

TENNESSEE VALLEY AUTHORITY

ADOPTION OF ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

SINK MOUNTAIN RECREATION IMPROVEMENT – LAND AGREEMENT WITH U.S. FOREST SERVICE CHEROKEE NATIONAL FOREST, JOHNSON COUNTY, TENNESSEE

In August 2021, the U.S. Forest Service (Cherokee National Forest, Watauga Ranger District) issued an Environmental Assessment (EA) addressing proposed recreation improvements to the Sink Mountain recreation site on Watauga Reservoir in Johnson County, Tennessee. In partnership with TVA, the Federal Highway Administration, and the State of Tennessee Wildlife Resource Agency (TWRA), the Forest Service is proposing to establish new boat ramp facilities to replace boat ramp facilities that have been inaccessible since landslides rendered portions of National Forest System Road (NSFR) 298 unsafe and impassable in 2019. NSFR 298 was a dead-end roadway that terminated at the Sink Mountain Boat Ramp. The old boat ramp location also served as a hiking trailhead for the Old Homestead Trail. With the closure of NSFR 298, there is no vehicle access to the boat ramp or trailhead at the road's terminus. Constructing a new boat ramp and trailhead on the portion of NSFR 298 that remains open for travel would reestablish a public access point on Watauga Reservoir and to the trail system affected by the road closure.

Under the proposal, the Forest Service would construct and install visitor amenities at the proposed Sink Mountain boat ramp, including the boat ramp, a courtesy dock and fishing pier, a parking lot (accommodating single vehicles and vehicles with trailers), a vault toilet, and picnic tables. The roadway and parking facility would require the replacement of a culvert. These facilities would be constructed on about 2.5 acres of moderately flat land adjacent to a small reservoir cove; the location and shoreline characteristics are suitable for boat ramp construction. The site is approximately 1 mile from Tennessee Highway 167.

The Forest Service would also decommission the old recreation site and the unsafe portion of NSFR 298 (approximately 1.5 miles in length). The decommissioned section of NSFR 298 would be accessible only to the public as a hiking/pedestrian trail. The old boat ramp site would be decommissioned with native vegetation; vegetation growth at the site would be maintained for wildlife habitat. The new Sink Mountain recreation site would serve as the new public trailhead for this section of the road and the Old Homestead Trail.

The Forest Service is the lead Federal agency and is responsible for land management of approximately half of the new Sink Mountain recreation site. TVA manages approximately half of the recreation site as reservoir lands it manages in association with Watauga Reservoir, part of TVA's reservoir system. The Federal Highway Administration would be responsible for

designing the new facilities and serves as a primary funding agency. The TWRA is a recreational access partner and may also support the project through funding.

TVA is considering, as the managing agency of a portion of the project area, whether to grant approval to the Forest Service for the proposed construction and long-term maintenance of the facilities on TVA-managed public lands. TVA's interest in this project arises from its commitment to provide for public infrastructure needs and recreational opportunities within the Tennessee Valley and is consistent with the Recreation objectives identified in TVA's Natural Resource Plan.

TVA served as a cooperating agency during the preparation of the Forest Service's EA, which is incorporated herein by reference (see Attachment A). TVA has independently reviewed the Forest Service EA and found that it adequately addresses the potential impacts associated with TVA's decision. TVA is therefore adopting the Forest Service EA.

Alternatives

After NSFR 298 was closed by landslides in 2019, the Forest Service and FHWA strongly considered repairing the road. As noted in the Forest Service EA, FHWA engineers analyzed the stability of slopes along the roadway and determined that the cost of stabilizing the area to allow NSFR 298 to reopen would be excessive.

In addition to the Proposed Action (Alternative 1), summarized above and in Chapter 2 of the Forest Service EA, the Forest Service considered taking no action. Under the No Action Alternative (Alternative 2), the proposed action would not be implemented and the current uses of the area would continue.

The Forest Service reviewed other locations along NSFR 298 to determine if they would be alternative locations for consideration in the EA. In Chapter 2 of the EA, the Forest Service discussed one alternative location considered but eliminated from detailed study. Located near Doe Creek Road, the Forest Service determined that the topography of the alternative location was less suitable for a boat ramp and that sensitive resources may be present at the location.

The Forest Service selected the Proposed Action (Alternative 1) as the preferred alternative based on consideration of potential impacts described in the EA and input from the public. In the Forest Service's Decision Notice and Finding of No Significant Impact (FONSI), signed on September 28, 2021, the Forest Service stated that Proposed Action is the alternative that best responds to their management objectives. The Proposed Action (Alternative 1) is also preferred by TVA.

Impacts Assessment

In the EA, the Forest Service addresses potential impacts to biological resources, soil resources, transportation, scenery, and cultural resources. The Forest Service determined that the proposal would have no significant impacts; see Attachment B for the Forest Service Decision Notice and FONSI.

Biological Resources

As part of their review, the Forest Service reviewed aquatic and terrestrial habitat occurring at the project location and in the adjacent Watauga Reservoir, along the 1.5-mile section of NSFR 298 that would be decommissioned, and within a 0.4-mile buffer of these areas. The Forest Service determined that three federally listed bat species have potential to be present in these areas. The gray bat (*Myotis grisescens*), which can be found throughout the region, and its maternity, hibernation, and roosting habitat, would not be directly affected by the project. Project activities may indirectly benefit foraging habitat, as described in Chapter 3 of the Forest Service EA. Potential impacts to the Northern long-eared bat (*Myotis septentrionalis*) would be similar (with potential impacts falling under the Endangered Species Act Section 4(d) rule adopted for this species at 50 CFR 17.40). The Virginia big-eared bat (*Corynorhinus townsendii virginianus*), would also not be directly or indirectly affected by the project; some beneficial impacts for foraging habitat may occur. There are no known records of the Indiana bat (*Myotis sodalis*) nearby the project location or known within the CNF.

The Forest Service made “may affect – not likely to adversely affect” determinations for the gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), and Virginia big-eared bat (*Corynorhinus townsendii virginianus*). The U.S. Fish and Wildlife Service concurred with these determinations, noting the lack of known records, the lack of cave or cave-like habitat in the action area, the tree clearing restrictions that the Forest Service would apply, and the insignificant effects caused by the alteration of foraging habitat. On September 9, 2021, the U.S. Fish and Wildlife Service agreed that as a cooperating agency, the TVA may rely on the effect analyses and the threatened and endangered species determinations made by the Forest Service and that TVA’s Endangered Species Act Section 7(a)(2) obligations were fulfilled.

In the EA, the Forest Service also discussed potential minor adverse effects to the Monarch butterfly (*Damus plexippus*), Eastern small-footed bat (*Myotis leibii*), Tricolored bats (*Perimyotis subflavus*), and to several bird and wildlife species.

Soil Resources

According to the Forest Service EA, at the site of the new access facilities, the proposed action would result in soil compaction and soil compaction and loss of soil productivity is expected across the entire activity area. Impacts at this location would be long term and the site would not be expected to grow biomass in the future. However, in areas that would be decommissioned, soil and water functioning would be restored and some natural soil processes would occur over time. Overall, soil impacts would be minor due to the limited size of the impact area; adverse effects would be offset by beneficial effects to soils where facilities are closed.

Water Resources

As described in the Forest Service EA, construction of the new public access site and the replacement of the culvert is likely to result in temporary impacts (sedimentation) to water quality. Decommissioning 1.5 miles of road would involve removing cross culverts and scarifying existing pavement, which are actions expected to improve soil permeability, water

percolation and filtration. The Forest Service would implement best management practices to address the potential for sedimentation associated with ground disturbing activities. Water quality and watershed conditions would have minor and temporary direct and indirect impacts on water quality; current water quality standards would be maintained.

Best management practices would also address potential impacts to floodplains. Road decommissioning along Roan Creek, the installation of the boat ramp, courtesy dock and fishing pier would occur within the 100-year floodplain. These are repetitive actions that would result in minor impacts. As noted in the EA, the courtesy dock would be anchored to prevent it from floating free during flooding, and the minimum elevation of the fishing pier would be 1.5 feet above the June 1 flood guide elevation. To minimize adverse impacts associated with the placement of the vault toilet during a flood event, the toilet door(s) would be removed and waste tanks would be pumped and sealed during a flood event.

Prior to implementing the project, the Forest Service will be responsible for obtaining permits from the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act (CWA) and an Aquatic Resource Alteration Permit from the State of Tennessee under CWA Section 401.

Transportation

The proposed action would have beneficial impacts on the transportation system locally as well as forest-wide. Decommissioning a portion of NFSR 298 would benefit the transportation system by eliminating maintenance and reducing the overall size of the transportation system.

Scenery

In the EA, the Forest Service noted that the proposed action would have direct effects on scenery, resulting from the removal of vegetation from land clearing and construction activities associated with the development of the recreation site. Design standards would minimize adverse impacts to scenery. The decommissioning of the old site (returning the site to a more natural setting) would largely offset the new scenery impacts associated with the new site.

Cultural Resources

TVA designated the Forest Service as the lead federal agency for this project for compliance with Section 106 of the National Historic Preservation Act. Because previous archaeological surveys did not document any historic properties in the project area, there would be no known direct, indirect, or cumulative effects on cultural resources. Pursuant to 36 CFR § 800.4(d)(1), the Forest Service determined that no historic properties would be affected by this undertaking and the Tennessee State Historic Preservation Office (SHPO) concurred with this finding.

Public Involvement

The Forest Service requested comments to help determine the scope of analysis. The Forest Service emailed the Signed Scoping and 30-day notice and comment letter, which included a

description of the proposed action along with maps of the project area on April 28, 2021, to interested and affected agencies, organizations, and individuals. The project, along with supporting documentation, was also posted to the Cherokee National Forest (CNF) website. A legal notice was placed in the Johnson City Press on April 29, 2021. Twenty-three responses were received as a result of these scoping efforts and are addressed by the Forest Service in Chapter 1 of the EA.

In addition, consistent with Forest Service administrative requirements, the Forest Service published its EA on August 5, 2021, and provided the public with a 45-day objection period. During this period, the Forest Service received no additional comments or objections from the public.

Design Criteria

In the EA, the Forest Service identified numerous design criteria that would reduce or avoid potential impacts to the environment. These 24 design criteria are found in Forest Service EA (Attachment A, pages 9-11) and the Forest Service Decision Notice and FONSI (pages 1-3). The criteria include best management practices and other measures commonly employed by the Forest Service, including standards and guidelines described in the CNF Revised Land and Resource Management Plan (2004).

TVA concurs with the Forest Service that these design criteria are measures that would reduce the potential for adverse significant environmental impacts to biological resources, streams, wetlands, water quality, and flood risk. TVA has not identified the need for other mitigation to further reduce potential impacts.

Conclusion and Findings

TVA has independently reviewed the Forest Service EA and adopts the EA, consistent with 40 CFR 1506.3(c). TVA has determined that the Forest Service's EA adequately addresses the potential environmental effects associated with TVA's decision whether to grant approval to the Forest Service for the proposed construction and long-term maintenance of the facilities on TVA-managed public lands. TVA has also reviewed the Forest Service's FONSI and concurs with their finding. TVA concludes that the proposed approval would not be a major federal action significantly affecting the environment. TVA's FONSI is contingent upon adherence to the design criteria identified by the Forest Service described above. Accordingly, an environmental impact statement is not required.



Dawn Booker, Manager
NEPA Program
Environment
Tennessee Valley Authority


11/08/2021

Date Signed

Attachment A: U.S. Forest Service, Cherokee National Forest, Watauga Ranger District, Sink Mountain Recreation Improvements Environmental Assessment (August 2021).

Attachment B: U.S. Forest Service, Cherokee National Forest, Watauga Ranger District, Decision Notice and Finding of No Significant Impact (September 28, 2021).

**Attachment A: U.S. Forest Service, Cherokee National Forest, Watauga Ranger District,
Sink Mountain Recreation Improvements Environmental Assessment (August 2021)**

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Environmental Assessment

Sink Mountain Recreation Improvement

*Watauga Ranger District
Cherokee National Forest
Johnson County, Tennessee*

August 2021



Responsible Official: Keith Kelley, Watauga District Ranger

For Information Contact: Keith Kelley, Watauga District Ranger
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Appendix A Project Maps

Chapter 1: Purpose and Need for Action

Purpose and Need for Proposal

Sink Mountain Boat Ramp History and Significance: Sink Mountain Boat Launch was developed in 1963 and is the only public access to Watauga Lake in Johnson County. The boat launch is a popular location for lake access for the community of Doeville and surrounding areas. The site has garnered significant political attention since it was closed to access in late 2019.

