a new accessible trail connecting existing accessible campsites to the existing restrooms at Owens Creek Campground. An existing picnic site at the Chestnut Picnic Area would be converted to an accessible picnic site. The site would be located within the interior of the parking loop and adjacent to existing parking and the existing accessible path connecting to the existing restroom facility. The existing path from the existing accessible picnic site to the restroom facility would be converted to an accessible trail.

Bike Trail

Alternative B would permit the use of bikes, including mountain bikes and electric bikes (e-bikes), on the 0.4-mile administrative road connecting Manahan Road and Foxville Deerfield Road. The allowance of bikes on this administrative road would provide bicycle access to Owens Creek Campground via Manahan Road. For these purposes, an e-bike is considered a two- or three-wheeled cycle with fully operable pedals and an electric motor of not more than 750 watts that meets the requirements of one of the three classes defined in 36 CFR 1.4, which are determined by the level of pedal assistance and speed.

Fly Fishing Heritage Trail

Approximately 0.7 miles of the existing Gateway Trail along Big Hunting Creek would be designated as a Fly Fishing Heritage Trail. This trail would provide opportunities to learn about the practices and history of fly fishing, including how it relates to Big Hunting Creek. Interpretive signage would be added along the trail. The five existing small fishing pull-off areas along Route 77 would also be improved by adding interpretive signage and formalizing pedestrian access to Big Hunting Creek.

Road Crossing Improvements

Two trail crossings between the park and Cunningham Falls State Park on Route 77 would be improved. These improved road crossings would enhance the visitor experience and alleviate unsafe conditions. From west to east, these crossings include the Catoctin National Recreation Trail (CNRT) crossing and the Cunningham Falls Nature Trail crossing. The NPS would work with the Maryland Department of Transportation State Highway Administration (SHA) and Cunningham Falls State Park to improve the crossings. Potential options include, but are not

limited to, realigning the road crossing to a safer location with better vehicle sight distances, working with SHA to control the speed of traffic, install pedestrian crossing signs, and/or install traffic calming devices, and working with Cunningham Falls State Park to install trail directional signage.

Potential Future External Trail Connections

The NPS would coordinate with appropriate entities to connect the park's trail system to the Appalachian Trail and the Town of Thurmont. These entities could include the Potomac Appalachian Trail Club, Appalachian Trail Conservancy, City of Hagerstown Watershed, Town of Thurmont, SHA, South Mountain State Park, Frederick County, Preserve Middletown Valley/Catoctin Watershed, Catoctin Land Trust, Hagerstown & Frederick Trolley Trail Association, and private property owners. Exact trail routes and how the routes are implemented would be dependent on potential agreements with these entities.

Parking

The Action Alternative would provide two new parking areas and improve four existing parking areas. New parking areas on Foxville Deerfield Road and Mount Zion Road would provide parking options on the west side of the park, alleviate parking demand and overflow, improve parking connectivity to trails, and accommodate future visitor growth. The new parking area on Foxville Deerfield Road would be an unpaved lot that would accommodate up to 20 cars, covering approximately 0.2 acres. The new parking area at Mount Zion Road would be an unpaved lot that would accommodate up to 15 cars and 2 horse trailers, covering approximately 0.4 acres.

The existing Visitor Center parking lot would be expanded towards Route 77 and restriped to improve vehicle circulation when the lot is full. The expanded parking lot would increase the existing number of parking spaces by six spaces. The expanded portion of the lot would cover approximately 0.2 acres. At the Lewis Area, the parking area would be enlarged from 10 to 20 spaces and resurfaced, with pervious materials, to define the parking area more clearly. The expanded portion of the parking area would cover approximately 0.1 acres. The entrance lane would be resurfaced, the trailhead would be improved, drainage issues would be addressed, and NPS park signage would be installed to formalize the area as a park entrance and improve visitor experience and wayfinding. At the Horse Trailer parking lot, the end of the parking lot would be expanded to allow horse trailers to turn around and exit through the existing access point to Park Central Road. At the Sawmill Exhibit parking area, the parking area would be widened to accommodate two buses parked end to end parallel with Foxville Deerfield Road. At the northern end, trees would be removed and fill added for leveling. The expanded parking area would increase the existing number of parking spaces by five spaces. The expanded portion of the parking area would cover approximately 0.02 acres.

Signage

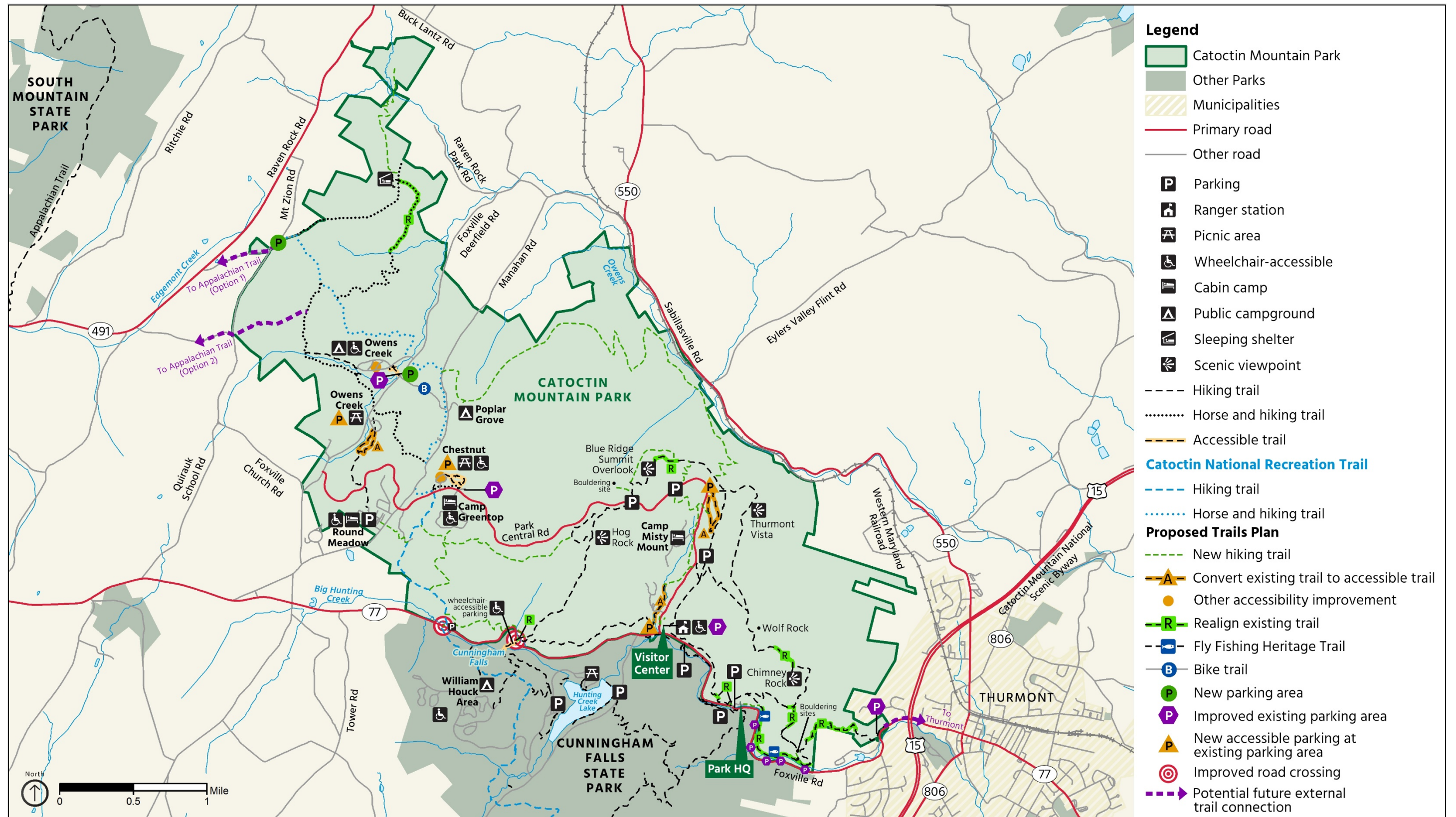
The Action Alternative would improve signage throughout the park consistent with the Catoctin Mountain Park Long Range Interpretive Plan (2008) guidelines. Standardized trail signs would be placed at new trailheads, accessible trailheads, critical trail intersections, bouldering sites, and trailheads that allow equestrians. New signs would provide clear direction for the navigation of new, existing, and realigned trails. Signs at accessible trailheads would comply with ABAAS for trailhead signs. Signs at shared-use trailheads would provide information about the allowed trail user groups and appropriate trail yielding etiquette. Signs on new trails leading into Camp Misty Mount, Camp Greentop, and park offices would inform users of the park's larger trail system that these new connecting trails are only for Camp users and, in the case of park offices, employees. New park entrance and orientation signage would also be added to the new parking area on Mount Zion Road and improved parking area at the Lewis Area. The installation of new signs would involve hole digging to install sign posts. Metal reflective tags would be installed on trees as blazes to replace existing paint.

Trail Maintenance

Routine maintenance on new, realigned, and existing trails would occur. Maintenance activities would include:

- Re-grade trail surfaces
- Remove extant berms that prevent proper drainage
- Replace, in-kind, greenstone gravel within trail corridor
- Repair or replace, in-kind, existing trail features, such as foot bridges, water bars, check dams, turnpikes, culverts, French drains, and steps
- Install new erosion control and drainage features, such as water bars, check dams, culverts, French drains, puncheons, and turnpikes. New features will match existing nearby features. Water bars and check dams will be constructed of native logs and stone and stabilized with weed-free soil from nearby tree root balls and rebar and/or new or nearby rocks. Turnpikes will be framed with native logs and infilled with stone collected from nearby or greenstone aggregate. Cultural resources staff would be consulted to ensure no archeological resources, historic stone walls, or other resources listed or eligible for listing in the NRHP are impacted.
- Clear water bars and check dams buried by soil accumulation
- Clear loose rocks and accumulation of debris from trail corridor
- Fill voids in tread as needed with nearby gathered and crushed rocks in the absence of available tree root balls for soil collection. Cultural resources staff would be consulted to ensure no archeological resources, historic stone walls, or other resources listed or eligible for listing in the NRHP are impacted.

- Borrow pit establishment may be necessary to obtain needed material to re-establish trail tread. Borrow pits are excavated holes no larger than three feet long by three feet wide by three feet deep and are only used when crushed rock, tree root balls for soil collection, and imported material is not available. Borrow pits must be rehabilitated by minimizing the visual impact of the pit and for safety. All pits would be filled in with rock, downed trees and branches so that it is not visible from the trail. Cultural resources staff would be consulted to ensure no archeological resources, historic stone walls, or other resources listed or eligible for listing in the NRHP are impacted.
- Narrow trails that have been widened by visitors walking on the edges by raking previously disturbed edges of the trail corridor toward the center of the trail. Edges may also be covered with existing downed brush and nearby rocks to deter foot traffic. Cultural resources staff would be consulted to ensure no archeological resources, historic stone walls, or other resources listed or eligible for listing in the NRHP are impacted.
- Install stone retaining walls along steep trails to hold trail tread to a sloping sidehill by constructing outside walls. The new retaining walls would be planned, designed, and installed to be compatible with the historic character of the landscape through appropriate scale, materials, form, and other considerations. The retaining walls would not radically change, obscure, damage, or destroy contributing features.
- Eliminate social trails by restoring natural vegetation along social trails or covering with nearby downed woody debris. Methods and species selected for re-seeding must be approved in advance by park natural resources staff.
- Install temporary signage along existing trail corridor to notify visitors and staff of danger, direction, and areas closed to the public
- Cut or cover exposed roots within existing trail corridor to prevent tripping
- Repair and/or replace, in-kind, existing trail signs and wayside exhibits
- Trim herbaceous and woody vegetation within the trail corridor
- Cut through fallen trees that are blocking the trail corridor



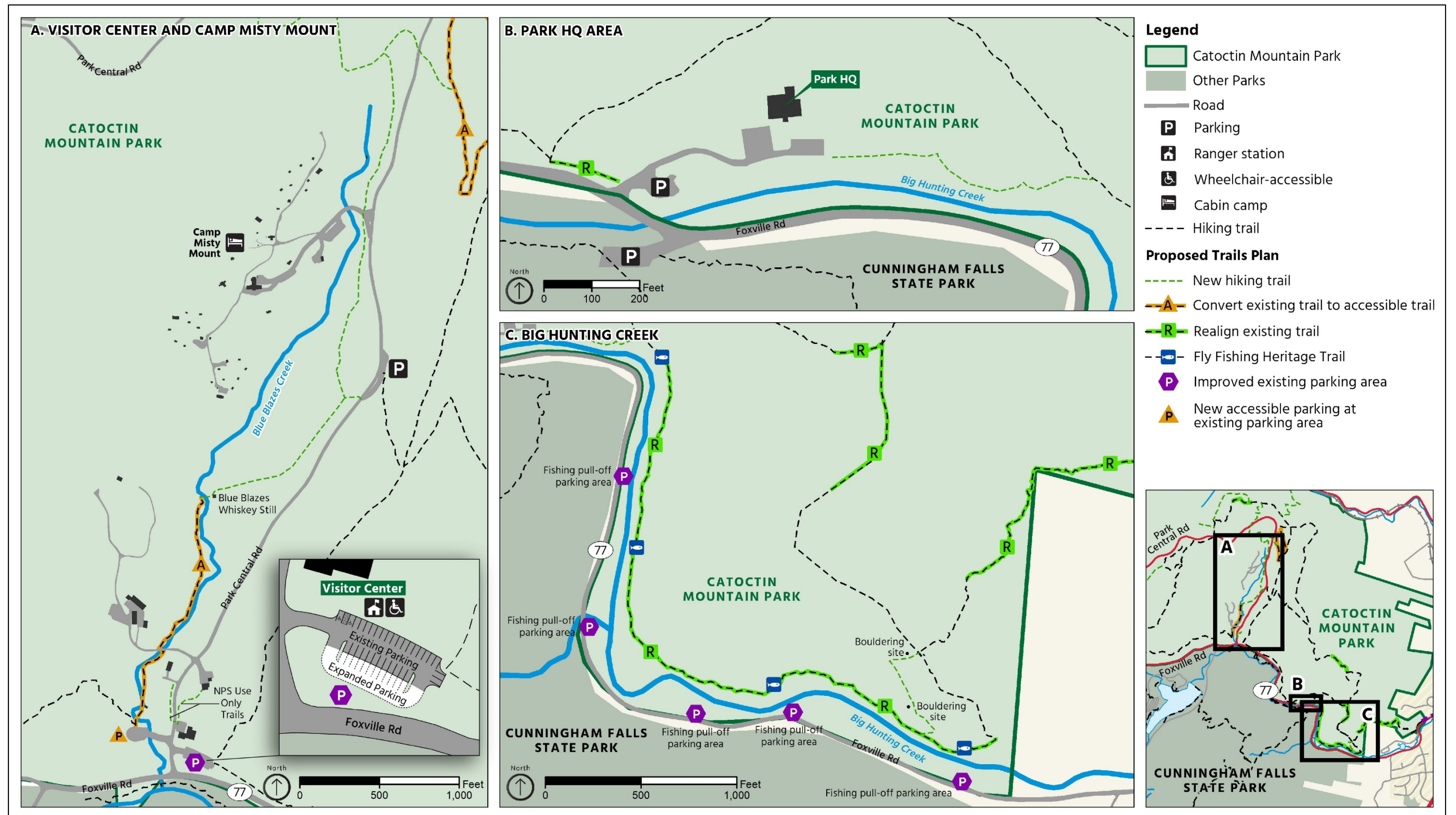


Figure 4: Action Alternative – Proposed Improvements on the East Side of the Park