In Spring of 2019, northeast Tennessee received unprecedented rainfall, making 2019 rank as the wettest on record for the region. This rainfall event triggered numerous landslides across the transportation system of the Cherokee National Forest. One such landslide occurred on National Forest System Road (NFSR) 298 (2.2 miles) in Johnson County, Tennessee. The road was used to access the Sink Mountain Boat Ramp. The landslide occurred at approximately the halfway point between TN- 167 and Sink Mtn Boat Ramp and affects approximately 300 feet of roadway. Initially, the slide did not move enough to restrict access to the recreation site. However, over the next several months the ground continued to shift, eventually rendering the section of road impassable and unsafe.

Repair of the road was strongly considered. Federal Highway Administration sent drill crews to the site to determine the extent of slope instability. Engineers then proposed a solution to provide stability of the hillside such that the road could be rebuilt in-kind. After initial field data was received engineering estimates were developed that put total project costs at over \$5 million. At this point, other alternatives were sought to restore access. Given the nature of the funding source, any solution must be on the same road, must be less expensive than repairing the section of road in-kind and must be implemented within 2 years of the incident (with the option of requesting 2 additional years).

Proposed Action

In cooperation with the Federal Highway Administration, Tennessee Valley Authority, Tennessee Wildlife Resource Agency and the Cherokee National Forest, the following repairs would be incorporated into this project:

- Replace existing lake access with a new facility 1.5 miles closer to the intersection of TN Hwy 167 (Doe Creek Road).
- Construct new facility that includes internal vehicular and pedestrian circulation, parking for single vehicles and vehicles with trailers, a boat launch with courtesy boat dock, fishing pier, and vault toilet.
- Replace culvert to the east of the proposed parking lot and boat launch location.
- Decommission 1.5 miles of road from the new location to the end of the road. Decommissioning may remove cross culverts, scarify/grind the existing pavement, and remove the existing parking area and boat ramp.
- Extend existing trail (603 Old Homestead Trail) from access point at existing Sink Mountain Boat Ramp location to the new boat ramp.
- Manage new trail segment as a hiker/pedestrian trail that allows admin OHV access for management purposes.
- Long-term maintenance and operation of these public recreation facilities

- Seed decommissioned roadbed and boat ramp/parking area with native vegetation and maintain as open area/wildlife habitat through mowing, herbicide treatment of undesirable vegetation, daylighting, and slashdown of woody vegetation (Tiering to Open Areas EA). (approximately 22 acres)

Project Area Description

This area is situated within a small cove, which is ideal for boat ramp construction due to protection from high winds. The shoreline here has ideal slopes that are steeper than the rest of the surrounding shorelines. Approximately 2.5 acres in size and moderately flat, this site lies just to the west of an unnamed stream. The Cherokee NF Land Management Plan designates this location as a “Concentrated Recreation Zone,” which are areas of the Forest set aside specifically for the development of recreation sites and concentrated human use. The site has enough slope to allow responsible runoff management, is small enough to contain the use, is large enough to provide better recreational opportunities than the existing location and provides good year-round access to the lake. This site also provides better access to existing trails that would be extended to the new recreation site once the old site is decommissioned. Developing this location would reduce the overall access road length by 1.5 miles and avoid the slide.

Removal of Existing Improvements:

The existing recreation site at the end of NFSR 298 would be decommissioned. The section of road between the new recreation site and the old recreation site would be scarified and some or all culverts may be removed for the benefit of hydraulic function. De-compacted and exposed soils would be seeded with native mixes to reduce erosion and weed infestation.

Construction of new improvements:

The new Sink Mountain Boat Launch site is proposed approximately one mile from TN State Hwy 167 along NFSR 298. The culvert to the east of the site would be replaced with an adequately sized structure for the design flows. This stream is not perennial and is not occupied by fish; therefore, fish passage design is not proposed. Excavation would occur on site to provide proper grades for transportation and accessibility according to industry standards. Grading is likely to occur across the entire 2.5 acre site. Thus, the full site is being analyzed for disturbance impacts. Once proper grading is achieved the site would be paved to accommodate both trailer and passenger car parking and circulation. Stormwater would be distributed through a series of swales and roughened drainage ditches to ensure pollutants are not discharged off site. A new vault toilet is proposed to be installed onsite as well, outside of the 100-year flood plain. A boat ramp and courtesy dock would provide access to the lake. Additionally, other improvements may include an informational kiosk, fee station, and fishing pier.

Consistency with the 2004 Revised Land and Resource Management Plan:

- Goal 30 -- Provide a spectrum of high quality nature-based recreation settings and opportunities that reflect the unique or exceptional resources of the CNF and the interests of the recreating public on an environmentally sound and financially sustainable basis. Adapt management of recreation facilities and opportunities as needed to shift limited resources to those opportunities (page 56).
- Goal 31 -- Where financially and environmentally feasible, enhance the following opportunities: water-based activities, sightseeing, camping, hunting, fishing, driving for pleasure, wildlife viewing/nature study, day-use and group facilities, non-motorized trail systems for hiking, biking, and equestrian use, designated OHV routes, special interest areas, interpretation and conservation education (page 56).
- Objective 31.01 -- Provide the appropriate site-specific combination of recreation facilities,

services, public information, and enforcement to minimize wildlife access to human food and trash (page 57).

The Sink Mountain Boat Ramp project area falls under the 7.D (Concentrated Recreation Zone) Management Prescription (Rx) area described in the 2004 Cherokee National Forest Revised Land and Resource Management Plan (RLRMP).

Cooperating Agencies and Authorizing Law

This EA is a cooperative effort between the Federal Highway Administration (FHWA), Tennessee Valley Authority (TVA), Tennessee Wildlife Resource Agency (TWRA) and the USDA Forest Service (USDA FS). The Forest Service is the lead agency responsible for the scope and content of this analysis and landowner of 50% of the project area and land management agency of project area as a whole. FHWA is responsible for designing and the funding agency for flood impact related aspects of the project. TVA is land owner for the remaining 50% of the project area and a potential funding partner. Under the proposed action, TVA would grant approval to the FS for the proposed construction and long-term maintenance of the facilities on TVA-managed public lands. TWRA is the recreational access partner and potential funding partner.

Public Involvement

The Forest Service requested comments to help determine the scope of analysis. The Forest Service emailed the Signed Scoping and 30 day notice and comment letter, which included a description of the proposed action along with maps of the project area on April 28, 2021 to interested and affected agencies, organizations, and individuals. The project, along with supporting documentation was also posted to the Cherokee National Forest (CNF) website. A legal notice was placed in the *Johnson City Press* on April 29, 2021. Twenty three responses were received as a result of these scoping efforts.

All comments received were in support of the project; however, we did we receive several project specific comments. Below are excerpts from numerous letters we received in support of this project.

Project Specific comments:

- The plan includes a provision to decommission 1.5 miles of road to convert to trail. It also states that the decommissioned area would be scarified and some, or all, culverts removed for water shed. If this is the case, how will the trail be maintained such that those wishing to continue bank fishing on this section will have adequate access?
 - *FS Response: As people hike along the trail, they can still access the bank, and walk along the bank anywhere they want to. There won't be any official established routes from the trail to the bank, but people can access the bank along the trail, where available.*
- How will you accommodate bank fishing access such that not everyone is pooled into one small area or on a pier that might be constructed? The plan cuts off areas currently used (prior to slide incident) for bank fishing by individuals and families who do not have access to motorized or non-motorized watercraft. This is the only public accessible bank fishing area on this end of the lake. Is there a way to design the improvements in such a way to maintain more area that can be easily accessed for bank fishing?
 - *FS Response: Fishing can continue anywhere along the bank. The fishing pier is provided for people who want to use it, but fishing won't be limited to the fishing pier only.*
- Final sentence in “Construction of New improvements” mentions other improvements “may”

include kiosk, fee, and fishing pier. So, I'm just looking to clarify if these are all actually going to be completed or just might be and will each be completed in phases?

- *FS Response: It will most likely be completed in phases, as funding allows.*
- How will fees be determined such that they do not become a barrier to access for families?
 - *FS Response: The Forest Service has a standard process for the determination of fees, including review of comparable public and private recreation opportunities in the vicinity of the proposed site. Fees also undergo an extensive approval process. This will include a chance for public comment, listing in the Federal Register, and review by the Recreation Resource Advisory Committee (RRAC) for the Southern Region, a Federal Advisory Committee made up of private citizens from around the Southeast representing varied recreation users and interests. Once the fee has been approved by the RRAC, it is submitted to the Regional Forester for approval. Only then can a fee be implemented.*
- I completely understand the intent and need for a fee but that can be a limitation to disparate populations. This is on the only public access to Watauga lake on this end whether that be access to shoreline for picnics and fishing or access for water sports. How can we ensure equitable access?
 - *FS Response: Any proposed fees will be consistent with other day use areas on the Watauga Ranger District. The Federal Land Recreation Enhancement Act gives the Forest Service the authority to collect recreation fees at developed recreation sites, including boat ramps. Various interagency pass programs such as Senior Passes, Access Passes, Military Passes, Every Kid Outdoors, and national fee free days are all efforts to provide equitable access. Forests retain 95% of the fees collected on the forest, and those revenues make a significant difference in our ability to provide recreation opportunities and invest in improvements like the new Sink Mountain Boat Launch.*
- How will hunting recreation be incorporated into the enhancements? Will there be any changes to hunting access?
 - *FS Response: There will be no change to hunting enhancements or access in this project.*
- Will there be a swimming area or will swimming continue to be allowed? This area has often been used for swimming.
 - *FS Response: There is not a planned designated swimming area, but general swimming is allowed along the bank, as it is currently. Swimming will not be allowed at the new boat launch or fishing pier.*
- Is there any chance of including a picnic area in the plan?
 - *FS Response: There is an opportunity to include 2-3 picnic tables with a walking path from the new parking lot if funding allows.*

Project Support:

- “It is with enthusiasm and hope that I, on behalf of Johnson County Commission, write of our full support for the proposal of the Recreational Improvement Project for the Sink Mountain area. – Mike Taylor, Mayor Johnson County”
- “I am in full support of this project and do not see where this project will have any significant

environmental impacts as proposed. Implementing the proposed action will reopen the boat ramp and increase fishing along with other recreational activities to this area. – Boy Richards”

- “I am writing in response to the Sink Mountain Recreation Improvement Environmental Assessment (EA). This project would be a major improvement to the Watauga Lake area to include additional access for recreational activities that take place on one of our most popular waterways..... Repairs to NFS Road 298 for access and a boat ramp would have an extremely positive effect on the economy of Johnson County as visitors and locals alike would have additional opportunities for fishing, flat water kayaking, canoeing and paddle boarding. This would also assist in land use management of areas that are currently over accessed along Watauga Lake. – Alicia Phelps”
- “While not a fisherman, I do support the relocation of the boat launch to allow lake access for recreation. The extension of the trail will allow access to enjoy the overlook on the lake. – Vic Hasler”
- “On behalf of The Nature Conservancy’s Tennessee Chapter, I want to thank the Cherokee National Forest for the opportunity to comment upon proposed, recreation improvement construction activities for the Sink Mountain boat ramp and public access point. As the only public access point to Watauga Lake in all of Johnson County, it is important to build back the access opportunity that was rendered unsafe by the 2019 floods. Watauga Lake is a beautiful destination for not just Johnson County residents, but also for visiting recreationists who contribute to the local economy. – Gabby Lynch, The Nature Conservancy”

Issues

There were no specific issues identified during our public comment period.

Chapter 2: Alternatives Including the Proposed Action

Alternatives Considered in Detail

Alternative 1 – Proposed Action.

In this alternative, the Forest Service in cooperation with the Federal Highway Administration, Tennessee Valley Authority, Tennessee Wildlife Resource Agency and the Cherokee National Forest, the following actions would be incorporated into this project:

- Replace existing lake access with a new facility 1.5 miles closer to the intersection of TN Hwy 167 (Doe Creek Road).
- Construct new facility that includes internal vehicular and pedestrian circulation, parking for single vehicles and vehicles with trailers, a boat launch with courtesy boat dock, fishing pier, and vault toilet.
- Replace culvert to the east of the proposed parking lot and boat launch location.
- Decommission 1.5 miles of road from the new location to the end of the road. Decommissioning may remove cross culverts, scarify/grind the existing pavement, and remove the existing parking area and boat ramp.
- Extend existing trail (603 Old Homestead Trail) from access point at existing Sink Mountain Boat Ramp location to the new boat ramp.

- Manage new trail segment as a hiker/pedestrian trail that allows admin OHV access for management purposes.
- Long-term maintenance and operation of these public recreation facilities.
- Seed decommissioned roadbed and boat ramp/parking area with native vegetation and maintain as open area/wildlife habitat through mowing, herbicide treatment of undesirable vegetation, daylighting, and slashdown of woody vegetation (Tiering to Open Areas EA). (approximately 22 acres)

Alternative 2 - (No Action)

This alternative responds to National Environmental Policy Act requirements [40 CFR 1502.14(c)] for a No Action Alternative. Selection of this alternative means no projects would be implemented in the project area at this time. Current uses of the area would continue until such uses were prohibited by changed environmental conditions.

Selection of Alternative 2 does not preclude future analysis or implementation of on-going management proposals within the project area. This alternative provides a baseline used to compare the environmental effects of the action alternatives

Alternative location Considered but Eliminated from Detailed Study

This site is 11 acres in size and located within a ¼ mile of Doe Creek Road. It is the furthest east of the 2 sites considered. Because of such a large clearing, this is less suitable for a boat ramp as the area will be more prone to environmental degradation and misuse by users of the boat ramp. The shoreline at this location also has shallower slopes that would be less conducive to a boat ramp than Alternative 1. In digital desktop exercises and field visits, it became apparent that providing a boat ramp at this location would be difficult. The topography does not provide an elevation profile conducive to constructing a ramp for year-round use, and would necessitate a very long ramp to reliably reach winter pool levels and still be usable at summer reservoir levels. Forest archaeologists have significant concerns about the site as well. The site is currently under the “7. B - Scenic Corridors/Sensitive Viewsheds” prescription in the Cherokee NF Land Management Plan, which does not preclude recreation development. The proposed actions would likely violate our Land Management Plan standard for developments within this prescription to “complement the desired landscape character...and blend into the natural and cultural environment.”

Design Criteria

Specific actions may be incorporated into the project design during the development of alternatives based on resource concerns and issues raised during scoping and analysis. Design criteria are intended to lessen or eliminate potential impacts from proposed activities. Criteria may or may not be included in RLRMP Standards and Guidelines, or may impose a stricter application of a Standard or Guideline. Design Criteria Common to All Action Alternatives includes:

1. Use a hydrologist or wildlife biologist to assist in the location of ephemeral pools, springs, and seeps.
2. Implement Tennessee Best Management Practices (BMPs) as a minimum to achieve soil and water quality objectives. When RLRMP Standards exceed BMPs, the standards shall take precedence over Tennessee BMPs.
3. Streamside management zones (riparian corridors and filter zones) would be established, as specified in the RLRMP.
4. Any new threatened, endangered, and/or sensitive species locations discovered within a project area may result in all actions being delayed or interrupted within the area. The appropriate

district wildlife/fisheries biologist or botanist would be consulted to determine effects of the action on the species.

5. Restrict tree and snag cutting (potential bat roosting habitat) to October-March. No tree cutting from April-September.
6. Trees known to have been used as roosts by Indiana or Northern long-eared bats are protected from cutting and/or modification until they are no longer suitable as roost trees unless necessary for public safety. Consultation with the US Fish and Wildlife Service (FWS) must occur before cutting or modification.
7. No activities within 660 feet of an active eagle nest. No cutting of trees with inactive eagle nest. Contact wildlife biologist if eagles begin nesting activity in project area.
8. Road decommissioning would be accomplished by but not limited to blocking authorized/unauthorized travelways by:
 1. Blocking the entrance points of the road with huge boulders.
 2. Recontouring portions of the road to restore natural hydrology.
 3. Felling trees and scattering debris on the roadbed to prohibit access.
 4. Revegetate the roadbed and restore the natural contours and slopes of the land.
 5. A combination of these methods along with other methods not listed above could be used to accomplish the objective.
9. Off-road equipment would be cleaned of seeds, soil, vegetative matter, and other debris that could hold fire ants, NNIS seeds and/or propagules. Off-road equipment would be inspected by a Forest Service representative to prevent NNIS introduction or spread in the project areas.
10. Any cultural resource sites found during implementation of the project would be reported immediately to a Forest Service Archaeologist and work would stop in the area.
11. Minimize impacts to existing trails and travelways and maintain the visual character in the vicinity of trail corridors and travelways.
12. Trees should be selectively removed to improve scenery within high use areas, vista points, and along interpretive trails.
13. Flowering and other visually attractive trees and understory shrubs should be favored when leaving vegetation.
14. Slash should be removed, burned, chipped, or lopped to within an average of 2 feet of ground, when visible within 100 feet on either side of the developed recreation site and Sink Mountain Road.
15. Root wads and other unnecessary debris should be removed or placed out of sight within 150 feet of the developed recreation site.
16. Stems should be cut to within 6 inches of the ground in the immediate foreground of the developed recreation site.
17. Openings should be organically shaped. Straight lines and geometric should be avoided. Edges should be shaped and/or feathered where appropriate to avoid a shadowing effect in the cut unit. Openings should be oriented to contours and existing vegetation patterns to blend with existing landscape characteristics, as appropriate.
18. Cut and fill slopes should be revegetated to the extent possible. In seen areas, consider seasonal color of vegetation. For instance, using warm season grass mixes that turn seasonally brown or gray instead of green. Cut banks should be sloped to accommodate natural revegetation.
19. Native wildflowers and/or shrubs and/or trees with showy flowers and/or fruits should be favored or introduced.
20. The vault toilet's waste tank(s) will be pumped dry and sealed off during a flood event
21. The floor elevation of the fixed fishing pier will be a minimum elevation of 1960.5 (1.5

- feet above the June 1 Flood Guide elevation 1959.0)
22. The floating courtesy dock will be anchored to prevent it from floating free during major floods
 23. Road-decommissioning debris, as well as any excess excavated material, would be spoiled at a location lying and being above the 1975.0-foot contour elevation (500-year flood elevation), and every effort made to prevent material from re-entering the reservoir
 24. All relevant and appropriate permits will be obtained prior to project implementation.

Chapter 3: Environmental Effects of the Alternatives

General Description of the Area

The Sink Mountain Recreation Area is a boat ramp located on Watauga Lake in the Cherokee National Forest. The area can only be accessed by FSR 298. FSR 298 has become impassable after sustaining damage from a landslide that has been estimated to cost over \$5 million to repair due to the scope of the damage and poor soil conditions. Repair of the road was strongly considered. Federal Highway Administration sent drill crews to the site to determine the extent of slope instability. Rather than repairing the road, areas have been designated as possible alternatives to build a new boat ramp and recreation area. These proposed locations will be better suited for a boat ramp and will save repair costs for the road and road maintenance costs by allowing the decommissioning of approximately 1.5 miles of FSR 298.

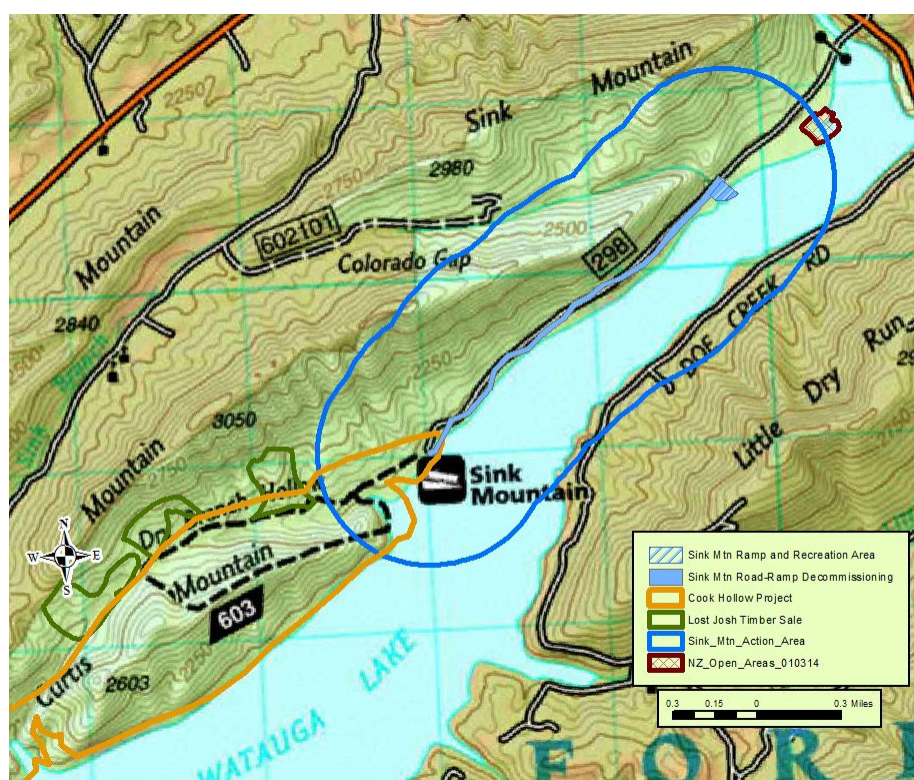
Biological Resources

Scope of Analysis

The analysis area for available habitat (Figure 1), direct effects, and indirect effects on Sensitive species includes activities in the Watauga River watershed of Johnson County, Tennessee. The action area is primarily under Forest Service management. The elevation range of the affected area is approximately 1980-2080 feet ASL. Aquatic habitat within the action area includes Watauga Lake and Colorado Creek (1st order stream). The proposed boat ramp/parking site is an old field surrounded by mature oak forest. The area along the decommissioned road is predominately forested in mid- successional yellow poplar, white-oak, and northern red-oak. There are no wetlands or other rare communities located within the analysis area.

The analysis area was determined based on the geographic extent of the all combined project effects (terrestrial and aquatic). A 0.4-mile buffer was placed on the project activities to consider bat foraging ranges and the action area was expanded to incorporate this buffer.

Figure 1. Sink Mountain Recreation Improvement Project Analysis Area Map



Biological resources considered will be Management Indicator Species with habitat present in the analysis area: Bald Eagles, Forest Service Sensitive Species (see Biological Evaluation), and Threatened and Endangered Species (see Biological Assessment). The scope of analysis for available habitat, direct effects, and indirect effects on Management Indicator and other rare or protected species includes the analysis area for spatial considerations. The timeframe considered for past and future actions is the last five years, based on timeframe of potential impacts and guidance from the US Fish and Wildlife Service (FWS). Cumulative effects analysis addresses past, present, and future actions in the analysis (Table 1). Viability of each species across the entire Cherokee National Forest (CNF) is also considered in making the Determination of Effect.

Table 1. Activities Considered in Cumulative Effects Analysis

Activity	Timing	Acres
Lost Josh Project (timber harvest and stand improvements)	2016	149
Cook Hollow Project (slashdown and burning)	2017	516
Kudzu Treatment (herbicide)	2016-2026	20
Shortleaf Pine Restoration	2018	60
Wildlife Opening Management (mowing, herbicide, slashdown)	2016-2026	6

Effects Analysis

Alternative 1 – Proposed Action

Federally Listed Species

Gray bat, *Myotis grisescens*, is found throughout the limestone region of southern middle-western and southeastern United States. It has been documented at 11 locations on the CNF, most on the North End. Gray bats use caves year-round for hibernating, maternity colonies, and roosting. They begin migrating to their hibernacula and mating as early as late September and migrate to their summer caves in late March to early April (NatureServe 2021). They forage for insects over water along riparian areas and shorelines with forest cover (USFWS 1982) and feed primarily on flying insects such as mayflies, moths, flies, and beetles (LaVal 1977). Gray bats are threatened by the destruction of hibernacula (USFWS 1982), but efforts to protect caves have resulted in population increases. White nose syndrome has been found in Tennessee. Large-scale population declines may occur in the future as the disease continues to spread.

Direct, Indirect and Cumulative Effects

Activities would occur during the day when bats are roosting. Foraging bats would not be directly impacted. The project would not indirectly affect maternity, hibernation, and roosting habitat. Tree cutting would occur adjacent to Watauga Lake and Colorado Gap Creek. Tennessee BMPs will be implemented, and streamside management zones will be established to protect water quality and foraging habitat. The extent of construction is small (3 acres) that changes to habitat would not be measurable.

Decommissioning of road and parking area and conversion to wildlife open area habitat would maintain a travel corridor, increase insect production, and improve foraging for bats. No activities on state or private lands are known for the next five years, so no cumulative effects are expected.