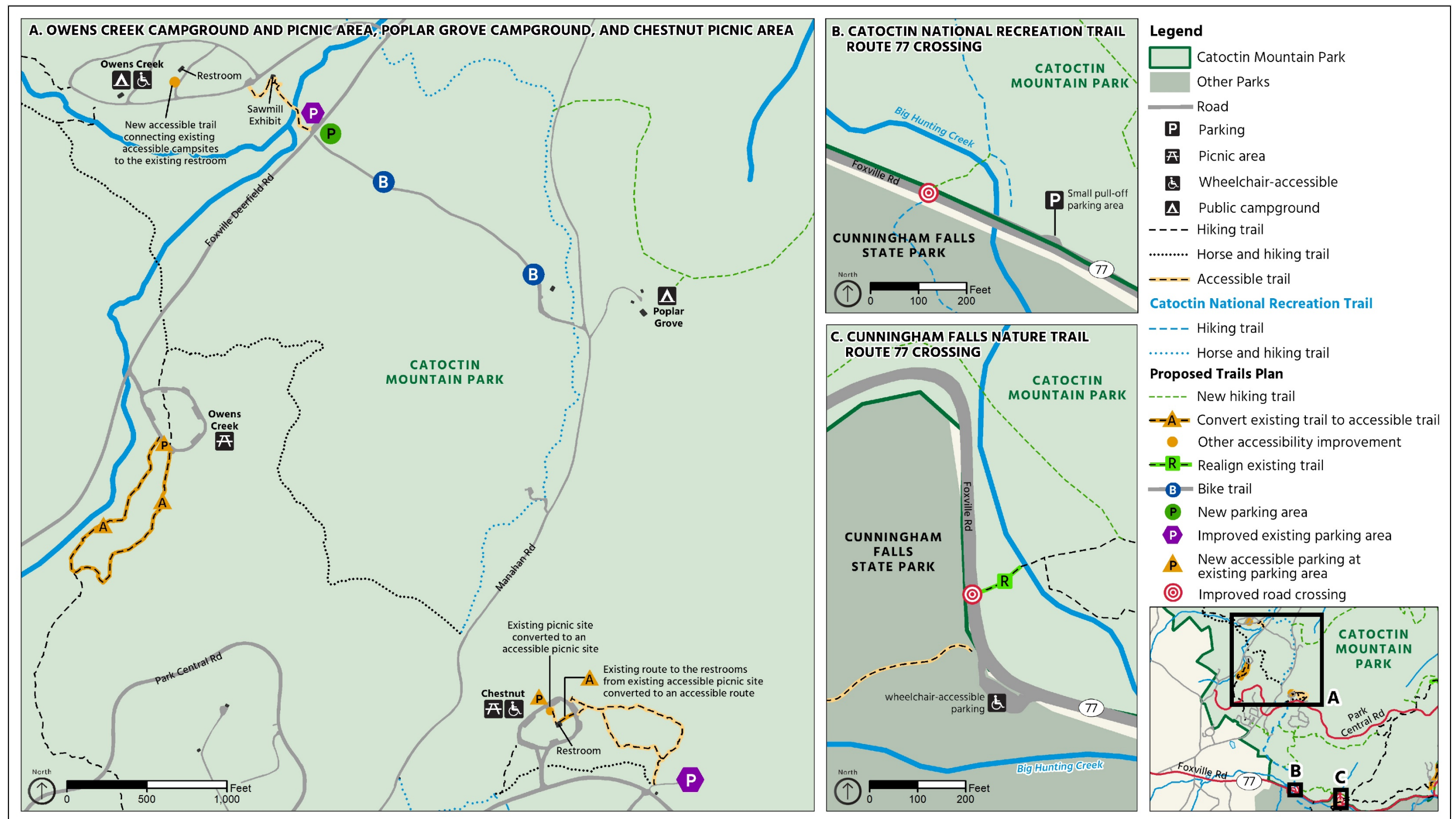


Figure 5: Action Alternative – Proposed Improvements on the West Side of the Park

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6. HISTORIC AND ARCHEOLOGICAL RESOURCES

The park includes numerous documented historic and archeological resources. Historic resources at the park include the Catoctin Mountain Park [Catoctin Recreational Demonstration Area (RDA)], the Camp (1) Misty Mount Historic District, and the Camp (2) Greentop Historic District, all of which are listed in the NRHP. Historic resources at the park also include the Catoctin Mountain Park, Camp Misty Mount, and Camp Greentop cultural landscapes, all of which are documented in Cultural Landscape Inventories (CLIs). The Action Alternative could affect contributing roads and trails, buildings and structures, small-scale features, archeological sites, vegetation, streams, spatial organization, and topography in the park's NRHP-listed historic districts and documented cultural landscapes.

The park also contains numerous archeological resources, including prehistoric and historic sites. The Action Alternative could affect documented archeological sites within or near existing trails pathways.

6.1 Historic Resources

The APE contains numerous overlapping historic resources, including districts, cultural landscapes, buildings, structures, objects, and sites. Many resources contribute to multiple properties. A historic district, as defined by 36 CFR Part 60 "National Register of Historic Places," is a "geographically definable area, urban or rural, possessing a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united by past events or aesthetically by plan or physical development. A district may also comprise individual elements separated geographically but linked by association or history." The NPS defines a cultural landscape as "a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person, or exhibiting other cultural or aesthetic values." Cultural landscapes are listed in the NRHP when their significant cultural values have been documented and evaluated within appropriate thematic contexts, and physical investigation determines that they retain integrity. Cultural landscapes are classified in the NRHP as historic sites or historic districts, or they may be included as contributing features of larger districts.

Documented historic resources in the APE include the following:

- ***Catoctin Mountain Park (Catoctin RDA) Historic District (HD) and Cultural Landscape:*** The district encompasses the entire park and has an extensive history dating back to circa 3000 BC. The district contains a variety of geological, archeological, architectural, and landscape features and characteristics that together illustrate the historical and ecological trends from prehistory through the present. The district is significant at the local, state, and national levels and was listed in the NRHP in 2014 under multiple criteria:

- Criterion A, as a good example of New Deal park planning efforts that reflect the social and economic goals of the recovery programs of the 1930s.
- Criterion A, as the location of numerous important political and diplomatic meetings of national and international significance.
- Criterion B, for its close associations with the productive lives and accomplishments of at least two U.S. presidents, President Franklin D. Roosevelt and President Jimmy Carter.
- Criterion C, for its retention of one of the best collections of New Deal-era park architecture and landscape architecture in Maryland, and its embodiment of most of the primary characteristics associated with New Deal-era park planning, landscape architecture, and architecture, as practiced by the NPS.
- Criteria A and D, for its collection of archeological sites, building ruins, farmstead sites, and landscape features that tells the story of human use and occupation in the Catoctin Mountains of Maryland from circa 3000 BC until the 1930s.

The historic district contains a total of 96 contributing resources (NPS 2014).

- ***Cultural Landscape Features:*** The Catoctin Mountain Park CLI suggests that the historic district has two periods of significance: 1) 1770-1903, when the landscape was utilized by the nearby iron furnace, an important example of the nation's early iron industry; the mountain forests were culled for timber; and small charcoal hearths dotted its slopes; and 2) 1934-1942, when a portion of the landscape was recast for recreation and conservation when the federal government developed it as a RDA (NPS 2002).
- ***Emergency Conservation Work (ECW) Architecture at Catoctin Mountain Park:*** ECW architecture at the park was further described in a multiple property listing in the NRHP in 1989 covering numerous elements within the park. The listing includes the natural landscape and built elements within the park supported by two historic contexts: the development of RDAs within the larger scope of ECW construction projects, and the concurrent development of a style of rustic architecture specifically generated by NPS architects. In 1989, as part of the multiple documentation form submission, the NPS also prepared two historic district nominations, one for Camp Misty Mount and one for Camp Greentop. The historic resources at Camp Misty Mount and Camp Greentop are significant at the state and local level because they represent the economic-improvement and conservation efforts of the New Deal programs of the mid-1930s. They are physically significant for rustic architectural and landscape architectural styling, as well as their role in the development of conservation and outdoor recreation. Character-defining elements have been identified within the park include natural landscape features, man-made landscape features, architecture typology, and architectural styling (NPS 1989a).

- ***Mission 66 Era Resources:*** The NPS is in the process of completing an update to the 2014 Catoctin Mountain Park HD NRHP nomination and update to the 2002 Cultural Landscape Inventory for Catoctin Mountain Park that identifies and evaluates resources associated with the Mission 66 era. The park currently manages these resources as contributing to the Catoctin Mountain Park HD. A 2015 NRHP multiple property listing nomination for NPS Mission 66 era resources located nationwide identifies potential property types and guidelines for determining National Register eligibility (NPS 2015b).
- ***Jobs Corps Related-Resources:*** The NPS is in the process of completing an update to the 2014 Catoctin Mountain Park HD NRHP nomination and update to the 2002 Cultural Landscape Inventory for Catoctin Mountain Park that identifies and evaluates resources associated with the Job Corps era. The park currently manages these resources as contributing to the Catoctin Mountain Park HD.
- ***Braestrup Farm Property:*** The Braestrup farm property, acquired by the NPS in 2010, may afford the most complete expression of a pre-park landscape found within the current park boundary. The Catoctin Mountain Park HD NRHP nomination states that several extant potentially contributing resources exist on the property, but further research is needed on the cultural landscape at the Braestrup farm and additional documentation provided to determine the eligibility status of individual resources (NPS 2014). The update to the 2014 Catoctin Mountain Park HD and an update to the 2002 Cultural Landscape Inventory for Catoctin Mountain Park will evaluate resources associated with the Braestrup property.
- ***Lewis Property:*** The Lewis property, acquired by the NPS in 2012, also may contain potentially contributing cultural features that require additional documentation and evaluation according to the Catoctin Mountain Park HD NRHP nomination (NPS 2014). The update to the 2014 Catoctin Mountain Park HD and an update to the 2002 Cultural Landscape Inventory for Catoctin Mountain Park will evaluate resources associated with the Braestrup property.
- ***Camp (1) Misty Mount HD and Cultural Landscape:*** The district was listed in the NRHP as part of the Multiple Documentation Form submission for the ECW Architecture in Catoctin Mountain Park in 1989. The district encompasses approximately 72 acres and contains buildings that support overnight organized camping activities. The district is significant at the state and local levels and contains 35 contributing buildings. All contributing buildings are related to two themes and movements of the 1930s: 1) the human and natural conservation efforts of New Deal programs, specifically the development of RDAs, and 2) the development of NPS-sponsored rustic architecture in concert with the rise of outdoor recreation (NPS 1989b).

- ***Cultural Landscape Features:*** The Camp Misty Mount CLI also includes contributing character-defining structures, cluster arrangement, circulation, small-scale features, archeological sites, and vegetation (NPS 2006).
- ***Camp (2) Greentop HD and Cultural Landscape:*** The district was listed in the NRHP as part of the Multiple Documentation Form submission for the ECW Architecture in Catoctin Mountain Park in 1989. The district encompasses approximately 40 acres and contains buildings that support overnight organized camping activities. The district is significant at the statewide and local levels and contains 24 contributing buildings. All contributing buildings are related to two themes and movements of the 1930s: 1) the human and natural conservation efforts of New Deal programs, specifically the development of RDAs, and 2) the development of NPS-sponsored rustic architecture in concert with the rise of outdoor recreation (NPS 1989c).
 - ***Cultural Landscape Features:*** The Camp Greentop CLI also includes contributing character-defining structures, cluster arrangement, circulation, small-scale features, vegetation, natural systems and features, land use, spatial organization, and topography (NPS 2015).

Specific resources that contribute to the historic properties are summarized below.

- ***Circulation.*** The overall integrity of the historic circulation from the 19th century and the RDA period is high. The current park road and trail features represent a continuity of use as many of them were converted from older circulation patterns. For the most part, roads retain their 19th-century locations. At Camp Misty Mount, a single gravel-surfaced road or path unifies the camp with a camp entrance road leading to the camp office and dining hall/kitchen. The camp entrance road and circulation routes between the units remain in their original location. At Camp Greentop, a main gravel loop road unites all four camp units to the central core of buildings. A spur entrance road connects to the loop road.

Contributing roads include:

- Route 77 and trace of old Route 77 roadway in the Visitor Center parking lots
- Park Central Road
- Foxville Deerfield Road
- Manahan Road
- Road traces mapped in 1992 survey
- Path through the center of Owens Creek Picnic Area
- Old turnpike section of Catoctin Trail
- Main gravel trail through each cabin camp

- Camp Misty Mount: Camp entrance road, circulation route between units, and a spur road to storage building
- Camp Greentop: Main gravel loop road and spur entrance road

During the New Deal/RDA period, trails incorporated existing farm roads, charcoal/logging roads, and earlier sightseeing trails, with new sections to create an interconnected trail system. The trail system was constructed using materials from the immediate surroundings. Trails are earthen or lightly graveled, and sometimes edged with stones that have been cleared from them, or marked at intervals by wooden erosion bars, and are repaired using materials taken from the immediate environment. The character has been maintained in most areas today.