Northern long-eared bat, *Myotis septentrionalis*, would have similar effects as Indiana bat. The proposed action is consistent with the activities analyzed in the Service's January 5, 2016, Programmatic Biological Opinion (PBO). The PBO addresses activities excepted from "take"[1] prohibitions applicable to the northern long-eared bat under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.). Based upon the IPaC submission for Sink Mountain Recreation Improvement Project, the action is consistent with activities analyzed in the PBO. The Action may affect the northern long-eared bat; however, any take that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o) (USFWS 2021b).

Indiana bat, *Myotis sodalis*, occurs from Iowa, south to Oklahoma and Alabama, west to South Carolina and north to New Hampshire. Caves are used for hibernacula. Over 90% of the population hibernated in five states (IN, MO, KY, IL, and NY) in 2005. No hibernacula are known from the CNF, but one is in the Great Smoky Mountains National Park, where several maternity roosts have been located. Four additional hibernacula are located within 40-70 miles of the CNF (USFWS 2007).

Indiana bats migrate to their hibernacula caves starting in late summer and return to their summer habitats in late spring (NatureServe 2021). In the Southern Appalachian region, females currently establish primary maternity roosts under the sloughing bark of dead yellow and white pines and eastern hemlock (O'Keefe 2012). Single bats may use a variety of tree species for roosts, as long as the trees have sloughing bark or crevices. Most roosts are on mid and upper slopes in mixed pine-hardwood stands, but some roosts have been found near streams. The species forages for flying insects along waterways, floodplains, and over upland waterholes (NatureServe 2021).

Direct, Indirect and Cumulative Effects

Indiana bats have never been captured on the North End of the CNF, so the risk of directly impacting an individual is low. Hibernacula caves do not occur in the action area and would not be affected. Tree cutting would only occur in fall through early spring when bats are hibernating and would not be roosting in trees. Most large trees would remain. Site construction and road/ramp decommissioning may create noise that would disturb roosting bats, but these activities would not come in direct contact with bats. These impacts

would be short-term and on a small scale.

Foraging, roosting, and maternity colony habitat may be altered by the project. Potential roost trees may be lost through clearing and tree cutting. The proposed recreation area would provide open habitat with large trees on the edge that may be utilized as maternity roosts (NatureServe 2021).

Roosting bats may be disturbed by human activity at the recreation site in the future, making it less suitable. The extent of tree clearing is relatively small (3 acres) and changes to habitat would be minimal across the landscape. Undisturbed habitat would remain in the surrounding forests.

Decommissioning of road/parking area and conversion to wildlife open area habitat would maintain a travel corridor, increase insect production, and improve foraging for bats. No additional activities on State and private lands are known for the next five years, so no cumulative effects are expected.

Virginia Big-eared Bat, *Plecotus townsendii virginianus*, is an endangered sub-species of Townsend's big-eared bat that occurs in the Appalachian Mountains of Kentucky, North Carolina, Tennessee, Virginia, and West Virginia. Big-eared bats do not migrate and use caves year-round for hibernating, maternity colonies, and roosting. Day roosts such as rock shelters and overhangs, and man-made structures are also used as day roosts. Studies indicate that VBEB forage within less than 7 miles of their roost sites, generally in forested areas, but may utilize small-scale developed areas. Corridors through forested and riparian areas are important habitat components. They feed primarily on moths and have a long foraging season (USFWS 2019). The major threats to this subspecies are loss of habitat and disturbance to maternity roosts and hibernacula (USFWS 2011).

Direct, Indirect and Cumulative Effects

Activities would occur during the day when bats are roosting. Foraging bats would not be directly impacted. The project would not indirectly affect maternity, hibernation, and roosting habitat. Tree cutting would occur adjacent to Watauga Lake and Colorado Gap Creek. Tennessee BMPs will be implemented, and streamside management zones will be established to protect water quality and foraging habitat. The extent of construction is small (3 acres) that changes to habitat would not be measurable. Decommissioning of road and parking area and conversion to wildlife open area habitat would maintain a travel corridor, increase insect production, and improve foraging for bats. These bats appear resilient to selective tree removal but do require a diversity and abundance of local woody species (USFWS 2019). No activities on State or private lands are known for the next five years, so no cumulative effects are expected.

Regional Forester's Sensitive Species

Monarch butterfly, *Danux plexippus*, breeding habitat in the CNF consists of fields, woodlands, roadsides, and other openings where milkweeds grow. Milkweeds are the host plant for monarchs and larvae will not develop into butterflies without them. Adult monarchs feed on the nectar of a variety of other species of plants. These flowering plants fuel the spring and fall migrations and sustain healthy breeding populations in the summer (Monarch Joint Venture 2019).

Direct, Indirect and Cumulative Effects

Adults may use the area for feeding and breeding, particularly along the existing road edge. Eggs and caterpillars may be present on milkweed growing along the road. Current overstory vegetation in the forested area of the new facilities location is too thick for milkweed. Individuals may be directly impacted by ramp construction and road/ramp decommissioning. Digging and working in and around the road may disturb, damage, or destroy caterpillars and/or adults. These direct effects would be short-term, occurring only during the duration of the activities and would be limited to the small impact area (<25 acres). Adult

monarchs would most likely fly away to avoid damage. Habitat in the project area would be temporarily disturbed but would likely return in the next growing season.

Decommissioning of road and parking area and conversion to wildlife open area habitat would improve and increase habitat for the future.

Past activities such as kudzu treatments, burning, tree cutting, and stand improvements have created more open habitat, leading to increased milkweed and other flowering plants and improved habitat for monarchs. Because the project would only affect the small area where construction will occur, negative cumulative effects would not be measurable.

Eastern small-footed bat, *Myotis leibii*, (ESFB) is moderately widespread with spotty distribution from southeastern Canada to Alabama and Georgia, west to Oklahoma. In summer they roost in rock outcrops and cliffs, rock crevices, caves, mines, bridges, trees, and buildings. Rocky areas or bridges with a sunny exposure in forested landscapes may be important maternity site features. These bats hibernate singly or in small groups only in coldest periods of winter and early spring in caves, mines, and buildings (Harvey, et al 1999). They typically forage over streams, ponds, roads, and waterholes (NatureServe 2021).

Forest-wide sampling from 1990 to 2015 captured over 3,300 bats, documenting at least 158 ESFB and several maternity colonies spread across most counties of the CNF. Foraging, roosting, and potential maternity habitats are available in the action area, although no ESFB have been captured in or near the project area. No hibernacula or rocky habitats occur in or near the action area.

Direct, Indirect and Cumulative Effects

Maternity roosts are not likely to occur in the areas of disturbance. Tree cutting would only occur in fall through early spring when bats are hibernating and would not be roosting in trees. Most large trees would remain. Site construction and road/ramp decommissioning may create noise that would disturb roosting bats, but these activities would not come in direct contact with bats. These impacts would be short-term and on a small scale. Foraging, roosting, and maternity colony habitat may be altered by the project. Potential roost trees may be lost through clearing and tree cutting. The proposed recreation area would provide open habitat with large trees on the edge that may be utilized as maternity roosts (NatureServe 2021). Roosting bats may be disturbed by human activity at the recreation site in the future, making it less suitable. However, tricolored bats often have maternity roosts in man-made structures such as buildings and bridges that would have human activity (NatureServe 2021). The extent of tree clearing is relatively small (3 acres) and changes to habitat would be minimal across the landscape. Undisturbed habitat would remain in the surrounding forests. Decommissioning of road/parking area and conversion to wildlife open area habitat would maintain a travel corridor, increase insect production, and improve foraging for bats.

Past activities such as burning, tree cutting and stand improvements have created more open habitat, leading to improved foraging habitat. Cumulative effects for this project would be beneficial overall.

Tricolored bats, *Perimyotis subflavus*, occur across the eastern half of the United States. Hibernacula (caves or mine shafts) are used in the fall and winter. Maternity and other summer roosts are mainly in tree foliage or snags. Tricolored bats forage along waterways near trees in forested areas. Night roosts during foraging may also include caves, mines, rocks, buildings, bridges and trees, sometimes in open areas (NatureServe 2021).

Forest-wide sampling from almost two decades has documented at least 761 tricolored bats spread across

most counties of the CNF. They have been captured in the affect area for this project. Foraging, roosting, and maternity habitats are available in the affected area, but no hibernacula are nearby.

Direct, Indirect and Cumulative Effects

Tree cutting would only occur in fall through early spring when bats are hibernating and would not be roosting in trees. Most large trees would remain. Foraging, roosting, and maternity colony habitat may be altered by the project. Potential roost trees may be lost through clearing and tree cutting. The proposed recreation area would provide open habitat with large trees on the edge that may be utilized as maternity roosts (NatureServe 2021). Roosting bats may be disturbed by human activity at the recreation site in the future, making it less suitable. However, tricolored bats often have maternity roosts in man-made structures such as building and bridges that would have human activity (NatureServe 2021). The extent of tree clearing is relatively small (3 acres) and changes to habitat would be minimal across the landscape. Undisturbed habitat would remain in the surrounding forests. Decommissioning of road/parking area and conversion to wildlife open area habitat would maintain a travel corridor, increase insect production and foraging for bats.

Past activities such as burning, tree cutting and stand improvements have created more open habitat, leading to improved foraging habitat. Cumulative effects for this project would be beneficial overall.

Management Indicator Species

Hooded warbler, *Wilsonia citrina*, is found in moist deciduous forests with fairly dense understories along near water (NatureServe 2021), but often nest along edges of small forest clearings where brush is more dense (Ogden and Stuchbury 1994).

Scarlet tanager, *Piranga olivacea*, prefer closed canopy deciduous forests, but they sometimes breed in wooded parks, orchard, and suburbs with open canopies (NatureServe 2021) and may occur in early successional forests (Mowbray 1999).

Pileated woodpecker, *Dryocopus pileatus*, requires large cavity trees for nesting and forages on dead trees and downed logs across a variety of community types. In the southeast, they prefer deciduous or mixed forest with high, closed canopy with a high basal area (NatureServe 2021).

Direct, Indirect and Cumulative Effects

Recreation area construction during breeding season would disrupt nesting behavior of hooded warblers and scarlet tanagers, potentially causing mortality of young in the nest. Hooded warblers are likely to abandon their nest site if disturbed during building, but once the eggs are laid, they are not likely to abandon the nest. Mortality would be likely if shrubs with nests are cut or are crushed by fallen trees or heavy equipment. Studies indicate that scarlet tanagers abandon nest sites if logging occurs in occupied breeding habitat during nesting (Mowbray 1999). Pileated woodpecker breeding would not be impacted by the project since no large cavity trees occur in the proposed recreation site. They commonly forage in younger forests and are likely to forage in the proposed recreation site so activities may disrupt foraging. However, pileated woodpeckers are relatively tolerant of human disturbance (Bull and Jackson 1995).

Road/ramp decommissioning implemented during nesting season is not likely to disturb scarlet tanagers since they nest and forage high in trees and would be away from disturbance. Pileated woodpeckers would not be impacted by this activity either. However, hooded warblers nesting in thick vegetation along the road may be disturbed. After project implementation, conversion of the road to wildlife open area habitat would maintain dense habitat along edges for hooded warbler nesting.

Impacts to Management Indicator Species would be minor in context of the surrounding landscape, having

long-term negative impacts to approximately 3 of the 1066 acres of the analysis area. The amount of habitat available across the analysis area would remain abundant and would support each species' habitat requirements.

This project in combination with past activities such as burning, tree cutting and stand improvements may have slight adverse cumulative effect on hooded warblers, scarlet tanagers, and pileated woodpeckers. However, the alternative would not negatively influence the species' population trends in the analysis area.

Demand Species

Black bear, *Ursus americanus*, uses a wide variety of forests and openings in the Southern Appalachians and feeds on a diverse diet of plants and animals. Important habitat elements include diversity, hard mast, den sites, and large home ranges (Whitaker and Hamilton 1998).

Direct, Indirect and Cumulative Effects

Bear activity and movement patterns would be altered during project implementation to avoid humans. However, bears are highly mobile and would continue to utilize the areas during and after implementation. Denning bears and habitat would not be impacted. Impacts would be considered minor in context of the surrounding landscape where suitable habitat is abundant.

The conversion of paved road to wildlife open area habitat would provide bears with a foraging and travel corridor. The installation of a parking area and gate to close the road would provide better opportunities for hunters and increase habitat remoteness for bears.

During the spring and summer, bear activity may increase within the analysis area due to the enhancement and production of forage and an increase in habitat diversity. These activities would in turn improve hunting and wildlife viewing opportunities for the public.

Past activities in the analysis area such as burning, tree cutting and stand improvements have created more open habitat, leading to improved foraging habitat. Cumulative effects for this project would be beneficial overall.

Species of Concern

Bald eagle, once on the verge of extinction, has been restored in much of its original range. This species has been de-listed from the Federal Endangered list. Bald eagles can be found along waterways throughout North America (Peterson 2002), nesting in large, isolated tracts of mature forests near water. They prefer roosts in conifers and protected areas along open water in the winter. Bald eagles are seen on Watauga Lake year-round and are known to nest there. No nests currently occur in the analysis area.

Direct, Indirect and Cumulative Effects

Eagles present in the area during recreation area construction and/or decommissioning activities may disturb eagles, causing them to avoid the area. Any impacts would be short-term, limited to the duration of the activities and would not result in changes to the local bald eagle population along Watauga Lake. If bald eagles begin nesting in the area, activities would be suspended in the vicinity of the nest site until protective measures could be taken.

This project in combination with past activities such as burning, tree cutting and stand improvements may have slight adverse cumulative effect on bald eagles, along with positive effects on habitat quality. The alternative would not negatively influence bald eagle population trends in the analysis area.

Alternative 2

Direct, Indirect and Cumulative Effects

Because no activities would occur with Alternative 2, no effects to Threatened, Endangered, Sensitive, Demand, or Concern Species or would occur.

Soil Resources

Desired soil conditions are considered in this section with respect to processes that affect long-term soil productivity; soil displacement (erosion), soil compaction and soil cover. Recreation management and new facilities construction may result in detrimental soil disturbance via soil displacement or erosion, soil compaction, and rutting resulting. Soils can be adversely impacted by activities such as building permanent recreation facilities. The amount of detrimental disturbance that occurs depends on soil moisture, slope steepness, complexity of topography, rock content of the soil.

Ground disturbing practices influence soil displacement principally because they remove vegetation ground cover and concentrate channel runoff water. Soil compaction increases the soil bulk density, decreasing the porosity as a result of the application of forces such as the weight and vibration of operation of heavy equipment. Compaction can detrimentally impact both soil productivity and watershed conditions by causing a decrease in infiltration of water into the soil, and increase in overland flow during storm events, and reduced plant growth due to reduce water movement into the soil and restricted root zone and soil aeration. Soil compaction is dependent on soil texture, organic matter and soil moisture (McKee et. al. 1985). Soil compaction increases soil density (weight per unit volume) or bulk density. Soils are rated based on their susceptibility to compaction from the operation of ground-based equipment used for harvesting and site preparation when soils are moist (NRCS 2005).

Affected Environment

Existing Condition

The Sink Mtn project area encompasses approximately 2.5 acres of new ground disturbance adjacent to Watauga Lake in Johnson County. The project activity area is moderately flat but has enough slope to allow responsible runoff management and is large enough to provide better recreational opportunities than the existing location and provides good year-round access to the lake. The Sink Mtn project area contains five major soil types: Craigsville cobbly sandy loam, Ditney sandy loam, Keener loam, Lonon loam, and the Unicoi-Rock outcrop complex. The Unicoi soils have been identified as a “Soil of Concern” for potential erosion and difficulties with revegetation on areas with exposed mineral soils.

The activity area includes approximately 0.5 acres of the Unicoi soil type and will be professionally engineered to include proper erosion control that follows State and Federal regulations. A detailed description of the soil map units and a location map can be viewed in the Johnson County Soil Survey - available on <https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/survey/>.

Environmental Effects - Soils

Methodology

Potential resource indicators of soil productivity were assessed in the Sink Mtn Project Area to determine if they would continue to meet the Regional and Forest Plan Soil Quality Standards. The resource indicators for soil productivity are soil displacement (erosion) and soil compaction. These indicators have the potential

to cause detrimental effects to soil productivity based on research literature. They can cause sheet, rills and gully formation of the soil due to erosion, and increased bulk density restricting root growth and water infiltration due to soil compaction.

Field visits to proposed activity stands, office analysis of Geographic Information System data, reports of past activities, and information from the Johnson County soil survey data were used to evaluate the impacts of proposed activities. The description of anticipated impacts to the soil resource was based on the sensitivity of the soils in the project area and the amount of soil proposed activities are likely to disturb. Cherokee National Forest Revised Forest Plan Goal 8 states “During mechanical disturbance on all soils dedicated to growing forest vegetation, the organic layers, topsoil and root mat will be left in place over 85 percent of a project area (USDA, 2004).

Direct effects on soils from proposed activities are estimated by analyzing the effects of soil displacement, soil compaction, rutting, burning, and use of herbicides on the soil surface. This is the most productive layer and also the easiest to disturb through management activities. Compaction and displacement can affect the soil’s physical, chemical and biological properties. Potential impacts are based on the extent of grading and surfacing and installation of recreation facilities, such as the boat ramp, parking area, toilet, and connector trail.

Indirect effects may include the loss of site productivity due to the removal of vegetation and nutrients. Woody debris is essential for maintenance of sufficient microorganism populations and long-term ecosystem function.

Cumulative effects include the combination of direct and indirect effects from past, present and reasonably foreseeable future activities added to the direct and indirect effects of the proposed activities. Direct, indirect and cumulative effects on soils are measured within each activity area. The cumulative effects analysis area for the soil resource consists of the cumulative impacts within each of the activity areas.

Scope of the Analysis

Geographic and Temporal Scope for Effects Analysis of Soils

The geographic scope of the analysis for the impacts to soils will be the area contained within the 2.5 acre activity area for the Sink Mtn project. Activity areas are the areas proposed for new construction where there is expected soil disturbance. Other management activities proposed in the project area, but outside of the activity area have previously disturbed soils. The temporal boundary used to assess effects would vary depending on the activity. Short-term effects from: disturbance or mixing of the soil organic horizon may disrupt decomposition processes for a few weeks or months and long-term effects of five to over 50 plus years may result if the highly productive upper layer of soil is compacted or displaced. For example, soil displacement or soil compaction could result from the permanent recreation development and use.

Alternative 1: Proposed Action

Direct and Indirect Effects

Preliminary engineering designs include construction of a new facility that includes vehicular and pedestrian

circulation, vehicular parking, a boat launch with courtesy boat dock, fishing pier, and vault toilet. These impacts will be primarily confined to the 2.5 acres and will be engineered to control for erosion and stormwater according to State and Federal regulations. It is assumed that most of the 2.5 acre activity area will be cleared of vegetation and graded before the new facilities will be constructed. Soil compaction and loss of soil productivity is expected across the entire activity area. Impacts will be long term and the site will not be expected to grow biomass in the future.

There will also be a culvert replaced to the east of the proposed parking lot and boat launch location, which will have a small footprint of soil disturbance, but typically limited to adjacent to the culvert and approximately 100ft above and below the culvert. There will be 1.5 miles of road decommissioning from the new location to the end of the road. Decommissioning may remove crossculverts, scarify/grind the existing pavement, and close the existing parking area and boat ramp.

Decommissioning will improve the previously compacted soils and improve soil permeability, thereby helping to restore soil and water functioning along this old road segment. Finally, the existing trail (603 Old Homestead Trail) will be extended from access point at existing Sink Mountain Boat Ramp location to the new boat ramp and managed as a hiker/pedestrian trail that allows admin OHV access for management purposes. The trail extension essentially exists on the ground currently, so new additional soil impacts are expected. Managing this section as pedestrian and limiting vehicular use will likely allow for some natural soil processes to occur over time.

Overall soil impacts will be minor due to the limited size of impact, even though 2.5 acres will be permanently converted to a new recreation facility site. Decommissioning the old facility and road will serve as a substantial offset of impacts, and improvements to soils along the closed facilities will return over the long-term.

Cumulative Effects

Cumulative effects were identified by the IDT team and include past and future projects such as timber harvest and stand improvements (Lost Josh Project and Shortleaf Pine Restoration), slashdown and burning (Cook Hollow Project), herbicide treatments of non-native invasive species, and mowing for wildlife openings. These projects were considered to have negligible to minor impacts to soils.

Therefore, with the extent of ground disturbance and the estimated short and long term effects to soils for actions proposed in Alternative 1, cumulative effects are not expected to have disturbance that exceeds Cherokee RLRMP Goal 8, of retaining organic layers, topsoil and root mat in place over 85 percent of a project area on soils dedicated to growing forest vegetation.

Alternative 2: No Action

Direct/Indirect Effects

In the absence of activities such as road decommissioning, trail building, and recreation facilities construction/installation, no increase or decrease in soil displacement (erosion) or soil compaction is expected under Alternative 2. Only undisturbed natural erosion as well as erosion associated with the landslide, and existing Forest Service system roads and trails would be expected to continue within the project areas. No direct impacts to the two soil types are expected by implementing Alternative 2.

Cumulative Effects

With no new activities under Alternative 2, no new management-induced detrimental cumulative impacts would occur in the Sink Mtn Project area.

Water Resources

Design criteria common to all alternatives include:

- Tennessee Best Management Practices (BMPs)
- Forest Standards FW-2, FW-3, FW-4, FW-5, FW-6, FW-7, FW-8, FW-9, FW-10, FW-11, FW-14, FW-15, FW-16, FW-18, FW-19, RX11-1, RX11-8, RX11-13, RX11-14, RX11-18, RX11-29, RX11-30, RX11-31, RX11-32
- Forest-wide Goal 8

Scope of Analysis

The scope of analysis for direct and indirect effects to Water Resources includes all NFS lands in the project area which is contained within the Lower Roan Watershed (6th level HUC). Cumulative effects analysis includes private lands within these watersheds. The cumulative effects analysis will consider activities that have occurred in the analysis area in the past five years. This timeframe was selected since when management activities are properly designed and appropriate design criteria (i.e. BMPs and RLRMP standards) are implemented, watersheds typically recover within 2-5 years post-harvest.

Cumulative effects will also consider future activities in the next five years since this timeframe roughly coincides with USFS out-year planning.

Existing Condition

The project area is approximately 1,200 acres and is mostly contained within one 6th level watershed, Lower Roan Creek (Hydrologic Unit Code: 60101030104) which is 34,607 acres total and drains to the Watauga River. Forest Service lands are only 6% of the watershed area. A watershed assessment was completed on the Cherokee National Forest in 2011 as part of the Forest Service Watershed Condition Framework (WCF) (USDA 2011a). Analysis evaluated available GIS and local data to consider how management actions can affect the conditions of watersheds and associated resources.

Indicators were evaluated using a defined set of attributes whereby each attribute was scored as Good (functioning properly), Fair (Functioning at risk), or Poor (impaired function).

The overall Watershed Condition Framework rating for Lower Roan Creek watershed is 'Functioning at Risk' with the specific indicator ratings shown below:

AQUATIC BIOTA	RIPARIAN	WATER QUALITY	WATER QUANTITY	AQUATIC HABITAT	ROADS/TRAILS	SOIL CONDITION	FIRE CONDITION	FOREST COVER	FOREST HEALTH	INVASIVE SPECIES
Poor	Fair	Good	Poor	Poor	Good	Fair	Poor	Good	Fair	Fair

According to the current Tennessee Water Quality Assessment (TDEC 2020), four stream segments are directly associated with the project area and shown below for attainment of water quality standards:

WATER_NAME	ATTAINMENT
Doe Creek	Fully Supporting
Misc Tribs to Doe Creek	Not Assessed
Watauga Reservoir	Not Supporting
Watauga Reservoir Misc. Tribs	Not Assessed

The Watauga Reservoir is not supporting beneficial uses due to atmospheric mercury deposition (TDEC 2020). This project will not contribute to mercury loading and therefore will not address this water quality impairment further. Doe Creek and all other tributaries are considered fully supporting, until future monitoring data can fully assess the status and indicate otherwise. The FS owns only 6% of the watershed and very limited portion along the Watauga Reservoir, therefore water quality in FS streams is assumed to be good despite some sediment delivery and effects on stream morphology from roads and recreation facilities in proximity to the reservoir. The proposed action will not affect the current water quality beneficial uses status.

Figure 2. Water Quality Attainment for the Lower Roan Watershed.

Mountain Boat Ramp location to the new boat ramp and managed as a hiker/pedestrian trail that allows admin OHV access for management purposes. The trail extension essentially exists on the ground currently, so new additional impacts are expected. Managing this section as pedestrian and limiting vehicular use will allow for some natural processes, such as water percolation and filtration, to occur over time.