Contributing trails include:

- All of the park's existing trails open to the public except the Gateway Trail from the trailhead at the Lewis Area parking area to the trail's T-intersection and the trail between the Park Headquarters and the Visitor Center
- Camp Airy Trail, which only park visitors associated with Camp Airy are permitted to use
- NPS Service trail (i.e., administrative road connecting Manahan Road and Foxville Deerfield Road)
- Greentop trails
- Bessie Darling Horse Trail

All contributing trails, except the NPS Service trail, Greentop trails, Bessie Darling Horse Trail, and the following described trails, are shown in **Figure 6**. Trails that are no longer in use at the park and are not included in the 2014 Catoctin Mountain Park HD NRHP nomination have not been evaluated for their NRHP eligibility. However, NPS treats these trails as contributing until their status is determined. Trails that are no longer in use at the park include, but are not limited to, trails connecting Camp Greentop, the CNRT, and the Hog Rock Trail, and a trail connecting the Poplar Grove Campground to the north area of the park towards Owens Creek.

- ***Buildings and Structures.*** Contributing buildings and structures are located throughout the park and include buildings, building foundations, wells, retaining walls, and a headwall. These buildings and structures date either to the New Deal or later. Anything earlier is a remnant or a later acquisition. The New Deal structures are representative of the rustic style of park architecture that was adopted by the NPS in the years before 1942 and were constructed largely by Works Progress Administration (WPA) labor.

Camp Misty Mount retains nearly all of its original buildings, built in the rustic style by the WPA, in good condition. The hewn log and rough board structures, with uniform V-notches

securing the building corners and white-plastered chinking between the logs, reflect their original rustic design.

A majority of the original buildings that stood from 1935-1948 at Camp Greentop remain with much of their historic character intact. The buildings were constructed with local timber and stone. Some buildings were wood-frame while others were built using hewn logs. Their roofs, originally of wood shakes made from local red oaks, were redone with asphalt shingles after World War II and remained that way until re-shingled with cedar shakes in the mid-1980s.

Mission 66 buildings and structures are in the Blue Blazes area (i.e., the Visitor Center general area), at Camp Misty Mount, at Camp Round Meadow, at Owens Creek Campground, at the fire cache area (i.e., between Camp Round Meadow and the CNRT south of Park Central Road), and at the southern end of Foxville Deerfield Road within the park boundaries. These were identified as noncontributing in the 2014 Catoclin Mountain Park HD NRHP nomination, but the park currently manages them as contributing.

JCCC buildings and structures are located in the Blue Blazes area, at Camp Misty Mount, at Camp Round Meadow, at the fire cache area, at the Poplar Grove Picnic Area, and at Owens Creek Campground and Picnic Area. These were identified as noncontributing in the 2014 Catoclin Mountain Park HD NRHP nomination, but the park currently manages them as contributing.

- ***Cluster Arrangement.*** Camp Misty Mount and Camp Greentop are composed of a central core of buildings with subunits containing cabins situated around the central core. Although most of the buildings that form these rows are not the originals, they stand in original locations and shape a space that has persisted since circa 1937.
- ***Small-scale Features.*** A number of small-scale features that date to both periods of significance for Catoclin Mountain Park remain in the landscape. Contributing features include stone boundary and mileage markers, charcoal hearths from the 19th century, fencing, stone walls, spring boxes, trail culverts from the New Deal period, stone edges of some trail sections, and a flagstone walk at Round Meadow. At Camp Misty Mount, contributing features include a flagpole located near the camp office, a culvert located under the camp entrance road at Blue Blazes Creek, and a campfire circle. At Camp Greentop, contributing small-scale features include the WPA campfire circle remnants and stone bases of the original drinking fountains located in each of the four camp units.
- ***Constructed Water Features.*** Contributing features include raceways associated with 19th-century sawmills.
- ***Cultural Traditions.*** The landscape of Frederick County, Maryland, including the mountains where the park is located, was influenced by the farming practices and structures of the large population of Germans who settled there in the mid-eighteenth century. The structures

built by WPA workers for the Catoctin RDA, although conforming to the requirements of cabin camp layout and building type, also borrowed construction methods and styles from local tradition. The workers themselves were from the nearby region and some were familiar with traditional building techniques.

- ***Archeological Sites.*** Contributing archeological sites include collier huts, distinguishable farmsteads, Native American quarrying and processing sites, a whiskey still from the early 1900s, and old road traces, including a road trace to an old wash house at Camp Misty Mount. The 2014 Catoctin Mountain Park HD NRHP nomination lists six contributing archeological sites.
- ***Vegetation.*** Most of Catoctin Mountain Park is covered in deciduous forest. The forest at the park is less than a century old, reflecting earlier use for timber extraction, charcoaling, and farming. Contributing vegetation includes the native plant communities of the deciduous forest, ornamental plants at farm sites, remaining orchard trees, the degree of openness of forest at the cabin camps, and the grass playing field and horse pasture at Camp Greentop. Today, though the trees are larger and the openings within the forest are fewer, the forests, along with the park's topographic and natural features, shape the landscape character.
- ***Natural Systems and Features.*** Catoctin Mountain Park includes a system of eroded peaks drained by three mountain streams, Owens Creek, Hunting Creek, and Antietam Creek. On the east side, the Catoctin ridge has several picturesque rock outcrops. A rounded plateau of about two square miles is located in the central area. The west side of the park is made up of a mountain valley (the Foxville area and Owens Creek headwaters) and part of the eastern ridge of South Mountain. The mountainous features and central plateau of the Camp Greentop area contribute to the historic character of the camp's landscape as they influenced early land use of the area, as well as the spatial organization of the group camp. The deciduous forest within and around the camp's landscape provided scenic, natural surroundings and an escape for campers.
- ***Land Use.*** Land use at Catoctin Mountain Park today is a continuation of the recreational and conservation uses established during the period of RDA development. Camp Greentop, developed as a group camp for children with disabilities, was situated in an opening of ten to twenty acres within a wooded-area. The remnant open field has been and continues to be used as the camp's playing field. Forest and timber resources are still regenerating, although browsing by the large population of white-tail deer has hindered its growth.
- ***Spatial Organization.*** The current landscape of Catoctin Mountain Park is arranged within a distribution of roads and land formations, and occupies sites that were areas of use before land began to be acquired by the RDA. The continuity of roads in their original locations assures a fair degree of spatial integrity. As they did historically, roads follow the gaps cut by streams and adapt in various ways to the mountain's geological formations. The trail system,

partly derived from earlier mountain farm and logging roads and a scenic trail, connects most of the developed areas of the park.

Spatial organization of the landscape can also be described as the degree of openness or enclosure of the land. In the 19th century, the land that became Catoclin Mountain Park was more open due to clearing for agricultural and domestic use and charcoal and other wood products. The character of the landscape today is different than existed in 1935, as intended. The present forest is taller and encloses more areas of the park. The formerly open agricultural areas have regrown with native woodland vegetation. This vegetation regrowth affects views from the road on the park's west side, where farm fields in 1935 permitted wider visibility.

The spatial organization of Camp Greentop's landscape was heavily influenced by the topography of the central plateau, vegetation, NPS design specifications for group camps of the New Deal-era time period, as well as the needs of youth campers with disabilities. The historic organization of the buildings and structures generally consisted of a cluster arrangement of a central core of buildings, surrounded by satellite units that include the camper cabins.

- **Topography.** The park is mountainous with streams, rocky outcrops, and boulder-strewn slopes. Contributing features include all streams, the drainage divide near Round Meadow, Chimney Rock, Hog Rock, Wolf Rock, and the flat central plateau within the mountain landscape where Camp Greentop was developed for the use of campers with disabilities.
- **Views and Vistas.** Contributing views include views from Blue Ridge Summit, Chimney Rock, Hog Rock, Thurmont Vista, and Wolf Rock, and views of Harbaugh Valley and Foxville from edges of the park. The park's vista points are unchanged, and the view out, though changing especially with suburbanization near Thurmont, still encompass farmland and multiple ridges in several directions.

Table 1 summarizes categories of feature types that contribute to the park's documented historic properties.

Table 1: Contributing Resources

Contributing Resources	Resources contribute to:		
	Catoctin Mountain Park (Catoctin RDA) HD (including the Catoctin Mountain Park Cultural Landscape (CL))	Camp (1) Misty Mount HD (including the Camp Misty Mount CL)	Camp (2) Greentop HD (including the Camp Greentop CL)
Circulation	✓	✓	✓
Buildings and structures	✓	✓	✓
Cluster arrangement	✓	✓	✓
Small-scale features	✓	✓	✓
Constructed water features	✓		
Cultural traditions	✓		
Archeological sites	✓	✓	
Vegetation	✓	✓	✓
Natural systems and features	✓		✓
Land use	✓		✓
Spatial organization	✓		✓
Topography	✓		✓
Views and vistas	✓		

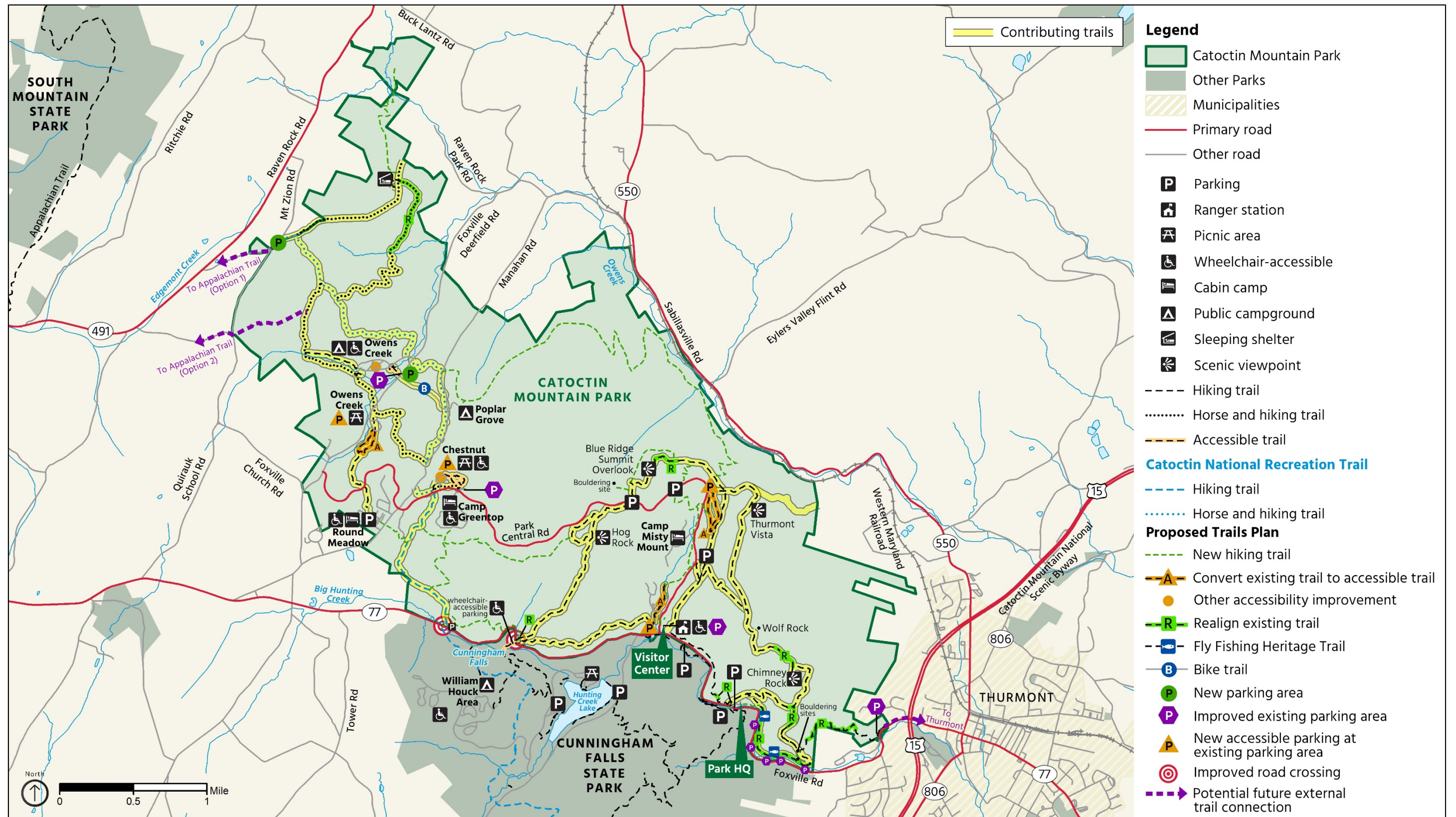


Figure 6: Contributing Trails overlaid on the Action Alternative

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6.2 Archeological Resources

A Phase I archeological survey has not been conducted for the entirety of the APE.

Approximately half of the park has been subject to archeological study/survey of some level. Surveyed areas generally include areas along most of the park's existing trails, around Camp Misty Mount and Camp Greentop, along Owens Creek, the Lewis Area, and along a buffered area surrounding proposed improvements to the park's utility infrastructure. Previous archeological studies/surveys have documented 156 archeological sites throughout the park. Some of the park's existing trails currently traverse through or are in the vicinity of these documented archeological sites. Six of the 156 sites contribute to the 2014 Catoclin Mountain Park HD NRHP listing. Historic sites within the park include sites related to the charcoal industry (hearths and collier's huts), farmsteads/domestic sites, mining sites, and refuse/building debris discard sites. Prehistoric sites include quarry or workshop sites, rockshelters, camp sites, and artifact scatters (Bedell et al. 2011; Favret and Greenberg 2021; Johnson and Regan 2021; Katz et al. 2021).

Although approximately half of the park has not been subject to any form of archeological survey, previous archeological studies/surveys have noted:

- Unsurveyed areas of the park that have a high probability of containing NRHP-eligible archeological resources include land along Manahan Road and the northwest section of the park.
- The presence of family cemeteries at the park is quite unlikely based on historic research conducted for the study.