The installation of a boat ramp into the shoreline has potential to result in temporary impacts to water quality, due to construction occurring along the shore. For such actions, TVA typically notes the potential for sedimentation or leaks from equipment and that BMPs would address these potential effects.

Even after construction, over the long term there could be potential impacts to water quality of visitors, vehicles, boats, etc at the ramp.

The overall watershed condition rating is not expected to change from the proposed action, given new ground disturbance is very small scale (2.5 acres) and decommissioning of the existing infrastructure would occur as an offset. As such, water quality and watershed conditions would have minor and temporary direct and indirect impacts and expected to maintain current water quality standards.

Alternative 2: No Action

There would be no direct or indirect effects to water resources because no activities would be implemented. Additionally, there will not be the benefitting effects of decommissioning 1.5 miles of road, which will allow the natural regime of water percolation to be restored over time. Rainfall events and natural erosion processes would continue to influence stream systems within the analysis area.

Cumulative Effects

Alternative 1- Proposed Action

Cumulative effects were identified by the IDT team and include past and future projects such as timber harvest and stand improvements (Lost Josh Project and Shortleaf Pine Restoration), slashdown and burning (Cook Hollow Project), herbicide treatments of non-native invasive species, and mowing for wildlife openings. These projects have overall minor impacts to water quality. Based on field work, local knowledge, experience, and best available science, implementation of the Sink Mtn project would not result in unacceptable cumulative effects to water resources, provided design criteria are implemented.

Alternative 2 - No Action

With no new activities under Alternative 2, no new management-induced detrimental cumulative impacts would occur in the Sink Mtn Project area for water quality or watershed conditions.

Compliance with RLRMP and Other Relevant Laws, Regulations, Policies and Plans

Clean Water Act

Section 313 of the Clean Water Act requires the Forest Service to adhere to state water quality requirements. Section 319 of the Clean Water Act of 1972 requires the Forest Service to accommodate concerns of States regarding the consistency of federal projects with State nonpoint source pollution control programs. All waters within National Forests are Exceptional Tennessee Waters (TDEC 2013b) and consequently no degradation that threatens the designated uses of these waters is permitted.

While some streams in the analysis area do not support all designated uses (TDEC 2018), the condition of pollution is generally present downstream of USFS ownership. Alternatives 1 and 2 are all fully consistent with Clean Water Act because no adverse water quality impacts are anticipated, beneficial uses would not be adversely affected, and BMPs and other design features including RLRMP standards are included in the proposed project.

Executive Orders 11988 and 11990 (Floodplains & Wetlands)

The objective of EO 11988 is to avoid, to the extent possible, the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative. The EO is not intended to prohibit floodplain development in all cases, but rather to create a consistent government policy against such development under most circumstances (U.S. Water Resources Council, 1978). The EO requires that agencies avoid the 100-year floodplain unless there is no practicable alternative.

The project would be located between Roan Creek miles 2.4 and 4.5, right descending bank, in Johnson County, Tennessee. Flood elevations on Watauga Reservoir upstream of Watauga Dam have not been computed; however, the 100- and 500-year flood elevations at Watauga Dam would be 1969.0 and 1975.0 feet, respectively, and the flood elevations at the project site are estimated to be those elevations, also.

Portions of the road to be decommissioned, road repair/upgrades, installation of culverts, parking lot, walking/OHV trail, and excavation and grading would be located within the 100-year floodplain of Roan Creek. Consistent with EO 11988, these activities are considered to be repetitive actions in the 100-year floodplain that should result in minor impacts. To minimize adverse impacts, BMPs would be used during construction, and the excavated material debris resulting from decommissioning the road would be spoiled on land lying and being outside the 500-year floodplain, elevation 1975.0, with every effort made to prevent material from reentering Watauga Reservoir.

The courtesy dock and fishing pier are likely to be floating and fixed facilities, respectively. Portions of the boat launch ramp, floating courtesy dock, informational kiosk, and fixed fishing pier would be located within the 100-year floodplain of Roan Creek. These facilities are considered to be repetitive actions in the 100-year floodplain that should result in minor impacts. To minimize adverse impacts, the courtesy dock would be anchored to prevent it from floating free during major floods, and the minimum elevation of the fishing pier would be 1960.5, which would be 1.5 feet above the June 1 Flood Guide elevation.

The vault toilet would be located on ground at about elevation 1970, which would be outside the 100-year floodplain and within the Watauga Reservoir Flood Storage Zone (FSZ). There is no practical alternative to locating the vault toilet in the flood storage zone because nearly the entire facility, graded to meet ADA accessibility requirements, would be within the Watauga Reservoir FSZ. To minimize adverse impacts, the door(s) of the vault toilet would be removed during a flood event, to allow the automatic entry and exit of floodwaters. In addition, the waste tank(s) would be pumped dry and sealed off during a flood event.

EO 11990 requires the Forest Service to take action to minimize destruction, loss, or degradation of wetlands and to preserve the natural and beneficial values of wetlands. The proposed action has been designed to minimize impacts to wetlands and is consistent with the Executive Order.

Permits

Permits that may be required for implementation of the proposed actions contained within this EA include:

- Army Corps of Engineers Section 404 Permit
- Tennessee Aquatic Resource Alteration Permit

The Forest Service will obtain any and all required permits prior to commencement of construction activities proposed under Alternatives 1 and 2.

Transportation

Affected Environment

This area is situated within a small cove, which is ideal for boat ramp construction due to protection from high winds. The shoreline here has ideal slopes that are steeper than the rest of the surrounding shorelines. Approximately 2.5 acres in size and moderately flat, this site lies just to the west of an unnamed stream. The Cherokee NF Land Management Plan designates this location as a “Concentrated Recreation Zone,” which are areas of the Forest set aside specifically for the development of recreation sites and concentrated human use. The site has enough slope to allow responsible runoff management, is small enough to contain the use, is large enough to provide better recreational opportunities than the existing location and provides good year-round access to the lake. This site also provides better access to existing trails that would be extended to the new recreation site once the old site is decommissioned. Developing this location would reduce the overall access road length by 1.5 miles and avoid the slide.

Alternative 1 (Proposed Action)

Direct, Indirect and Cumulative Effects

Effects of proposed Sink Mtn Boat Ramp Project will have a positive impact on the transportation system both locally and forest-wide. Transportation activities proposed by this project will both create a safer transportation system and eliminate deferred maintenance on 1.5 miles of National Forest System Road 298. Because of a slide near MP 2.0, the project proposes to move the Sink Mountain Boat Ramp from its current location to a new location 1.5 miles closer to Doe Creek Road. The slide has impacted approximately 300-ft of roadway and has made the section of road impassable.

Performing a satisfactory permanent repair in the existing location was evaluated and determined to be cost prohibitive. Since the sole purpose of the road is to access the ramp, the 1.5 miles of road that accessed the old ramp location will be converted to trail. This conversion benefits the transportation system by eliminating deferred maintenance and reducing the overall size of the transportation system. With NFSR 298 being a Maintenance Level 5, 2-lane paved road, the annual recurring maintenance and deferred maintenance eliminated is a significant savings and will assist the forest in progressing toward a sustainable transportation system. Administrative access to the end of NFSR 298 will be preserved to allow for future Forest Management activities to include recreation, vegetation and fire. Access will be managed by traffic control devices to ensure the conversion to a trail is effective.

Alternative 2 (No action)

If the new launch is not constructed, the existing launch is not usable because of the landslide that closed the road. The current infrastructure would remain in its existing condition with the exception of the repair to 300-ft of roadway.

Scenery

Affected Environment

The environment surveyed for impacts to scenic resources encompasses the area described in the Project Area Description. Additionally, the analysis includes locations from which the project area can be seen, primarily from the waters of Watauga Lake itself and the Lakeview Drive corridor across the lake. The proposed Sink Mountain Boat Launch development is located within Prescription 7.D – Concentrated Recreation Zone. These Zones are managed to provide the public with a variety of recreational opportunities in visually appealing and environmentally healthy settings. Facilities that provide for user convenience (such as parking and fishing piers), as well as protect resources (such as restrooms and boat ramps), can be constructed and/or maintained in developed recreation areas. Motorized access and their support facilities (i.e., roads, parking lots, or water access) are emphasized. Plants and animals will be managed (pest control) to protect visitor enjoyment in developed recreation sites, but not at the expense of the general health of local ecosystem. The landscape character will be natural appearing with variations created by the recreational facilities. These variations will primarily occur in developed recreation sites to accommodate human use and protect high use sites. Constructed facilities should be visually subordinate to the land and designed at a development scale appropriate to the ROS class, which for the proposed site is Roaded Natural.

Alternatives 1 (Proposed Action)

Direct, Indirect and Cumulative Effects

As the proposed action is located within a prescription allowing for the development of recreation facilities, there is no disagreement with the RLRMP. Direct but temporary effects include the loss of vegetation from land clearing and construction activities associated with the development of the recreation site. Compliance with the Built Environment Image Guide and best design practices of the Agency in choice of colors and materials will align the recreation development with the desired condition of the prescription.

Alternative 2 (No Action)

Direct, Indirect and Cumulative Effects

This alternative would have no effect on scenery resources.

Cultural Resources

Affected Environment

Cultural resource sites represent evidence for past human activities and occupations. Such sites include but are not limited to archeological sites, standing buildings, and other features on the landscape that reflect intentional human modification. Federal laws and Forest Service policy protect those cultural resources determined to be significant, and therefore eligible for inclusion on the National Register of Historic Places (NRHP) from disturbance and other adverse effects. Sites that have been archeologically or historically researched and determined not to be eligible for the NRHP are not protected under Federal law.

The entire length of Forest Road 298 extending from TN Hwy 167 (Doe Creek Road) west to the present boat ramp, including the south slope of Sink Mountain to the shoreline of the maximum pool level and in

the drawdown zone of Watauga Lake, has been subjected to previous archaeological surveys beginning with Dr. Cliff Boyd in the mid-1980s. These surveys documented no cultural resource sites in the project's Area of Potential Effect (APE). Pursuant to 36 CFR § 800.4 (d) (1), USDA Forest Service determined that no historic properties would be affected by this undertaking and the Tennessee State Historic Preservation Office (SHPO) concurred with this finding. This area is situated within a small cove, which is ideal for boat ramp construction due to protection from high winds. The shoreline here has ideal slopes that are steeper than the rest of the surrounding shorelines. Approximately 2.5 acres in size and moderately flat, this site lies just to the west of an unnamed stream. The Cherokee NF Land Management Plan designates this location as a "Concentrated Recreation Zone," which are areas of the Forest set aside specifically for the development of recreation sites and concentrated human use. The site has enough slope to allow responsible runoff management, is small enough to contain the use, is large enough to provide better recreational opportunities than the existing location and provides good year-round access to the lake. This site also provides better access to existing trails that would be extended to the new recreation site once the old site is decommissioned. Developing this location would reduce the overall access road length by 1.5 miles and avoid the slide.

Scope of Analysis

The scope of analysis is the individual boundaries of the areas identified in each of the alternatives. The time frame is from if and when the project is implemented to the time of completion.

Effects of the Alternatives

Alternative 1 (Proposed Action)

Direct, Indirect and Cumulative Effects

Previous archaeological surveys did not document any historic properties in the project area. Therefore, there are no known direct, indirect, or cumulative effects on cultural resources. If cultural resources are discovered during project implementation, work will halt, and these resources will be evaluated for National Register eligibility in conjunction with the TN SHPO.

Alternative 2 (No Action)

Direct, Indirect and Cumulative Effects

This alternative would have no effect on cultural resources. There is limited potential for discovery of currently unknown sites. There would be no known cumulative effects.

Chapter 4: Agencies Consulted

During the analysis process for the Sink Mountain Recreation Improvement project, the following agencies were contacted/consulted

Federal Highway Administration
Tennessee Valley Authority
The Nature Conservancy in Tennessee
The U.S. Fish and Wildlife Service
Tennessee Department of Environmental Conservation
Tennessee Wildlife Resource Agency

Chapter 5: List of Preparers

Team Leader

Jonathan Lampley (NEPA Planner): NEPA

Team Members

Chad Ingle (Recreation Program Manager): Recreation

Marcia (Wildlife Biologist): Biological Resources

Pauline Adams (Forest Hydrologist): Soil and Water

Bret Yaw (Forest Engineer): Transportation

Jessie English (Forest Recreation, Wilderness & Trails Program Manager): Scenery

Quentin Bass (Forest Archaeologist): Cultural Resources

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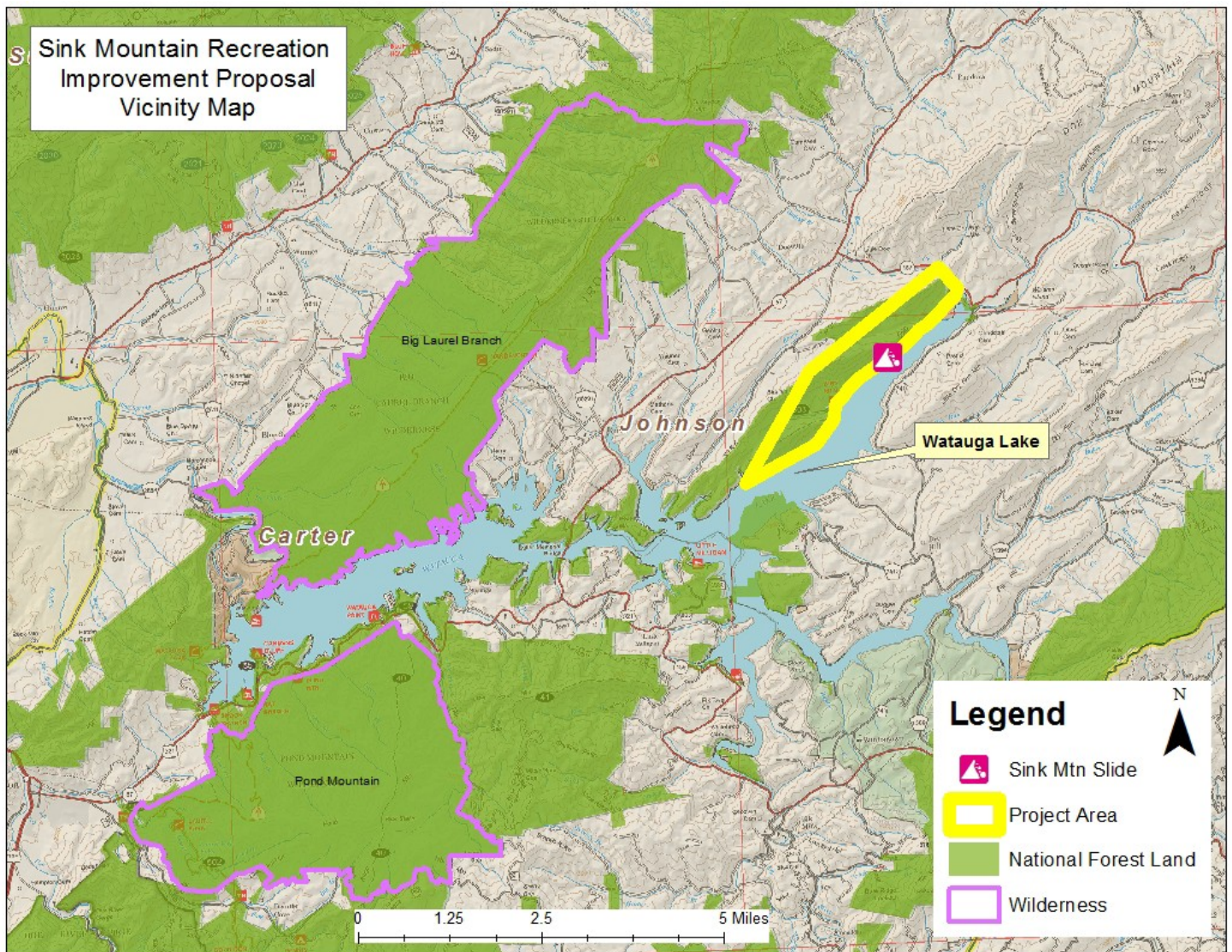
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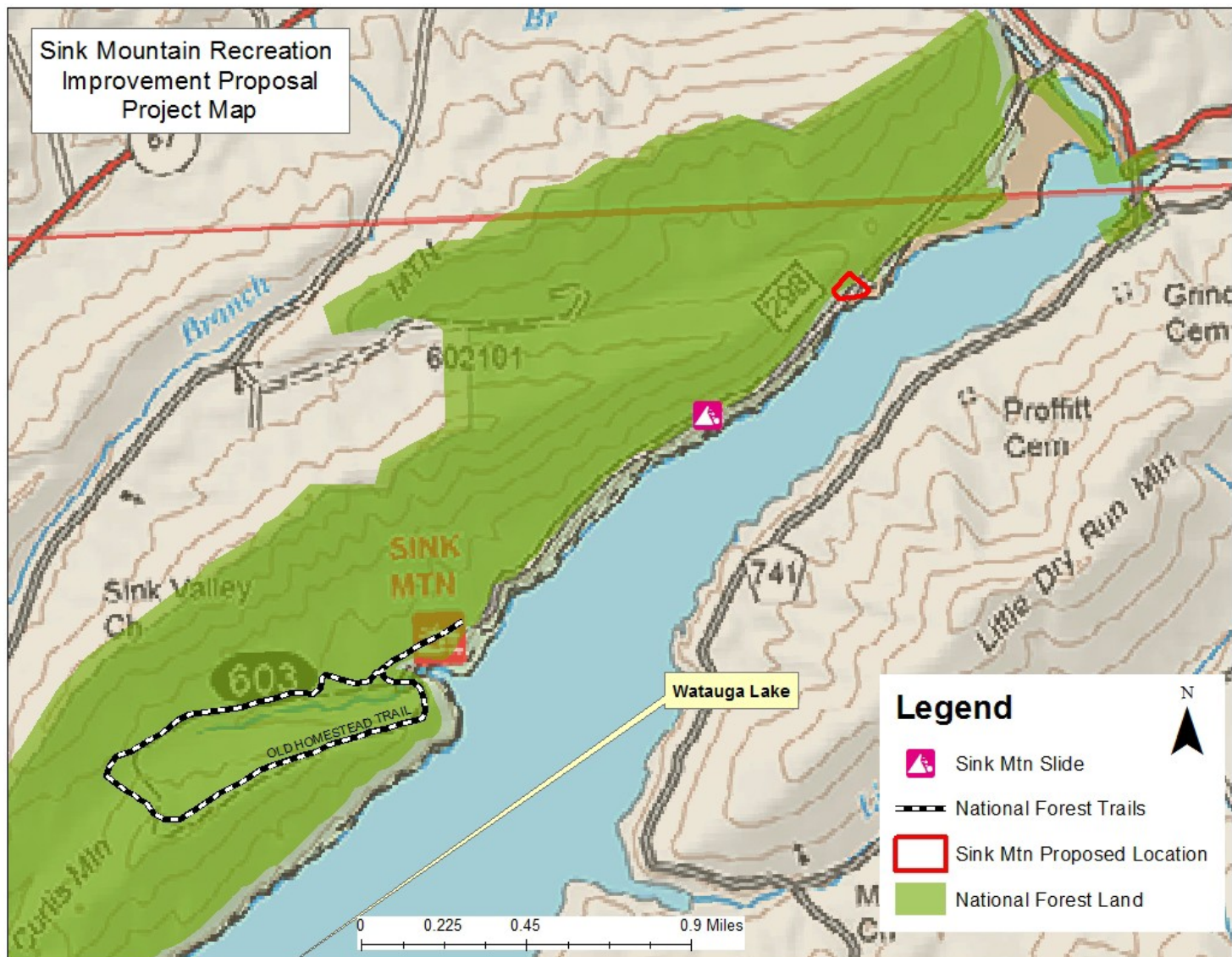
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APPENDIX A - PROJECT MAPS





Attachment B: U.S. Forest Service, Cherokee National Forest, Watauga Ranger District, Decision Notice and Finding of No Significant Impact (September 28, 2021)

DECISION NOTICE AND FINDING OF NO SIGNIFICANT IMPACT
SINK MOUNTAIN RECREATION IMPROVEMENT
USDA FOREST SERVICE
CHEROKEE NATIONAL FORESTS
JOHNSON COUNTY, TENNESSEE

DECISION

Based upon my review of the analysis documented in the environmental assessment (EA) for this project, it is my decision to implement Alternative 1 which addresses recreation improvements to the Sink Mountain Boat ramp and adjacent forest land. The following activities will be incorporated into this project:

- Replace existing lake access with a new facility 1.5 miles closer to the intersection of TN Hwy 167 (Doe Creek Road).
- Construct new facility that includes internal vehicular and pedestrian circulation, parking for single vehicles and vehicles with trailers, a boat launch with courtesy boat dock, fishing pier, and vault toilet.
- Replace culvert to the east of the proposed parking lot and boat launch location.
- Decommission 1.5 miles of road from the new location to the end of the road. Decommissioning may remove cross culverts, scarify/grind the existing pavement, and remove the existing parking area and boat ramp.
- Extend existing trail (603 Old Homestead Trail) from access point at existing Sink Mountain Boat Ramp location to the new boat ramp.
- Manage new trail segment as a hiker/pedestrian trail that allows admin OHV access for management purposes.
- Long-term maintenance and operation of these public recreation facilities
- Seed decommissioned roadbed and boat ramp/parking area with native vegetation and maintain as open area/wildlife habitat through mowing, herbicide treatment of undesirable vegetation, daylighting, and slashdown of woody vegetation (Tiering to Open Areas EA). (approximately 22 acres)

DECISION RATIONALE

I selected Alternative 1 because I believe that it best responds to the management objectives identified for this project.

Alternative 1 includes the following design criteria (EA page 9):

1. Use a hydrologist or wildlife biologist to assist in the location of ephemeral pools, springs, and seeps.

2. Implement Tennessee Best Management Practices (BMPs) as a minimum to achieve soil and water quality objectives. When RLRMP Standards exceed BMPs, the standards shall take precedence over Tennessee BMPs.
3. Streamside management zones (riparian corridors and filter zones) would be established, as specified in the RLRMP.
4. Any new threatened, endangered, and/or sensitive species locations discovered within a project area may result in all actions being delayed or interrupted within the area. The appropriate district wildlife/fisheries biologist or botanist would be consulted to determine effects of the action on the species.
5. Restrict tree and snag cutting (potential bat roosting habitat) to October-March. No tree cutting from April-September.
6. Trees known to have been used as roosts by Indiana or Northern long-eared bats are protected from cutting and/or modification until they are no longer suitable as roost trees unless necessary for public safety. Consultation with the US Fish and Wildlife Service (FWS) must occur before cutting or modification.
7. No activities within 660 feet of an active eagle nest. No cutting of trees with inactive eagle nest. Contact wildlife biologist if eagles begin nesting activity in project area.
8. Road decommissioning would be accomplished by but not limited to blocking authorized/unauthorized travelways by:
 1. Blocking the entrance points of the road with huge boulders.
 2. Recontouring portions of the road to restore natural hydrology.
 3. Felling trees and scattering debris on the roadbed to prohibit access.
 4. Revegetate the roadbed and restore the natural contours and slopes of the land.
 5. A combination of these methods along with other methods not listed above could be used to accomplish the objective.
9. Off-road equipment would be cleaned of seeds, soil, vegetative matter, and other debris that could hold fire ants, NNIS seeds and/or propagules. Off-road equipment would be inspected by a Forest Service representative to prevent NNIS introduction or spread in the project areas.
10. Any cultural resource sites found during implementation of the project would be reported immediately to a Forest Service Archaeologist and work would stop in the area.
11. Minimize impacts to existing trails and travelways and maintain the visual character in the vicinity of trail corridors and travelways.
12. Trees should be selectively removed to improve scenery within high use areas, vista points, and along interpretive trails.
13. Flowering and other visually attractive trees and understory shrubs should be favored when leaving vegetation.
14. Slash should be removed, burned, chipped or lopped to within an average of 2 feet of ground, when visible within 100 feet on either side of the developed recreation site and Sink Mountain Road.
15. Root wads and other unnecessary debris should be removed or placed out of sight within 150 feet of the developed recreation site.
16. Stems should be cut to within 6 inches of the ground in the immediate foreground of the developed recreation site.
17. Openings should be organically shaped. Straight lines and geometric should be avoided. Edges should be shaped and/or feathered where appropriate to avoid a shadowing effect

- in the cut unit. Openings should be oriented to contours and existing vegetation patterns to blend with existing landscape characteristics, as appropriate.
18. Cut and fill slopes should be revegetated to the extent possible. In seen areas, consider seasonal color of vegetation. For instance, using warm season grass mixes that turn seasonally brown or gray instead of green. Cut banks should be sloped to accommodate natural revegetation.
 19. Native wildflowers and/or shrubs and/or trees with showy flowers and/or fruits should be favored or introduced.
 20. The vault toilet's waste tank(s) will be pumped dry and sealed off during a flood event
 21. The floor elevation of the fixed fishing pier will be a minimum elevation of 1960.5 (1.5 feet above the June 1 Flood Guide elevation 1959.0)
 22. The floating courtesy dock will be anchored to prevent it from floating free during major floods
 23. Road-decommissioning debris, as well as any excess excavated material, would be spoiled at a location lying and being above the 1975.0-foot contour elevation (500-year flood elevation), and every effort made to prevent material from re-entering the reservoir
 24. All relevant and appropriate permits will be obtained prior to project implementation.