7. EFFECTS ASSESSMENT

This document records the assessment of effects on the historic and archeological resources identified in the preceding sections. The section below addresses anticipated effects of the Action Alternative on the project area's and the APE's historic and archeological resources. Adverse effects in the section below are defined according to the NHPA Section 106 implementing regulations (36 CFR Part 800), which state that "an adverse effect is found, when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association." Adverse effects could include, but are not limited to, physical destruction or damage, alterations that are not consistent with *The Secretary of the Interior's Standards for the Treatment of Historic Properties*, removal from historic location, change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance, and introduction of visual elements that diminish the integrity of the property's significant historic features.

7.1 Historic Resources

Overall, the Action Alternative would have no adverse effects on historic resources. Changes to contributing resources as a result of the Action Alternative and why these changes would not result in adverse effects are described below.

Circulation

The undertaking would have no adverse effects on contributing circulation features. No changes to the park's contributing roads would occur as a result of the undertaking. The realignment, conversion to accessible, and routine maintenance activities of existing trails, and the designation of a Fly Fishing Heritage Trail, would result in physical changes to contributing trails, but the overall existing character and setting of these natural trails within a woodland setting would be retained.

The undertaking would introduce new trails in areas where no trails are present, which would result in changes to circulation patterns. New trails would create new paths of circulation within the park and provide visitor access to areas of the park that are currently inaccessible to visitors, including along Owens Creek north of Park Central Road, between the Hog Rock Trail and the CNRT, and to the Braestrup property. However, new trails would also provide connections between contributing trails on the east and west sides of the park, improving the trail system's overall interconnectedness. New trails providing connections to Camp Misty Mount and Camp Greentop would not result in changes to these cabin camps' broad circulation patterns.

Trails that are no longer in use at the park and have not been evaluated for their NRHP eligibility are treated by NPS as contributing until their status is identified. Although new trails would not follow the exact alignment of trails no longer in use, new trails would establish trail connections that the trails no longer in use once provided between specific areas of the park. For example, new trails would provide trail connections between Camp Greentop, the CNRT, and the Hog Rock Trail, and connect the Poplar Grove Campground to the north area of the park towards Owens Creek.

The closing and realignment of sections of contributing trails with moderate or severe erosion or other condition problems would alter the historic locations of these circulation features. However, the realigned trail sections would not result in changes to the park's broader circulation patterns. Contributing trails would maintain their overall existing character and setting of a natural trail within a woodland setting. Natural groundcover vegetation would be allowed to grow into the closed trail section, but the closed trail section would be maintained to include a trace so that the historic alignment is legible in the landscape.

The conversion of the existing Blue Blazes Whiskey Still Trail, Charcoal Trail, and Brown's Farm Nature Trail, which are contributing trails, to accessible trails may require changes to the trail surface material and width, and minor topographic alterations in order to comply with ABAAS. These design actions would be undertaken in a manner that is consistent with *The Secretary of the Interior's Standards for the Treatment of Historic Properties*. Although the conversion of these trails to accessible trails could result in noticeable changes, these trails' function as circulation features and existing character and setting of a natural trail within a woodland setting would be retained. Examples of the existing character and setting of existing contributing trails proposed to be converted to accessible trails are provide in **Figure 7**.

Although routine trail maintenance activities could result in noticeable changes on contributing trails, these activities would help maintain or improve these trails' function as circulation features by preventing trail erosion and diminished trail conditions. Maintenance activities specific to each contributing trail are summarized in **Table 2**, with additional details and existing conditions provided in **Appendix B**. Specific maintenance activities for the NPS Service trail (i.e., administrative road connecting Manahan Road and Foxville Deerfield Road) and Greentop trails have not yet been identified. However, maintenance activities on these trails would be consistent with those activities described in the Action Alternative. Overall, the existing character and setting of these natural trails within a woodland setting would be retained. **Figure 7** illustrates examples of the existing character and setting of existing contributing trails. Indigenous materials would be used to the extent practicable for maintenance activities. New erosion control and drainage features would match existing nearby features, use native logs, and use stone or rocks collected from nearby, to the extent practicable. Voids in trail tread would be filled, as needed, by nearby gathered and crushed rocks in the absence of available tree root

balls for soil collection. If borrow pits are established to obtain needed material to re-establish trail tread, the pits would be filled with rock, downed trees and branches so that it is not visible from the trail. Trail edges that have been widened may be covered with existing downed brush and nearby rocks. Cultural resources staff would be consulted on these described maintenance activities to ensure no resources listed or eligible for listing in the NRHP are affected.

The addition of interpretive signage along a section of the Gateway Trail along Hunting Creek, a contributing trail, as part of its' proposed designation as a Fly Fishing Heritage Trail would result in noticeable changes, but the trail's function as a circulation feature and existing character and setting as a natural trail within a woodland setting would be retained.

The allowance of bikes on the administrative road connecting Manahan Road and Foxville Deerfield Road, which currently allows pedestrians and official vehicle use, would introduce a new type of transportation use on the road. New bike use on the road would be consistent with and continue the transportation use of the road. The road's function as a circulation feature and existing character and setting as a natural trail within a woodland setting would be retained.

Overall, the undertaking's proposed new trails and changes to existing trails would minimize the potential for adverse effects on contributing trails by using indigenous materials, muted colors, and a design that is representative of the rustic style and sympathetic and complementary to the surrounding landscape. These design actions would be undertaken in a manner that is consistent with *The Secretary of the Interior's Standards for the Treatment of Historic Properties*.



Figure 7: Examples of Existing Contributing Trails

(1) Blue Blazes Whiskey Still Trail; (2) Blue Ridge Summit Trail; (3) Brown's Farm Trail; (4) Chimney Rock Trail/Wolf Rock Trail between Thurmont Vista and Wolf Rock; (5) Chimney Rock Trail/Wolf Rock Trail between Chimney Rock and Park Headquarters; (6) Catoclin National Recreational Trail

Table 2. Contributing Trail Maintenance Activities

Contributing Trail	Clean waterbars and/or clear culverts	Replace waterbars	Install new waterbars	Install log checks and cribbing	Import and place subbase material for log cribbing structures and/or approaches	Install new turnpike treatment	Replace pedestrian bridge	Repair/improve boardwalk	Replace boardwalk	Improve trail tread by out-sloping and grubbing	Excavate to grade and install stabilized tread material	Rebuild rock walls	Build retaining support wall	Eliminate social trail	Repair and/or paint signs	Replace blazes/markers with new reflective trail markers	Install new signs and/or reflective trail markers	Remove vegetation/trees
Blue Blazes Whiskey Still Trail	✓	✓	✓				✓						✓	✓		✓		✓
Blue Ridge Summit Trail	✓	✓	✓	✓	✓										✓	✓		✓
Brown's Farm Trail	✓	✓	✓				✓		✓							✓		✓
Charcoal Trail	✓	✓	✓							✓						✓		✓
Chimney Rock Trail/Wolf Rock Trail (except the section between the Park Headquarters and the Visitor Center) ¹	✓	✓	✓	✓	✓		✓			✓		✓			✓	✓	✓	✓
CNRT	✓	✓	✓	✓	✓	✓				✓						✓	✓	✓
Cunningham Falls Nature Trail	✓	✓	✓	✓	✓		✓			✓		✓		✓	✓	✓	✓	✓
Deerfield Nature Trail	✓	✓	✓	✓	✓		✓			✓					✓	✓	✓	✓
Gateway Trail (except the section from the trailhead at the Lewis Area parking area to the trail's T-intersection)	✓	✓	✓	✓						✓	✓		✓	✓	✓	✓	✓	✓

Contributing Trail	Clean waterbars and/or clear culverts	Replace waterbars	Install new waterbars	Install log checks and cribbing	Import and place subbase material for log cribbing structures and/or approaches	Install new turnpike treatment	Replace pedestrian bridge	Repair/improve boardwalk	Replace boardwalk	Improve trail tread by out-sloping and grubbing	Excavate to grade and install stabilized tread material	Rebuild rock walls	Build retaining support wall	Eliminate social trail	Repair and/or paint signs	Replace blazes/markers with new reflective trail markers	Install new signs and/or reflective trail markers	Remove vegetation/trees
Hog Rock Trail	✓	✓	✓	✓	✓		✓			✓		✓		✓	✓	✓	✓	✓
Horse Trail	✓	✓	✓	✓	✓	✓				✓				✓		✓	✓	✓
Sawmill Trail								✓										
Spicebush Trail											✓					✓	✓	✓
Thurmont Vista Trail	✓	✓	✓	✓	✓					✓					✓	✓	✓	✓

Source: Facility Engineering Associates, P.C. 2021

¹ The detailed scope of work for trail maintenance activities in the *Final Report for Project Scoping Assessment*, which is summarized in Table 2, does not distinguish trail maintenance activities for the contributing vs. non-contributing section of the Chimney Rock Trail/Wolf Rock Trail. Therefore, trail maintenance activities for the non-contributing trail section may be included in Table 2.

Buildings and Structures

The undertaking would have no adverse effects on contributing buildings and structures. The undertaking would not result in physical changes to contributing buildings and structures, but would introduce new trails, and convert existing trails to accessible trails in the vicinity of contributing buildings and structures at Camp Misty Mount, Camp Greentop, Camp Round Meadow, the Blue Blazes area, and at Owens Creek Campground. A new trail would be located to the east of Camp Misty Mount between the camp and Park Central Road. New trails would lead out of Camp Round Meadow and Camp Greentop. The new trails would introduce defined trails in the camps' vicinity where there currently are none, thus altering the setting of the camps' buildings. New trails in the vicinity Camp Misty Mount and Camp Greentop would be designed to be compatible with the character associated with these camps' rustic architecture and design harmony with the adjacent natural and man-made landscape. **Figure 8** illustrates examples of the existing character and setting of contributing buildings and structures at Camp Misty Mount and Camp Greentop. New accessible trails in the Blue Blazes area and at Owens Creek Campground could also alter the character associated with Mission 66 and JCCC buildings.

Routine trail maintenance activities would be conducted in the vicinity of contributing buildings and trails. Maintenance activities could include the collection of native logs and stone or rocks collected from nearby. Cultural resources staff would be consulted on these described maintenance activities to ensure no logs, stone, or rocks are collected from buildings or structures listed or eligible for listing in the NRHP.

The new parking area along Mount Zion Road and improved Visitor Center parking lot and Horse Trailer parking lot would also be within the vicinity of contributing 19-century farm building ruins, wells, and walls, respectively. The new and improved parking areas would not result in physical changes to these contributing buildings and structures and would not alter the overall character and setting of these buildings and structures given the proximity of the existing roads and parking areas.

New trails, changes to existing trails, and new and improved parking areas would minimize the potential for adverse effects on nearby contributing buildings and structures by using indigenous materials, muted colors, and a design that is representative of the rustic style and sympathetic and complementary to the surrounding landscape. These design actions would be undertaken in a manner that is consistent with *The Secretary of the Interior's Standards for the Treatment of Historic Properties*.



Figure 8: Examples of Contributing Buildings and Structures and the Park's Overall Vegetative Character, Mountainous Features, and Rock Outcrops

(1) Camp Misty Mount; (2) Camp Greentop; (3) View from Blue Ridge Summit Overlook; (4) View from Hog Rock; (5) Approach to Wolf Rock; (6) Rock outcrop east of Park Headquarters

Small-scale Features

The undertaking would have no adverse effects on contributing small-scale features. The undertaking would introduce new trails in the vicinity of contributing small-scale features, including charcoal hearths from the 19th century, spring boxes, the culvert located under the Camp Misty Mount entrance road at Blue Blazes Creek, and small-scale features at Camp Greentop. The new trails would introduce defined trails in areas where there are currently none, thus altering the setting of these small-scale features.

The undertaking would convert the existing Charcoal Trail, which intentionally bisects a 19th-century charcoal hearth as part of an interpretive display, to an accessible trail. The Blue Ridge Summit Trail also traverses through a 19th-century charcoal hearth. Routine trail maintenance activities would be performed on both of these trails. These proposed elements may require minor ground disturbance, such as vegetation removal and minor topographic alterations. In order to avoid or minimize the potential for adverse effects, the NPS shall conduct an archeological survey where ground disturbance is proposed after the exact project/limits-of-disturbance boundaries are identified and prior to any construction work. The historic property identification efforts would determine the presence or absence of archeological deposits in the footprint of disturbance. The NPS would minimize ground-disturbing activities to the extent practicable during the construction phase.

Routine trail maintenance activities would also be conducted in the vicinity of contributing small-scale features. Maintenance activities could include the collection of native logs and stone or rocks collected from nearby and the repair or replacement of erosion control and drainage features, such as culverts. Cultural resources staff would be consulted on these described maintenance activities to ensure no small-scale features listed or eligible for listing in the NRHP are affected.

The new parking area along Foxville Deerfield Road would be within the vicinity of a contributing 19th-century charcoal hearth. However, the parking area would not alter the overall setting of the charcoal hearth given the proximity of the existing Foxville Deerfield Road, Sawmill Exhibit parking area, and administrative road connecting Manahan Road and Foxville Deerfield Road.

New trails, changes to existing trails, and the new Foxville Deerfield Road parking area would minimize the potential for adverse effects on nearby contributing small-scale features by using indigenous materials, muted colors, and a design that is representative of the rustic style and sympathetic and complementary to the surrounding landscape. These design actions would be undertaken in a manner that is consistent with *The Secretary of the Interior's Standards for the Treatment of Historic Properties*.

Archeological Sites

The undertaking would have no adverse effects on contributing archeological sites. Some of the existing trails with moderate or severe erosion or other condition problems that would be realigned as part of the undertaking currently traverse contributing archeological sites. These existing trail sections would be realigned away from archeological sites, which would prevent future site disturbances caused by erosion from trail use.

The undertaking would include routine trail maintenance activities on the CNRT, which traverses through one archeological site and is near one archeological site, both of which the 2014 Catoctin Mountain Park HD NRHP nomination identifies as contributing. Previous archeological survey efforts at these sites have revealed sub-surface components. The 2008 NPS Programmatic Agreement will guide future Section 106 compliance for maintenance activities at these sites.

Routine trail maintenance activities could include the establishment of borrow pits to obtain needed material to re-establish trail tread and the collection of native logs and stone or rocks collected from nearby. The construction of new earthen-surfaced trails may also harvest/mine earth from within the park. Cultural resources staff would be consulted on these described maintenance activities to ensure no archeological sites listed or eligible for listing in the NRHP are affected.

Vegetation

The undertaking would have no adverse effects on contributing vegetation. The undertaking would remove approximately 9.6 acres of vegetation of the 5,760-acre project area to accommodate new, realigned, and accessible trails, and new and improved parking areas. Routine trail maintenance activities would also include trimming herbaceous and woody vegetation within trail corridors. The introduction, realignment, and expansion of these elements within the park's forest would not be noticeable at a large scale, and the park would retain its overall vegetated character and the degree of openness of forest at the cabin camps. New trails within the vicinity of Camp Misty Mount and Camp Greentop could be visible from within the camps, but would not noticeably alter the vegetative character of the camps (see **Figure 8**). New, realigned, and accessible trails would avoid the removal of large trees; the removal of other trees would be avoided to the extent feasible. New and expanded parking areas would be constructed in areas with existing tree clearings, when possible. In areas where tree and vegetation removal would occur, the areas would be revegetated using native grasses, shrubs, trees, or other plants where needed.

Spatial Organization

The undertaking would have no adverse effects on contributing spatial organization. No changes to the park's landscape arrangement within a distribution of roads and land formations, road locations, and Camp Greentop's cluster arrangement of central core of buildings surrounded by satellite units that include the camper cabins would occur as a result of the undertaking. The undertaking's introduction of new trails in areas where no trails are present would create new paths of circulation within the park and provide visitor access to areas of the park that are currently inaccessible to visitors, including along Owens Creek north of Park Central Road, between the Hog Rog Trail and the CNRT, and to the Braestrup property. However, new trails would provide connections between the park's existing trail system and connect most of the developed areas of the park.

The undertaking would remove approximately 9.6 acres of vegetation of the 5,760-acre project area to accommodate new, realigned, and accessible trails, and new and improved parking areas. Routine trail maintenance activities would also include trimming herbaceous and woody vegetation within trail corridors. However, the introduction, realignment, and expansion of these elements within the forest would not be noticeable at a large scale and the landscape would retain its degree of openness or enclosure of the land. New, realigned, and accessible trails would avoid the removal of large trees; the removal of other trees would be avoided to the extent feasible. New and expanded parking areas would be constructed in areas with existing tree clearings, when possible. In areas where tree and vegetation removal would occur, the areas would be revegetated using native grasses, shrubs, trees, or other plants where needed.

Natural Systems and Features, and Topography

The undertaking would have no adverse effects on contributing natural systems and features, and topography. No changes to the park's mountainous features, rocky outcrops, boulder-strewn slopes, drainage divide near Round Meadow, Chimney Rock, Hog Rock, Wolf Rock, the central plateau, and deciduous forest within and around Camp Greentop would occur as a result of the undertaking (see **Figure 8**). The undertaking could minimally alter existing topography to provide appropriate slopes for new and accessible trails, and new and improved parking areas. However, the park's mountainous features would be retained.

Although the undertaking would introduce new trail crossings of streams, the park's streams and associated drainage basins would be retained. New foot bridges would be installed as needed to cross streams. Minor stream crossings would use bridges or other structures that completely span the channel and associated wetland habitat.

The undertaking would help stabilize and prevent continue erosion of streambanks through realigning sections of existing trails with moderate or severe erosion or other condition

problems away from streams. Natural groundcover vegetation would be allowed to grow into the closed trail section, but the closed trail section would be maintained to include a trace.

Cluster Arrangement, Constructed Water Features, Cultural Traditions, Land Use, and Views and Vistas

The undertaking would have no adverse effects on contributing cluster arrangement, constructed water features, cultural traditions, land use, and views and vistas. No changes to these contributing resources would occur as a result of the undertaking.

Overall, the Action Alternative would minimize the potential for adverse effects on contributing resources by using indigenous materials, muted colors, and a design that is representative of the rustic style and sympathetic and complementary to the surrounding landscape. These design actions would be undertaken in a manner that is consistent with *The Secretary of the Interior's Standards for the Treatment of Historic Properties*. Therefore, the undertaking would result in no adverse effects on the Catoctin Mountain Park, Camp Misty Mount, and Camp Greentop historic districts and cultural landscapes.

While the Action Alternative Plan overall would result in no adverse effects on historic districts and cultural landscapes, the implementation of individual Plan elements could result in an adverse effect on the historic districts and cultural landscapes. Each element of the Plan will be subject to a separate Section 106 consultation as outlined in the 2008 Programmatic Agreement; and all work will be designed to meet *The Secretary of the Interior's Standards for the Treatment of Historic Properties*. NPS will complete additional Section 106 compliance, including consultation with SHPO and Tribal Historic Preservation Offices (THPOs), submitted as a separate project (or separate projects) from this Action Alternative as the precise locations of each element of the Plan are developed and designed. Section 106 compliance will be completed prior to any construction work. Individual Memorandums of Agreements will be developed for these elements if there is a finding of adverse effect.

7.2 Archeological Resources

The Action Alternative proposes new trails, realigned trails, the conversion of existing trails to accessible trails, a new accessible picnic site, the new use of bikes on an existing administrative road, routine trail maintenance activities, and new and improved parking areas through the park. Ground disturbance, such as grading and vegetation removal, related to the proposed project elements could disrupt or displace as-yet unidentified archeological resources and result in a loss of integrity of the archeological resource, and therefore could result in an adverse effect. Some ground disturbance would be surficial, such as construction of earthen-surfaced trails, while other project elements would likely use mechanical equipment, such as to remove vegetation and/or install pavement.

Archeological sites have been identified along the Blue Blazes Whiskey Still Trail, the Charcoal Trail, and the Brown's Farm Nature Trail Loop. The undertaking proposes to convert these existing trails to accessible trails. All except one of the archeological sites are located outside of the trail pathway. However, these trail pathways are located within a 33-foot (10-meter) buffer of the archeological sites. These sites appear undisturbed or minimally disturbed and in good condition despite being within a high visibility setting and used by NPS as interpretive displays. For the one site located directly on the trail pathway, the trail intentionally bisects the site as part of an interpretive display. The continued use of the site as part of the trail will continue to wear the surface of the site. However, the site is not believed to have significant subsurface components (Johnson and Regan 2021). The conversion of the trail to an accessible trail may require minor ground disturbance, such as vegetation removal and minor topographic alterations. Additional Section 106 consultation will be carried out prior to trail conversion.

Routine trail maintenance activities could include the establishment of borrow pits to obtain needed material to re-establish trail tread and the collection of native logs and stone or rocks collected from nearby. The construction of new earthen-surfaced trails may also harvest/mine earth from within the park. Routine trail maintenance activities would also be performed on the CNRT, which traverses through one archeological site and is near one archeological site, both of which the 2014 Catoctin Mountain Park HD NRHP nomination identify as contributing. Previous archeological survey efforts at these sites have revealed subsurface components.

The potential of the proposed project elements to impact unmarked cemeteries or human remains does exist.

The Action Alternative's proposed elements would avoid documented archeological sites and would provide a buffer to avoid potentially encountering subsurface features or other archeological artifacts during construction. In areas of the park that have not been subject to archeological survey, there is potential for adverse effects to archeological resources during implementation of some of the proposed project elements. For areas that have not been subject to historic property identification efforts, the NPS will conduct Section 106 consultation as outlined in the 2008 Programmatic Agreement on each element of the Plan once exact project /limits-of-disturbance boundaries are identified. Individual Memorandums of Agreements will be developed for these elements if there is a finding of adverse effect.

In order to avoid or minimize the potential for adverse effects and consistent with *The Secretary of the Interior's Standards for the Treatment of Historic Properties*, the NPS shall conduct an archeological survey for undocumented areas and areas previously subjected only to pedestrian survey without shovel testing, including for those areas where borrow pits may be established, material collected, and earth harvested/mined for the construction of new trails and routine trail maintenance activities. These surveys would take place where ground disturbance is proposed after exact project /limits-of-disturbance boundaries are identified and prior to any construction

work. The historic property identification efforts would determine the presence or absence of archeological deposits in the footprint of disturbance. If NRHP-eligible or potentially eligible archeological resources are present, the NPS would define appropriate avoidance, minimization, or mitigation measures to be taken and would consult with MHT, the Delaware Nation Historic Preservation Office, the Seneca-Cayuga Nation, and the Tuscarora Nation, and consulting parties.

The NPS would minimize ground-disturbing activities to the extent practicable during the construction phase, including using existing vehicle circulation areas and construction methods that minimize ground disturbance. If determined appropriate, archeological monitoring would take place during construction.

Existing archeological resources along existing trails would be protected from ongoing impacts through re-routing of trails or the use of wood chips, landscape fabric, or other methods to cover exposed resources. For archeological resources that have been previously evaluated for NRHP eligibility through consultation with the MHT, the 2008 NPS Programmatic Agreement will guide future Section 106 compliance.

A protocol for the unanticipated discovery of cemeteries or human remains will be developed for the construction contractor. If any Native American burials, cemeteries, or funerary objects are encountered, the NPS would contact federally recognized Tribes with affiliation in Maryland, in accordance with the Native American Graves Repatriation Act (NAGPRA).

While the implementation of the recommended actions in the Action Alternative has the potential to disturb currently undocumented archeological resources that would result in an adverse effect, each element of the Plan will be the subject of a separate Section 106 consultation as outlined in the 2008 NPS Programmatic Agreement. All work will be designed to meet the applicable Secretary of the Interior's standards.

While the Action Alternative overall would result in no adverse effects on archeological resources, the NPS will complete additional Section 106 compliance, including SHPO and THPO consultation, submitted as a separate project (or separate projects) from this Action Alternative as the precise locations of each element of the Plan are developed and designed. Section 106 compliance will be completed prior to any construction work. Individual Memorandums of Agreements will be developed for these elements if there is a finding of adverse effect.

8. AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES

In order to avoid or minimize adverse effects on historic properties, several steps would be undertaken by NPS during implementation of the Action Alternative.

- NPS would avoid disturbing known historic and archeological resources during design and construction to the extent practicable.
- NPS shall complete additional Section 106 compliance, including consultation with SHPO and THPOs, submitted as a separate project (or separate projects) as the precise locations of each element of the Plan are developed and designed. Section 106 compliance will be completed prior to any construction work. Individual Memorandums of Agreements will be developed for these elements if there is a finding of adverse effect.
- The design and construction of new, realigned, and accessible trails would be undertaken in a manner that is consistent with *The Secretary of the Interior's Standards for the Treatment of Historic Properties*.
- NPS shall conduct an archeological survey for undocumented areas and areas previously subjected only to pedestrian survey without shovel testing where ground disturbance is proposed after exact project /limits-of-disturbance boundaries are identified and prior to any construction work. The historic property identification efforts would determine the presence or absence of archeological deposits in the footprint of disturbance. If NRHP-eligible or potentially eligible archeological resources are present, the NPS would define appropriate avoidance, minimization, or mitigation measures to be taken and would consult with MHT, the Delaware Nation Historic Preservation Office, the Seneca-Cayuga Nation, and the Tuscarora Nation, and consulting parties.
- NPS would minimize ground-disturbing activities to the extent practicable during the construction phase, including using existing vehicle circulation areas and construction methods that minimize land disturbance. If ground disturbances are proposed in areas of known moderate to high archeological sensitivity, additional investigation may be necessary. This work may include trail construction monitoring, geoarcheological testing, and/or archeological survey to determine or refine the nature, types, extent, and potential significance of archeological resources.
- NPS would develop an Unanticipated Discoveries Plan to outline communication, management, and consulting protocols in the event unanticipated archeological resources are encountered anywhere in the park as a result of ground disturbances arising from recreational, maintenance, and construction activities.
- NPS will develop a protocol for the unanticipated discovery of cemeteries or human remains for the construction contractor.

- NPS would contact federally recognized Tribes with affiliation in Maryland if any Native American burials, cemeteries, or funerary objects are encountered.

9. SOURCES

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APPENDIX A



IN REPLY
REFER TO:

United States Department of the Interior

NATIONAL PARK SERVICE
Catoctin Mountain Park
6602 Foxville Road
Thurmont, MD 21788

CATO-1.A.2 COMPLIANCE

January 11, 2021

Ms. Elizabeth Hughes
Director/State Historic Preservation Officer
Attn: Beth Cole, Administrator, Project Review and Compliance
Maryland Historical Trust
100 Community Place, 3rd Floor
Crownsville, MD 21032-2023

Subject: Section 106 Consultation for Catoctin Mountain Park Comprehensive Trail
System Plan and Environmental Assessment

Dear Ms. Hughes:

The National Park Service (NPS) is preparing a Comprehensive Trail System Plan and corresponding Environmental Assessment (EA) for Catoctin Mountain Park. The NPS wishes to formally initiate consultation for this project with the Maryland State Historic Preservation Office (SHPO), in accordance with 36 CFR 800.3 of Section 106 of the National Historic Preservation Act of 1966.

Catoctin Mountain Park is located in Frederick County, Maryland, and contains 25 miles of developed trails that provide several scenic viewpoints, multiple universally accessible trails, and 6 miles of trails open to horseback riding. A number of these trails were designed as part of the park's original master plan and built by the Civilian Conservation Corps and Works Progress Administration crews in the 1930s and 1940s. The NPS has maintained these trails for over 80 years without a comprehensive plan to guide the design, management, and overall cohesion with the park's evolving mission and goals. The entire park is listed in the National Register of Historic Places (NRHP) as a Historic District. The Camp Greentop Historic District and Camp Misty Mount Historic District, which are both cabin camps in the park, are also listed in the NRHP.

In accordance with the National Environmental Policy Act (NEPA), the NPS will prepare an EA that will address this project. The NPS intends to coordinate consultation and NEPA review per Advisory Council on Historic Preservation (ACHP) regulations (36 CFR 800.8) and to consult the public per 36 CFA 800.3(e) in public meetings and through our Planning, Environment, and Public Comment (PEPC) website (<https://parkplanning.nps.gov/>). It is anticipated that these outreach efforts will accommodate both NEPA and the Section 106 processes, although the NEPA and Section 106 processes are on two separate, but parallel tracks.

The proposed Area of Potential Effect is the project site, as shown in the attached map. However, at this early stage, we are unable to make any determination of effect. Once determined, the NPS will prepare a formal Assessment of Effects for the project.

We look forward to consulting with you on this project. If you have any questions, please do not hesitate to contact Katie Wackrow, Cultural Resources Program Manager, by phone at 229-815-0051 or by email at kathleen_wackrow@nps.gov.