The No Action alternative (Alternative 2) does not implement any of the proposed activities. Selection of this alternative means no projects would be implemented in the project area at this time. Current uses of the area would continue until such uses were prohibited by changed environmental conditions.

COOPERATING AGENCIES AND AUTHORIZING LAW

This EA is a cooperative effort between the Federal Highway Administration (FHWA), Tennessee Valley Authority (TVA), Tennessee Wildlife Resource Agency (TWRA) and the USDA Forest Service (USDA FS). The Forest Service is the lead agency responsible for the scope and content of this analysis and landowner of 50% of the project area and land management agency of project area as a whole. FHWA is responsible for designing and the funding agency for flood impact related aspects of the project. TVA is land owner for the remaining 50% of the project area and a potential funding partner. Under the proposed action, TVA would grant approval to the FS for the proposed construction and long-term maintenance of the facilities on TVA-managed public lands. TWRA is the recreational access partner and potential funding partner.

PUBLIC INVOLVEMENT

The Forest Service emailed the signed scoping and 30 day notice and comment letter, which included a description of the proposed action along with maps of the project area on April 28, 2021 to interested and affected agencies, organizations, and individuals. The project, along with supporting documentation, was also posted to the Cherokee National Forest (CNF) website. A legal notice was placed in the *Johnson City Press* on April 29, 2021. Twenty three responses were received as a result of these scoping efforts. All comments received were in support of the

project; however, we did we receive several project specific comments. Below are excerpts from numerous letters we received in support of this project.

Project Specific comments: The plan includes a provision to decommission 1.5 miles of road to convert to trail. It also states that the decommissioned area would be scarified and some, or all, culverts removed for water shed. If this is the case, how will the trail be maintained such that those wishing to continue bank fishing on this section will have adequate access?

- *FS Response: As people hike along the trail, they can still access the bank, and walk along the bank anywhere they want to. There won't be any official established routes from the trail to the bank, but people can access the bank along the trail, where available.*
- How will you accommodate bank fishing access such that not everyone is pooled into one small area or on a pier that might be constructed? The plan cuts off areas currently used (prior to slide incident) for bank fishing by individuals and families who do not have access to motorized or non-motorized watercraft. This is the only public accessible bank fishing area on this end of the lake. Is there a way to design the improvements in such a way to maintain more area that can be easily accessed for bank fishing?
 - *FS Response: Fishing can continue anywhere along the bank. The fishing pier is provided for people who want to use it, but fishing won't be limited to the fishing pier only.*
- Final sentence in “Construction of New improvements” mentions other improvements “may” include kiosk, fee and fishing pier. So, I’m just looking to clarify if these are all actually going to be completed or just might be and will each be completed in phases?
 - *FS Response: It will most likely be completed in phases, as funding allows.*
- How will fees be determined such that they do not become a barrier to access for families?
 - *FS Response: The Forest Service has a standard process for the determination of fees, including review of comparable public and private recreation opportunities in the vicinity of the proposed site. Fees also undergo an extensive approval process. This will include a chance for public comment, listing in the Federal Register, and review by the Recreation Resource Advisory Committee (RRAC) for the Southern Region, a Federal Advisory Committee made up of private citizens from around the Southeast representing varied recreation users and interests. Once the fee has been approved by the RRAC, it is submitted to the Regional Forester for approval. Only then can a fee be implemented.*
- I completely understand the intent and need for a fee but that can be a limitation to disparate populations. This is on the only public access to Watauga lake on this end whether that be access to shoreline for picnics and fishing or access for water sports. How can we ensure equitable access?
 - *FS Response: Any proposed fees will be consistent with other day use areas on the Watauga Ranger District. The Federal Land Recreation Enhancement Act*

gives the Forest Service the authority to collect recreation fees at developed recreation sites, including boat ramps. Various interagency pass programs such as Senior Passes, Access Passes, Military Passes, Every Kid Outdoors, and national fee free days are all efforts to provide equitable access. Forests retain 95% of the fees collected on the forest, and those revenues make a significant difference in our ability to provide recreation opportunities and invest in improvements like the new Sink Mountain Boat Launch.

- How will hunting recreation be incorporated into the enhancements? Will there be any changes to hunting access?
 - *FS Response: There will be no change to hunting enhancements or access in this project.*
- Will there be a swimming area or will swimming continue to be allowed? This area has often been used for swimming.
 - *FS Response: There is not a planned designated swimming area, but general swimming is allowed along the bank, as it is currently. Swimming will not be allowed at the new boat launch or fishing pier.*
- Is there any chance of including a picnic area in the plan?
 - *FS Response: There is an opportunity to include 2-3 picnic tables with a walking path from the new parking lot if funding allows.*

Project Support:

- “It is with enthusiasm and hope that I, on behalf of Johnson County Commission, write of our full support for the proposal of the Recreational Improvement Project for the Sink Mountain area. – Mike Taylor, Mayor Johnson County”
- “I am in full support of this project and do not see where this project will have any significant environmental impacts as proposed. Implementing the proposed action will reopen the boat ramp and increase fishing along with other recreational activities to this area. – Boy Richards”
- “I am writing in response to the Sink Mountain Recreation Improvement Environmental Assessment (EA). This project would be a major improvement to the Watauga Lake area to include additional access for recreational activities that take place on one of our most popular waterways..... Repairs to NFS Road 298 for access and a boat ramp would have an extremely positive effect on the economy of Johnson County as visitors and locals alike would have additional opportunities for fishing, flat water kayaking, canoeing and paddle boarding. This would also assist in land use management of areas that are currently over accessed along Watauga Lake. – Alicia Phelps”
- While not a fisherman, I do support the relocation of the boat launch to allow lake access for recreation. The extension of the trail will allow access to enjoy the overlook on the lake. – Vic Hasler”
- On behalf of The Nature Conservancy’s Tennessee Chapter, I want to thank the Cherokee National Forest for the opportunity to comment upon proposed, recreation improvement

construction activities for the Sink Mountain boat ramp and public access point. As the only public access point to Watauga Lake in all of Johnson County, it is important to build back the access opportunity that was rendered unsafe by the 2019 floods. Watauga Lake is a beautiful destination for not just Johnson County residents, but also for visiting recreationists who contribute to the local economy. – Gabby Lynch, The Nature Conservancy”

Issues

There were no specific issues identified during our public comment period.

FINDING OF NO SIGNIFICANT IMPACT

After considering the environmental effects described in the Environmental Assessment, I have determined that, after considering the context and intensity of impacts, the actions will not have a significant effect on the quality of the human environment (40 CFR 1508.27). Thus, an environmental impact statement will not be prepared. I base my finding on the following:

1. My finding of no significant environmental effects is not biased by the beneficial effects of the action (see Environmental Assessment, Chapter III: Affected Environment and Environmental Consequences).
2. Public health and safety are not affected by the proposed actions (see Chapter III).
3. There are no unique geographic characteristics affected by the planned activity (see Chapter III).
4. The effects on the quality of the human environment are not likely to be controversial (see Chapter III).
5. We have considerable experience with the types of activities to be implemented. The effects analysis shows the effects are not uncertain, and do not involve unique or unknown risk (see Chapter III).
6. The action is not likely to establish a precedent for future actions that may be implemented to meet the goals of the Cherokee National Forest Revised Land and Resource Management Plan (RLRMP).
7. The cumulative impacts are not significant (see EA Chapter III).
8. It is determined pursuant to 36 CFR § 800.4 (d) (1), no historic properties will be affected by the proposed undertaking on Forest Service property. It is also unlikely that significant historic properties will be affected on the TVA portion of the reservoir bottom where the pier and boat ramp is proposed to be installed (SHPO Concurrence July 22,2021) . If the

proposed project changes, a new undertaking will be submitted for Section 106 review (see Environmental Assessment, page 23).

9. For the Endangered Species Act of 1973, a “May effect, not likely to adversely affect” determination was made for the Gray Bat, Virginia Big-eared Bat, and Indiana Bat. A “May effect, likely to adversely affect “ determination was made for the Northern Long-eared Bat.

The U.S. Fish and Wildlife Service, in a letter dated July 22, 2021 (2021-CPA-0515 / I-1023 concurred with the Determination of Effects in the Biological Assessment for species listed under the Endangered Species Act, as amended. The letter of concurrence is located in the Sink Mountain Recreation Improvement Project file.

10. The action will not violate Federal, State, and local laws or requirements for the protection of the environment. The action is consistent with the Cherokee National Forest *Revised Land and Resource Management Plan* (See Environmental Assessment, page 5).

Based on the Environmental Assessment (EA), I have determined that the action associated with the Sink Mountain project is not a major federal action significantly affecting the environment. Therefore, an environmental impact statement will not be prepared. This determination was made considering the factors mentioned above.

FINDINGS REQUIRED BY OTHER LAWS AND REGULATIONS

The actions are consistent with the intent of the management goals, objectives, and standards described in the *Cherokee National Forest Revised Land and Resource Management Plan*. The project was designed in conformance with the RLRMP and incorporates appropriate guidelines and mitigation measures. The project is feasible and reasonable, and it results in applying management practices that meet the Plan’s overall direction of protecting the environment while providing goods and services.

It is my finding that the actions of this decision comply with the requirements of the National Forest Management Act of 1976, the Act’s implementing regulations in 36 Code of Federal Regulations Section 219, the National Historic Preservation Act, the Endangered Species Act, the National Environmental Policy Act, and the Council on Environmental Quality Regulations.

A Finding of No Significant Impact (FONSI) and EA were considered. The EA identified applicable laws and regulations. I determined these actions will not have a significant effect on the quality of the human environment, and an Environmental Impact Statement (EIS) will not be prepared.

PRE-DECISIONAL ADMINISTRATIVE REVIEW (OBJECTION) OPPORTUNITIES

This decision is subject to objection pursuant to 36 CFR 218.5. Objections must meet content requirements of 36 CFR 218.8. The Notice of Objection, including attachments, must be postmarked or received within 45 days after the date the legal notice is published in the *Johnson City Press* (Johnson City, TN). The objection should be sent to Cherokee National Forest, ATTN: Objections, 2800 Ocoee Street, Cleveland, TN 37312. Objections may be faxed to (423) 476-9791. Hand delivered objections must be received at 2800 N. Ocoee Street, Cleveland, TN within the normal business hours of 8:00 am to 4:30 pm. Objections may also be electronically mailed to: sm.fs.r8chersoobj@usda.gov.

All time periods are computed using calendar days, including Saturdays, Sundays, and Federal holidays. However, when the time period expires on a Saturday, Sunday, or Federal holiday, the time is extended to the end of the next Federal working day (11:59 pm). The day after publication of the legal notice of the decision in the newspaper of record (§218.7) is the first day of the objection-filing period. The publication date of the legal notice of the decision in the newspaper of record is the exclusive means for calculating the time to file an objection. Those filing an objection should not rely on date or time information provided by any other source.

PROJECT IMPLEMENTATION

As per 36 CFR 218.12, if no objection is received within the legal objection period, this decision may be signed and implemented on, but not before, the fifth business day following the close of the objection-filing period. If an objection is filed, this decision cannot be signed or implemented until the reviewing officer has responded in writing to all pending objections.

CONTACT

For additional information concerning objections, contact Laura Wood, Cherokee National Forest, 2800 Ocoee Street, Cleveland, TN, 37312, or by phone at (423) 476-9700.

For further information on this decision, contact Keith Kelley, Watauga District Ranger, 4400 Unicoi Drive Unicoi, TN 37692, or by telephone (423) 735-1500.



September 28, 2021

Keith Kelley

Date

District Ranger, Watauga Ranger District

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