Sincerely,

**RICHARD
SLADE**

Rick Slade
Superintendent
Catoctin Mountain Park

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RICHARD SLADE
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Cc: Cultural Resources Program Manager, Catoctin Mountain Park

Enclosure: Proposed Area of Potential Effect

Larry Hogan, Governor
Boyd Rutherford, Lt. Governor



Robert S. McCord, Secretary
Sandy Schrader, Deputy Secretary

Maryland
DEPARTMENT OF PLANNING
MARYLAND HISTORICAL TRUST

February 11, 2021

Rick Slade, Superintendent
Catoctin Mountain Park, NPS
6602 Foxville Road
Thurmont, MD 21788
Sent via email to: rick_slade@nps.gov

Re: Catoctin Mountain Park - Comprehensive Trail System Plan
Frederick County, Maryland - Section 106 Review

Dear Superintendent Slade:

Thank you for your recent letter, dated January 11, 2021 and received by the Maryland Historical Trust (Trust) on January 14, 2021, initiating consultation with the Trust pursuant to Section 106 of the National Historic Preservation Act for the above-referenced undertaking.

We understand that NPS is developing a Comprehensive Trail System Plan for the entire park. As noted in the submittal, the project area encompasses the Park's three historic districts, all listed in the National Register of Historic Places: Catoctin Mountain Park (F-6-147), Camp Misty Mount (F-6-43) and Camp Greentop (F-6-44). NPS has also undertaken considerable archeological survey within the Park to identify and evaluate archeological sites parkwide. The trails at Catoctin Mountain Park are contributing resources to the Catoctin Mountain Park Historic District. We appreciate NPS's early coordination on this undertaking to ensure the appropriate consideration of the park's cultural resources, including the trails and other historic landscape elements near the trails, during project planning and implementation.

We look forward to further coordination with NPS and other consulting parties to complete the Section 106 review of this undertaking and await NPS's findings of effect on historic properties for our review and concurrence. If you have questions or need further assistance, please contact Becky Roman (for historic structures) at becky.roman@maryland.gov or me (for archeology and general coordination) at beth.cole@maryland.gov. Thank you for providing us this opportunity to comment.

Sincerely,

Beth Cole signed electronically

Beth Cole
Administrator, Project Review and Compliance

BC/202100123
cc: Katie Wackrow (NPS CATO / kathleen_wackrow@nps.gov)

Maryland Historical Trust • 100 Community Place • Crownsville • Maryland • 21032

Tel: 410.697.9591 • toll free 877.767.6272 • TTY users: Maryland Relay • MHT.Maryland.gov



IN REPLY
REFER TO:

United States Department of the Interior

NATIONAL PARK SERVICE

Catoctin Mountain Park
6602 Foxville Road
Thumont, MD 21788

CATO-1.A.2 COMPLIANCE

January 27, 2021

Ms. Erin Paden
Historic Preservation Director
Delaware Nation
P.O. Box 825
Anadarko, OK 73005

Subject: Section 106 Consultation for Catoctin Mountain Park Comprehensive Trail
System Plan and Environmental Assessment

Dear Ms. Paden:

The National Park Service (NPS) is preparing a Comprehensive Trail System Plan and corresponding Environmental Assessment (EA) for Catoctin Mountain Park. The NPS wishes to formally initiate consultation for this project with the Delaware Nation Historic Preservation Office, in accordance with 36 CFR 800.3 of Section 106 of the National Historic Preservation Act of 1966.

Catoctin Mountain Park is located in Frederick County, Maryland, and contains 25 miles of developed trails that provide several scenic viewpoints, multiple universally accessible trails, and 6 miles of trails open to horseback riding. A number of these trails were designed as part of the park's original master plan and built by the Civilian Conservation Corps and Works Progress Administration crews in the 1930s and 1940s. NPS has maintained these trails for over 80 years without a comprehensive plan to guide the design, management, and overall cohesion with the park's evolving mission and goals. The entire park is listed in the National Register of Historic Places (NRHP) as a Historic District. The Camp Greentop Historic District and Camp Misty Mount Historic District, which are both cabin camps in the park, are also listed in the NRHP.


In accordance with the National Environmental Policy Act (NEPA), the NPS will prepare an EA that will address this project. The NPS intends to coordinate consultation and NEPA review per Advisory Council on Historic Preservation (ACHP) regulations (36 CFR 800.8) and to consult the public per 36 CFA 800.3(e) in public meetings and through our Planning, Environment, and Public Comment (PEPC) website (<https://parkplanning.nps.gov/>). It is anticipated that these outreach efforts will accommodate both NEPA and the Section 106 processes, although the NEPA and Section 106 processes are on two separate, but parallel, tracks.

The proposed Area of Potential Effect is the project site, as shown in the attached map. However, at this early stage, we are unable to make any determination of effect. Once determined, the NPS will prepare a formal Assessment of Effects for the project.

We look forward to consulting with you on this project. If you have any questions, please do not hesitate to contact Katie Wackrow, Cultural Resources Program Manager for the park, by phone at 229-815-0051 or by email at kathleen_wackrow@nps.gov.

Sincerely,

**RICHARD
SLADE**

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Date: 2021.01.27
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Rick Slade
Superintendent
Catoclin Mountain Park

Cc: Cultural Resources Program Manager, Catoclin Mountain Park
Enclosure: Proposed Area of Potential Effect



IN REPLY
REFER TO:

United States Department of the Interior

NATIONAL PARK SERVICE

Catoctin Mountain Park
6602 Foxville Road
Thumont, MD 21788

CATO-1.A.2 COMPLIANCE

January 27, 2021

Mr. William Tarrant
Cultural Director
Seneca-Cayuga Nation
PO Box 453220
Grove, OK 74344

Subject: Section 106 Consultation for Catoctin Mountain Park Comprehensive Trail
System Plan and Environmental Assessment

Dear Mr. Tarrant:

The National Park Service (NPS) is preparing a Comprehensive Trail System Plan and corresponding Environmental Assessment (EA) for Catoctin Mountain Park. The NPS wishes to formally initiate consultation for this project with the Seneca-Cayuga Nation Historic Preservation Office, in accordance with 36 CFR 800.3 of Section 106 of the National Historic Preservation Act of 1966.

Catoctin Mountain Park is located in Frederick County, Maryland, and contains 25 miles of developed trails that provide several scenic viewpoints, multiple universally accessible trails, and 6 miles of trails open to horseback riding. A number of these trails were designed as part of the park's original master plan and built by the Civilian Conservation Corps and Works Progress Administration crews in the 1930s and 1940s. NPS has maintained these trails for over 80 years without a comprehensive plan to guide the design, management, and overall cohesion with the park's evolving mission and goals. The entire park is listed in the National Register of Historic Places (NRHP) as a Historic District. The Camp Greentop Historic District and Camp Misty Mount Historic District, which are both cabin camps in the park, are also listed in the NRHP.

In accordance with the National Environmental Policy Act (NEPA), the NPS will prepare an EA that will address this project. The NPS intends to coordinate consultation and NEPA review per Advisory Council on Historic Preservation (ACHP) regulations (36 CFR 800.8) and to consult the public per 36 CFA 800.3(e) in public meetings and through our Planning, Environment, and Public Comment (PEPC) website (<https://parkplanning.nps.gov/>). It is anticipated that these outreach efforts will accommodate both NEPA and the Section 106 processes, although the NEPA and Section 106 processes are on two separate, but parallel, tracks.

The proposed Area of Potential Effect is the project site, as shown in the attached map. However, at this early stage, we are unable to make any determination of effect. Once determined, the NPS will prepare a formal Assessment of Effects for the project.

We look forward to consulting with you on this project. If you have any questions, please do not hesitate to contact Katie Wackrow, Cultural Resources Program Manager for the park, by phone at 229-815-0051 or by email at kathleen_wackrow@nps.gov.

Sincerely,

**RICHARD
SLADE**

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Rick Slade
Superintendent
Catoctin Mountain Park

Cc: Cultural Resources Program Manager, Catoctin Mountain Park

Enclosure: Proposed Area of Potential Effect



IN REPLY
REFER TO:

United States Department of the Interior

NATIONAL PARK SERVICE

Catoctin Mountain Park
6602 Foxville Road
Thumont, MD 21788

CATO-1.A.2 COMPLIANCE

January 27, 2021

Chief Leo R. Henry
Tuscarora Nation
2006 Mt. Hope Road
Lewistown, NY 14092

Subject: Section 106 Consultation for Catoctin Mountain Park Comprehensive Trail System Plan and Environmental Assessment

Dear Chief Henry:

The National Park Service (NPS) is preparing a Comprehensive Trail System Plan and corresponding Environmental Assessment (EA) for Catoctin Mountain Park. The NPS wishes to formally initiate consultation for this project with the Tuscarora Nation Historic Preservation Office, in accordance with 36 CFR 800.3 of Section 106 of the National Historic Preservation Act of 1966.

Catoctin Mountain Park is located in Frederick County, Maryland, and contains 25 miles of developed trails that provide several scenic viewpoints, multiple universally accessible trails, and 6 miles of trails open to horseback riding. A number of these trails were designed as part of the park's original master plan and built by the Civilian Conservation Corps and Works Progress Administration crews in the 1930s and 1940s. NPS has maintained these trails for over 80 years without a comprehensive plan to guide the design, management, and overall cohesion with the park's evolving mission and goals. The entire park is listed in the National Register of Historic Places (NRHP) as a Historic District. The Camp Greentop Historic District and Camp Misty Mount Historic District, which are both cabin camps in the park, are also listed in the NRHP.

In accordance with the National Environmental Policy Act (NEPA), the NPS will prepare an EA that will address this project. The NPS intends to coordinate consultation and NEPA review per Advisory Council on Historic Preservation (ACHP) regulations (36 CFR 800.8) and to consult the public per 36 CFA 800.3(e) in public meetings and through our Planning, Environment, and Public Comment (PEPC) website (<https://parkplanning.nps.gov/>). It is anticipated that these outreach efforts will accommodate both NEPA and the Section 106 processes, although the NEPA and Section 106 processes are on two separate, but parallel, tracks.

The proposed Area of Potential Effect is the project site, as shown in the attached map. However, at this early stage, we are unable to make any determination of effect. Once determined, the NPS will prepare a formal Assessment of Effects for the project.

We look forward to consulting with you on this project. If you have any questions, please do not hesitate to contact Katie Wackrow, Cultural Resources Program Manager for the park, by phone at 229-815-0051 or by email at kathleen_wackrow@nps.gov.

Sincerely,

**RICHARD
SLADE**

Digitally signed by
RICHARD SLADE
Date: 2021.01.27
14:04:37 -05'00'

Rick Slade
Superintendent
Catoclin Mountain Park

Cc: Cultural Resources Program Manager, Catoclin Mountain Park
Enclosure: Proposed Area of Potential Effect

APPENDIX B

The following description of existing conditions and proposed trail maintenance activities for contributing trails is from the 2021 *Final Report for Project Scoping Assessment* completed by Facility Engineering Associates, P.C. for the park. Note that the trail maintenance activities proposed for the Chimney Rock Trail/Wolf Rock Trail are for the entire length of the trail, including the section between the Park Headquarters and the Visitor Center, which is not contributing.

Trail Name: Chimney Rock/Wolf Rock Trail #TR-1 Asset number: #16957

The trail head starts at the Park Visitor Center, just off SR-77, and almost immediately starts to climb. The trail has fairly steep grades and the tread condition reflects that. The section between the Visitor Center and Park Headquarters is very rocky. After the climb up to Chimney Rock the grades become less severe, except for a steep downhill section between Chimney and Wolf Rock. From Wolf Rock down the trail has steep grade and fairly evenly applied. The trail terminates at Wolf Rock parking lot. Note: The trail needs a terminus at Wolf Rock due to safety issue leading hikers to an unsafe area and no real delineation of trail ending point.

- **General Information**
 - Length: 3.9 miles.
 - Width: three to four feet.
 - Trail Class II (Recommended Class III).
 - CRV: \$300,000 (appears low with structure and tread).
 - Grade (general): Steep and rocky, some very steep sections.
 - ABAAS potential: None, apply total trail exemption.
- **Plants/Vegetation/Trees**
 - Brushing/tree removal
 - Brushing: Clear under and overstory of brush, shrubs, and small trees (less than 12-inch DBH). Travel way clearing for a pedestrian path should be a box 8-FT x 8-FT. Brush and grub approximately one acre of trail prism.
 - Tree trimming/cutting (greater than 12-inch DBH): Trim and/or cut 40 trees.
- **Site Features**
 - Signage:
 - Paint and rehabilitate three directional signs.
 - Install trailhead sign compliant with ABAAS Chapter 1017.10 identifying trail features: 1) length of trail; 2) surface type; 3) typical and minimum tread width; 4) typical and maximum running slope; and 5) typical and maximum running slope.
 - Blazes: Replace with 200 orange reflective trail markers.
- **Structures**
 - Drainage
 - Water bars: Clean approximately 190 waterbars. Replace 40 waterbars.
 - Install approximately 3,000 LF of log checks and cribbing in ten uphill climbs to check erosion and soil destabilization.
 - Walls
 - Reconstruct 1,000 LF x 2-FT wide rock walls using existing rock for outside retainment and crush fill leading to Wolf Rock terminus point.
 - Bridges
 - Demolition of two existing pedestrian bridges.
 - Replace two pedestrian wooden bridges, 15 LF x 4-FT wide. Rework approaches and abutments.
 - Textured paint or stain should be used for walking surface to provide slip resistant surface.

- **Surface/Base and Subbase**

- Trail Tread:
 - Import and place subbase material for log cribbing structures and approaches, estimate 378 tons of import soil or crush fill onsite. Requires logistics and cost for backcountry transport.
 - Relocate approximately 1,500 LF x 4 FT wide trail onto the old trail route at the current very steep section. Requires grubbing and out sloping of new trail surface.
 - Obliterate and revegetate the steep trail section being rerouted (approximate 3,600 SF).

Trail Name: Crows Nest Trail #TR-2 Asset number: #16964

The trail is a historic trail with structures. The trail follows beside the creek before climbing back up the hill to intersect with the Chimney Rock trail.

- **General Information**

- Length: 1.56 miles.
- Width: Two to four feet.
- Trail Class II.
- CRV: \$201,000 (some structures).
- Grade (general): General grade is medium too steep with some steps.
- ABAAS potential: No potential, needs whole trail exception.

- **Plants/Vegetation/Trees**

- Remove plants within the trail corridor that require cyclic maintenance including trees, shrubs, vines, down trees and logs, ground covers, herbaceous perennials, and annuals. Total approximately one acre.
- Tree trimming/cutting (greater than 12-inch DBH): Trim and/or cut five trees.

- **Site Features**

- Repaint four trail intersection signs.
- Replace 85 white reflective markers.
- Install two new trail directional signs.
- Install trailhead sign compliant with ABAAS Chapter 1017.10 identifying trail features: 1) length of trail; 2) surface type; 3) typical and minimum tread width; 4) typical and maximum running slope; and 5) typical and maximum running slope.

- **Structures**

- Drainage: Clean approximately 85 waterbars. Replace 20 waterbars.

- **Surface, Base and Subbase**

- Trail tread: Improve 1,500 LF x 5-FT wide of trail tread by out-sloping and grubbing to improve tread and drainage conditions (estimated 0.17 acre).

Trail Name: Cunningham Falls #TR-3 Asset Number: #16962

This trail starts in the vicinity of the Visitor Center, and shares trailhead facilities with the Whiskey Still Trail. The grade is steep in both an up-climb and down-climb. The trail is seeing increased usage due to the adjacent Cunningham Falls State Park initiating fees within their park boundaries.

- **General**
 - Length: 1.2 miles.
 - Width: Three to four feet.
 - Trail Class III.
 - CRV: \$139,000, appears low with bridge, structures, and tread.
 - Grade (general): General grade is medium to steep.
 - ABAAS potential: None, apply total trail exception.
- **Plants/Vegetation/Trees**
 - Brushing/tree removal
 - Brushing: Clear under and overstory of brush, shrubs, and small trees (less than 12-inch DBH). Travel way clearing for a pedestrian path should be a box 8-FT x 8-FT. Brush and grub approximately 0.8 acres of trail prism.
 - Tree trimming/cutting (greater than 12-inch DBH): Trim and/or cut five each.
 - Social Trailing: Revegetate 500 LF of unauthorized trail.
- **Site Features**
 - Trailhead parking surface: Included with Whiskey Still Trail.
 - Signage:
 - Repaint three directional signs.
 - Install trailhead sign compliant with ABAAS Chapter 1017.10 identifying trail features: 1) length of trail; 2) surface type; 3) typical and minimum tread width; 4) typical and maximum running slope; and 5) typical and maximum running slope.
 - Blazes: Replace with 63 yellow reflective markers.
- **Structures**
 - Drainage
 - Culverts: Clear four culverts.
 - Water bars: Clean approximately 150 waterbars. Replace 35 waterbars.
 - Install 750 LF of log checks and cribbing in overly steep section of trail to check erosion and soil destabilization.
 - Walls
 - Rebuild 40 SF of rock wall with material on-site.
 - Bridge: Demolition and replace one 15 LF x 5-FT wide wood decked bridge with steel girders. Elevation about 2.5-FT feet above creek surface. (Bridge located by trailhead parking near Visitor Center).
 - Textured paint or stain should be used for walking surface to provide slip resistant surface.
- **Surface, Base and Subbase**
 - Trail Tread: Import and place estimated 81 tons of subbase material for log cribbing structures and approaches. Requires logistics and cost for backcountry transport.

Trail Name: Whiskey Still Trail #TR-4 Asset number: #16960

The Whiskey Still Trail starts at the Visitor Center Parking lot, and shares parking and trail head facilities with the Cunningham Falls Trail. Relatively short flat trail with several structures and interpretive displays. Has potential for conversion to ABAAS trail.

- **General**
 - Length: 0.6 miles; length appears low.
 - Width: three feet (ABAAS would require five feet).
 - Trail Class III (ABAAS-IV potential).
 - CRV: \$35,700, appears low with an existing bridge.
 - Grade (general): General grade is low.
 - ABAAS potential: Has good potential.
- **Plants/Vegetation/Trees**
 - Remove plants within the trail corridor that require cyclic maintenance, including trees, shrubs, vines, down trees and logs, ground covers, herbaceous perennials, and annuals.
 - Brushing: Clear under and over-story of brush and shrubs. Travel way clearing for a standard pedestrian path should be a box 8-FT x 8-FT. Brush and grub approximately 0.2 acres of trail prism.
 - Social Trailing: Revegetate and obliterate approximately 500 LF of social trail.
- **Site Features**
 - Parking: The Visitor Center/Cunningham Falls trailhead area needs surface maintenance and markings.
 - Resurface gravel parking lot with 2-inches aggregate and regrade (approximate 900 SY).
 - Install 18 wood parking blocks.
 - Construct two accessible paved parking spaces (one van accessible, one regular, and aisle) with striping and signage.
 - Benches: Replace existing eight benches to be ABAAS compliant and harden approach surfaces.
 - Install trailhead sign compliant with ABAAS Chapter 1017.10 identifying trail features: 1) length of trail; 2) surface type; 3) typical and minimum tread width; 4) typical and maximum running slope; and 5) typical and maximum running slope.
- **Structures**
 - Drainage
 - Culverts: Clear five culverts.
 - Water bars: Replace the existing 30 waterbars with 12-inch corrugated HDPE culverts to be ABAAS compliant. (Possible alternative not costed is to grade the trail slope and/or swale to comply with ABAAS maximum running and cross slope requirements).
 - Walls: Build small wood retaining support walls (15 LF X 2-FT high) for reroute to meet grade requirements where the trail crosses the road.
 - Bridges
 - Demolish and replace one 40 LF x 5-FT wide wood decked bridge approximately 2.5-FT feet above creek surface. Construct two new trail tread approaches approximately 15 LF x 4-FT wide (each) to match the 5% grade at both ends of the bridge.
 - Demolish and replace one 15 LF x 5-FT wide wood bridge at the Still site.

- Textured paint or stain should be used for walking surface to provide slip resistant surface.
- **Surface, Base and Subbase**
 - Trail Tread: Excavate for maximum 5% grade (3,168 LF x 5-feet x 4-inch). Remove native soil material and use for shoulders. Replace with stabilized aggregate surface such as SOIL-LOC™ stabilized tread material, grade and compact, estimate 360 tons of import SOIL-LOC. Requires mechanical placement and transport to site.

Trail Name: Blue Ridge Summit Vista Trail #TR-5 Asset number #16965

This trail begins in the Hog Rock parking area and continues for approximately one mile until it intersects with the Thurmont Vista trail. This is an unassuming class II trail with a great view of the Blue Ridge. One section of the trail is overly steep and could be a potential reroute option.

- **General**
 - Length: one mile (Believe entire trail to Thurmont Loop Intersection is one mile).
 - Width: two feet.
 - Trail Class II.
 - CRV: \$133,000.
 - Grade (general): General grade is low on top, with one steep section.
 - ABAAS potential: None, apply total trail exception.
- **Plants/Vegetation/Trees**
 - Brushing/tree removal
 - Brushing: Clear both under and overstory of brush, shrubs, and small trees (less than 12-inch DBH). The travel way clearing for a pedestrian path should be a box 8-FT x 8-FT. Brush and grub approximately 0.6 acres of trail prism should be brushed and grubbed.
 - Tree trimming/cutting (greater than 12-inch DBH): Trim and/or cut five trees.
- **Site Features**
 - Signage: Paint one directional sign.
 - Install trailhead sign compliant with ABAAS Chapter 1017.10 identifying trail features: 1) length of trail; 2) surface type; 3) typical and minimum tread width; 4) typical and maximum running slope; and 5) typical and maximum running slope.
 - Blazes: Replace with 50 yellow reflective trail markers.
- **Structures**
 - Drainage
 - Water bars: Clean approximately 30 waterbars.
 - Replace six water bars.
 - Install new 750 LF log checks and cribbing in uphill climbs to check erosion and soil destabilization. (Possible option to consider in future is to reroute this section of trail).
- **Surface, Base and Subbase**
 - Trail Tread: Import and place estimated 81 tons of subbase material for log cribbing structures. Requires logistics and costs for backcountry transport.



APPENDIX D – Trails Detailed Scope of Work

Trail Name: Charcoal Interpretive Trail #TR-6 Asset number: #16961

The Charcoal Trail is an easy (0.6 mile) loop hike that starts and ends at the Thurmont Vista Parking area. This trail follows an old coaling road where the local residents made charcoal for the Catoclin Iron furnaces.

- **General**
 - Length: 0.6 miles.
 - Width: four feet.
 - Trail Class III.
 - CRV: \$32,00.
 - Grade (general): Low.
 - ABAAS potential: Possible, but some grade and tread issues. Trail would need to have tread and grading improvement.
- **Plants/Vegetation/Trees**
 - Brushing/tree removal
 - Brushing: Clear both the under and overstory of brush, shrubs, and small trees (less than 12-inch DBH). Travel way clearing for a standard pedestrian path should be a box 8-FT x 8-FT. Brush and grub approximately 0.5 acres of trail prism.
 - Tree trimming/cutting (greater than 12-inch DBH): Trim and/or cut three trees.
- **Site Features**
 - Benches: Rehab two existing benches and install two additional benches.
 - Signage: Adequate. Interpretive signage is a separate asset.
 - Install trailhead sign compliant with ABAAS Chapter 1017.10 identifying trail features: 1) length of trail; 2) surface type; 3) typical and minimum tread width; 4) typical and maximum running slope; and 5) typical and maximum running slope.
- **Structures**
 - Drainage: Clean approximately 15 waterbars. Replace four waterbars.
 - Drainage swales and out sloping would be required to replace waterbars if ABASS conversion were to happen; not included in cost estimate.
- **Surface, Base and Subbase**
 - Trail Tread: Excavate to grade (3,168 LF x 5-feet x 4-inch). Remove native soil material and use for shoulders. Import, place, grade, and compact an estimated 392 tons of SOIL-LOC stabilized trail tread material. Requires mechanical placement and transport to site.

Trail Name: Thurmont Vista Trail #TR-7 Asset Number: #16958

This trail starts at the Thurmont Vista parking lot and shares a parking lot and trail head with the Charcoal Trail accessed off the Park Central road. The trail terminates at the intersection with the Wolf/Chimney Rock Trail. This is a moderate hike with decent grades.

- **General**
 - Length: 1.22 miles.
 - Width: three to four.
 - Trail Class III.
 - CRV: \$116,300, maybe low.

- Grade (general): General grade is medium, with one steep section.
- ABAAS potential: None, apply total trail exception.
- **Plants/Vegetation/Trees**
 - Brushing/tree removal
 - Brushing: Clear both the under and overstory of brush shrubs and small trees (less than 12-inch DBH). Travel way clearing for a pedestrian path should be a box 8-FT x 8-FT. Brush and grub approximately 0.8 acres of trail prism.
 - Tree trimming/cutting (greater than 12-inch DBH): Trim and/or cut five trees.
- **Site Features**
 - Signage: Repaint three directional signs. Install two directional signs at intersection.
 - Install trailhead sign compliant with ABAAS Chapter 1017.10 identifying trail features: 1) length of trail; 2) surface type; 3) typical and minimum tread width; 4) typical and maximum running slope; and 5) typical and maximum running slope.
 - Blazes: Replace with 140 purple reflective trail markers.
 - Benches: Replace four wood benches.
- **Structures**
 - Drainage
 - Water bars: Clean approximately 148 waterbars. Replace 30 waterbars.
 - Walls: Install 1,500 LF of log checks and cribbing in uphill climbs to check erosion and soil destabilization.
- **Surface, Base and Subbase**
 - Trail Tread: Import and place an estimated 175 ton of subbase material for log cribbing structures and approaches. Requires logistics and costs for backcountry transport.

Trail Name: Hog Rock Trail #TR-9 Asset number: #16963

The Hog Rock trail starts at the Hog Rock parking area on Park Central road. Proceeds at a gentle downhill grade for $\frac{3}{4}$ of a mile and then the trail descends downhill to the Cunningham Falls trail intersection. The $\frac{3}{4}$ mile of the trail with the steepest grades requires the most repairs.

- **General**
 - Length: 1.8 miles (mileage listed as 1 mile).
 - Width: three to four feet.
 - Trail Class III.
 - CRV: \$99,600, appears low due to structures and tread.
 - Grade (general): The grade is low on the top with a steep section (0.5 miles) climbing uphill from Cunningham Falls.
 - ABAAS potential: None, apply total trail exception.
- **Plants/Vegetation/Trees**
 - Brushing/tree removal
 - Brushing: Clear both the under and overstory of brush shrubs and small trees (less than 12-inch DBH). Travel way clearing for a pedestrian path should be a box 8-FT x 8-FT. Brush and grub approximately 0.8 acres of trail prism.
 - Tree trimming/cutting (greater than 12-inch DBH): Trim and/or cut five trees.

- Revegetate and close 500 LF of social trail.
- **Site Features**
 - Signage: Repaint three directional signs.
 - Install trailhead sign compliant with ABAAS Chapter 1017.10 identifying trail features: 1) length of trail; 2) surface type; 3) typical and minimum tread width; 4) typical and maximum running slope; and 5) typical and maximum running slope.
 - Blazes: Replace with 180 yellow reflective trail markers.
- **Structures**
 - Drainage
 - Culverts: Clear five culverts.
 - Water bars: Clean approximately 150 waterbars. Replace 25 waterbars.
 - Install 750 LF of log checks and cribbing in overly steep trail sections to check erosion and soil destabilization.
 - Walls
 - Rebuild 40 SF of rock wall with materials on-site.
 - Bridges: Demolish existing bridge and replace one 15 LF x 5-FT wide wood deck bridge with steel girders. Approximately 2.5-FT above creek surface. (Bridge located adjacent to MD 77).
 - Textured paint or stain should be used for walking surface to provide slip resistant surface.
- **Surface, Base and Subbase**
 - Trail Tread: Import and place estimated 81 tons of subbase material for log cribbing structures and approaches. Requires logistics and costs for backcountry transport.

Trail Name: Catoctin National Recreation Trail #TR-12 Asset number: #85829

This trail starts in the far northwest section of the park off the Mt. Zion road. It quickly transects off the horse trail loop and heads southeast to Chestnut Picnic area where it crosses the road and terminates at the south end of the park. The trail is confusing at times with intersections and trail not well marked in several locations. The current parking area is on private land and the land owner has requested NPS to relocate parking lot onto NPS property.

- **General**
 - Length: 4.75miles.
 - Width: four to five feet.
 - Trail Class III.
 - CRV: \$110,000, appears low due to length and structures.
 - Grade (general): General grade is medium to low with some steep sections.
 - ABAAS potential: No potential, apply total trail exception.
- **Plants/Vegetation/Trees**
 - Remove plants within the trail corridor including trees, shrubs, vines, down trees and logs, ground covers, herbaceous perennials, and annuals within the trail right of way. Estimate total of 1.8 acres.
 - Tree trimming/cutting (greater than 12-inch DBH): Trim and/or cut 25 trees.
 - Close and revegetate 1,500 LF of old trail bed.

- **Site Features**
 - Signage
 - Trailhead signage: Two trailhead signs and four trail intersection signs are in good condition.
 - Trail signage: Install two new directional signs.
 - Install trailhead sign compliant with ABAAS Chapter 1017.10 identifying trail features: 1) length of trail; 2) surface type; 3) typical and minimum tread width; 4) typical and maximum running slope; and 5) typical and maximum running slope.
 - Blazes: Replace with 250 reflective blue trail markers.
 - Trailhead parking: Construct new gravel parking lot on NPS site to be determined.
 - Construct new parking lot with capacity for 15 cars and two vehicles with horse trailers (assume 7,500 SF).
 - Remove trees and vegetation, grub, and grade.
 - Construct new asphalt paved two lane entry drive and turnaround (assume 3,000 SF).
 - Entry road to be 12-inch aggregate base and 3-inch asphalt surface connecting to County Road.
 - Parking lot to be crushed aggregate with 9-inch base and 3-inch surface course.
 - Install new vehicle heavy metal pipe gate at entry to parking (assume 25 FT opening).
 - Install 15 new wood parking blocks.
 - Install two signs for horse trailer parking only,.
- Install 600 LF of new perimeter split-rail fencing to define parking area.
- **Structures**
 - Walls: Install 1,000 LF of log checks and cribbing in four uphill climbs to check erosion and soil destabilization.
 - Drainage: Clean approximately 250 waterbars. Replace 45 waterbars.
- **Surface, Base and Subbase**
 - Trail Tread: Import and place 160 tons of subbase material for log cribbing structures and approaches. Requires logistics and costs for backcountry transport. (Possible option to crush fill onsite is not included in the cost estimate).

Trail Name: Spicebush Trail #TR-13 Asset number: #17026

The Spicebush Trail is a small interpretive trail located off the Chestnut Picnic area. Posted as an accessible trail it needs rehabilitation and resurfacing to enhance the experience for all.

- **General**
 - Length: 0.36 miles.
 - Width: three feet.
 - Trail Class V: Imported surface material.
 - CRV: \$44,200 appears low with all imported base.
 - Grade (general): General grade is low.
 - ABAAS potential: Meets ABAAS standard. While stable, it is somewhat uneven, bumpy, and cross slope issues.

- **Plants/Vegetation/Trees**
 - Brushing: Clear both the under and overstory of brush and shrubs. Travel way clearing for a standard pedestrian path should be a box 8-FT x 8-FT. Brush and grub approximately 0.2 acres of trail prism.
- **Site Features**
 - Parking surface: Apply seal coat on parking area, and new ABAAS pavement markings and signage.
 - Benches: Rehab one wood bench and install one new wood bench meeting ABAAS requirements. Provide benches with adequate passing and resting space.
 - Install trailhead sign compliant with ABAAS Chapter 1017.10 identifying trail features: 1) length of trail; 2) surface type; 3) typical and minimum tread width; 4) typical and maximum running slope; and 5) typical and maximum running slope.
- **Structures**
 - None.
- **Surface, Base and Subbase**
 - Trail Tread: Excavate to grade (1,900 LF x 5-feet x 4-inch), remove native soil material and use for shoulders, install estimated 255 tons of stabilized tread material such as SOIL-LOC™, grade, and compact. Requires mechanical placement and transport to site.

Trail Name: Horse Trail #TR-14 Asset number #17029

Beginning at the Chestnut Picnic area horse trailer parking area, the trail crosses the northwest section of the park and ends with a large loop intersecting and crossing with the Catoctin NR Trail and the park's two Adirondack shelters.

- **General**
 - Length: 5.25 miles.
 - Width: three to four feet.
 - Trail Class III.
 - CRV: \$297,00, appears low with bridge, structures and tread.
 - Grade (general): General grade is medium, with some steep sections.
 - ABAAS potential: None, apply total trail exception.
- **Plants/Vegetation/Trees**
 - Brushing: Clear both the under and overstory of brush shrubs and small trees (less than 12-inch DBH). Travel way clearing for a pedestrian horse path should be a box 10-FT x 10-FT. Brush and grub approximately 2.6 acres of trail prism.
 - Tree trimming/cutting (greater than 12-inch DBH): Trim and/or cut 30 trees.
 - Close and revegetate 500 LF of social trails.
- **Site Features**
 - Trail camp shelter: Two Adirondack Shelters, three-sided with wood floors and walls, asphalt composite roof, 24-FT x 18-FT.
 - Deck: Prep and paint both shelters.
 - Walls: Prep and paint both shelters.

- Roof: Reroof both shelters with asphalt shingles. Assume 10% framing and sheathing repairs.
- Other: Repair four damaged support piers. Reconstruct both wood steps (4-FT wide x 3-FT high).
- Trail camp features
 - Replace two 30-inch metal fire pits with grills.
 - Replace two wood picnic tables.
 - Relocate and reconstruct two pit privy outhouses, 5-FT x 5-FT each. (Possible alternative not included in scope nor cost estimate is to construct low profile compost toilet which requires increased maintenance and higher construction costs. With the low number of camp users, composting toilets could function satisfactorily).
 - Replace two hitching posts.
- Trailhead
 - Parking surface: Horse trailer parking by Chestnut needs gravel resurfacing (estimate five tons).
- Signage: Install three new signs at trail intersections.
- Install trailhead sign compliant with ABAAS Chapter 1017.10 identifying trail features: 1) length of trail; 2) surface type; 3) typical and minimum tread width; 4) typical and maximum running slope; and 5) typical and maximum running slope.
- Blazes: Install 275 new orange reflective trail markers.
- **Structures**
 - Drainage
 - Culverts: Clear ten culverts
 - Water bars: Clean approximately 400 waterbars. Replace 100 waterbars.
 - Install new 1,000 LF of log checks and cribbing in overly steep trail sections to check erosion and soil destabilization (five linear feet of cribbing consist of four logs, 5.5-FT feet long, assembled in a box configuration, in a step-up manner up the hill, typically pinned in place using rebar spike, later filled with crush fill or imported tread).
 - Causeway/Turnpike: Install new 750 LF of turnpike type treatment, located at various places in the trail where trail has become incised.
 - Bridges: Construct new log cribbing approaches (15 LF x 4-FT wide x 2.5-FT high) at both approaches to the 40-FT steel girder bridge.
 - Textured paint or stain should be used for walking surface to provide slip resistant surface.
- **Surface, Base and Subbase**
 - Trail Tread: Import and place estimated 80 tons of subbase material for log cribbing structures and approaches. Requires logistics for soil transport.

Trail Name: Brown's Farm Trail #TR-15 Asset Number: #17024

The trail starts at Camp Round Meadow with the access trail for the first half mile very brushy with some structures (waterbars and steps at road crossing). The intersection of the Interpretive trail is well marked, except a third trail (utility corridor access, and potential ABAAS route) intersects at the signage and confuses users. The Interpretive route has great potential for ABAAS; it already has displays, signage, and interpretive map/brochure. Grades look promising and an alternative approach route exists if needed. The existing condition of trail is fair with the boardwalk and bridge structure in poor condition.

- **General Information:**

- Length: 0.4 miles (mileage is suspect, loop is 0.4 mile and connector to Round Meadow is 0.5 miles also).
- Width: four feet.
- Trail Class III.
- CRV: \$100,000, appears low with boardwalk and bridge features.
- Grade (general): General grade is low.
- ABAAS: Not currently but there is potential to meet ABAAS criteria.

- **Plants/Vegetation/Trees**

- Remove plants within the trail corridor that require cyclic maintenance, including trees, shrubs, vines, down trees and logs, ground covers, herbaceous perennials, and annuals. Turf areas including turf shoulders or trail right of ways is mowed only once or twice a year. Estimate 0.32 acres.

- **Site Features**

- Trailhead
 - Parking: The Owens Creek Picnic parking area requires seal coating of the asphalt surface (400 SY), parking lot stripping for eight standard car spaces, and two accessible spaces with pavement markings and signs.
 - Benches: Install eight new 6-FT ABAAS compliant benches on the Interpretive loop.
 - Map box: Install one map box at both entrances to loop.
 - Trailhead signage: Install two signs at Owens Creek Picnic Trailhead and one at Camp Round Meadow.
 - Install trailhead sign compliant with ABAAS Chapter 1017.10 identifying trail features: 1) length of trail; 2) surface type; 3) typical and minimum tread width; 4) typical and maximum running slope; and 5) typical and maximum running slope.
 - Blazes: Install 50 new white reflective markers.

- **Structures**

- Boardwalk is in poor condition. The entire boardwalk (270 FT x 5-FT width) needs replacement, with helical pier construction, spacing at 10-FT centers, and pressure treated wood beams. Surfaced with ABAAS compliant wood or similar decking and rails. Helical piers to be installed below frost line (>36-inches) per soil engineering recommendations.
- Bridges
 - Replace existing wood stringer bridge (40 LF x 5-FT wide) and wood decked bridge, six feet above creek surface. Replace with standard steel stringer designed bridge.

- Causeway/Cribbing: Install two new log cribbing approaches approximately 15 LF x 5-FT at both ends of the bridge to be ABAAS compliant.
 - Textured paint or stain should be used for walking surface to provide slip resistant surface.
- **Drainage**
 - Water bars: Clean approximately 58 waterbars. Replace 12 waterbars.
- **Surface, Base and Subbase**
 - Install imported aggregate subbase and a stabilized engineered soil trail surface for the ABAAS Interpretive Trail (0.4 miles). Grub and grade trail to ABAAS required grades. Place and compact a 2-inch lift of aggregate base material (estimated 237 tons) and a 3-inch lift of a stabilized soil type product such as SOIL-LOC™ (estimated 285 tons). Required mechanical equipment for transport, spreading, leveling, and compacting.

Trail Name: Sawmill Trail #TR-16 Asset number: #17028

- **General**
 - Length: 0.66 miles.
 - Width: four feet, turnouts six feet. .
 - Trail Class IV Constructed Boardwalk, 2-inch x 6-inch deck, 4-inch x 4-inch structural uprights, all wood.
 - CRV: \$100,500, appears low with extensive boardwalk.
 - Grade (general): General grade is low.
 - ABAAS potential: Currently meets ABAAS standard.
- **Site Features**
 - Trailhead Parking: The ABAAS paved parking area on Foxville Deerfield Road requires crack sealing, seal coating, pavement markings, and signage.
 - Install trailhead sign compliant with ABAAS Chapter 1017.10 identifying trail features: 1) length of trail; 2) surface type; 3) typical and minimum tread width; 4) typical and maximum running slope; and 5) typical and maximum running slope.
- **Structures**
 - Boardwalk is in good condition:
 - Entire boardwalk needs painting/staining application, 17,000 SF. Textured paint or stain should be used for walking surface to provide slip resistant surface.
 - Install cable or wire fencing between existing railings for code compliance spacing on the areas of boardwalk where height dictates. Approximately 1,000 LF of boardwalk requiring 4,000 LF of cable and turnbuckles.
- **Surface, Base and Subbase**
 - Scour problems at base of pier by sawmill display: Rip-rap creek sides to protect piers on both sides (Estimated 4.6 tons).
- **Other**
 - The boardwalk is wheelchair accessible and has a substantial height above the ground adjacent to the Sawmill exhibit and the campground access. The boardwalk railing should be retrofitted with additional board railings or fencing to decrease the gap between railings in these locations.

- The boardwalk condition should be monitored due to extensive wood to ground contact and possibly undersized framing members for future failures, although at this time there is no evidence of deterioration.

Trail Name: Deerfield Nature Trail #TR-17 Asset number: #17025

Deerfield Nature Trail is a small loop hike that starts and ends in Owens Creek Campground. It also shares a small trail section with the Horse Trail and is a pleasant stroll in the forest through a variety of terrain.

- **General**
 - Length: 1.3 miles.
 - Width: three to four feet.
 - Trail Class III.
 - CRV: \$110,000, appears low with bridge.
 - Grade (general): General grade is medium, with some steep sections.
 - ABAAS potential: None, apply total trail exemption.
- **Plants/Vegetation/Trees**
 - Brushing/tree removal
 - Brushing: Clear both the under and overstory of brush, shrubs, and small trees (less than 12-inch DBH). Travel way clearing for a standard horse path should be a box 10-FT x 10-FT. Brush and grub approximately 0.8 acres of trail prism.
 - Tree trimming/cutting (greater than 12-inch DBH): Trim and/or cut 32 trees.
- **Site Features**
 - Benches: Rehab existing two benches, install two additional benches.
 - Signage: Prep and repaint four signs. Install two new directional signs.
 - Install trailhead sign compliant with ABAAS Chapter 1017.10 identifying trail features: 1) length of trail; 2) surface type; 3) typical and minimum tread width; 4) typical and maximum running slope; and 5) typical and maximum running slope.
 - Blazes: Install 68 new yellow reflective blazes.
- **Structures**
 - Drainage: Clean approximately 70 waterbars. Replace 25 waterbars.
 - Cribbing and log checks: Install new 1,000 LF of log checks and cribbing in overly steep sections of trail to check erosion and soil destabilization.
 - Bridges: Demolish and construct new 40 LF x 5-FT wide wood stringer and wood decked bridge. Height is six feet above creek surface. Install new log cribbing approaches approximately 15 LF x 4-FT wide at both ends of the bridge.
 - Textured paint or stain should be used for walking surface to provide slip resistant surface.
- **Surface, Base and Subbase**
 - Trail Tread: Import estimated 75 tons of subbase material for log cribbing structures and approaches. Requires logistics for materials transport.