



National Park Service  
U.S. Department of the Interior  
Great Smoky Mountains National Park  
North Carolina and Tennessee

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**FINDING OF NO SIGNIFICANT IMPACT**  
**Rehabilitation of Water and Wastewater Systems at**  
**Balsam Mountain Campground and Heintooga Picnic Area**

Recommended:

Cassius M. Cash  
Superintendent, Great Smoky Mountains National Park

9/16/22  
Date

Approved:

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Mark A. Foust  
Regional Director, Interior Region 2, South Atlantic – Gulf

Date

## INTRODUCTION

In compliance with the National Environmental Policy Act (NEPA), the National Park Service (NPS) prepared an environmental assessment (EA) to examine alternatives and environmental impacts associated with proposed rehabilitation of water and wastewater systems at Balsam Mountain Campground and Heintooga Picnic Area at Great Smoky Mountains National Park (the Park), Swain County, North Carolina. The purpose of the project is to provide reliable and effective water and wastewater systems to serve the campground and picnic area. The project is needed because the water and wastewater systems were built in 1953-1955 and require rehabilitation to protect human health and safety. The proposed action is also needed to reduce system maintenance requirements and the incidence of system failures. The EA analyzed two alternatives, no action (Alternative 1) and the proposed action (Alternative 2 and the NPS preferred alternative).

The statements and conclusions reached in this finding of no significant impact (FONSI) are based on documentation and analysis provided in the *Rehabilitation of Water and Wastewater Systems at Balsam Mountain Campground and Heintooga Picnic Area Environmental Assessment* (July 2022) and its associated decision file. The EA was completed in accordance with the Council on Environmental Quality NEPA Implementing Regulations Revisions, 87 Fed. Reg. 23466 (April 20, 2022). The EA was made available for public review from July 11, 2022, through July 26, 2022. Thirteen pieces of correspondence, which included two substantive comments, were received during the comment period. In general, commenters supported the proposed improvements and no commenters expressed objections. No changes to the EA were necessary because of comments from the public. Attachment A summarizes the public comments, including NPS responses to substantive comments received on the EA. As required by NPS *Management Policies 2006*, a finding of non-impairment is included as Attachment B. Text changes made to the EA to correct information or add new information are provided in Attachment C.

## SELECTED ALTERNATIVE AND RATIONALE FOR THE DECISION

Based on the analysis presented in the EA and after considering public comments, NPS selected Alternative 2 (proposed action and NPS preferred alternative). Under the selected alternative, NPS will implement the following water wastewater system improvements at the campground and picnic area:

- Replace approximately 9,450 linear feet of existing waterline within the campground and picnic area.
- Replace the existing well pump.
- Rehabilitate the existing 30,000-gallon below ground water storage tank by lining it with a polyethylene coating and replacing existing piping and valves.
- Install chain link fencing around the water tank and well pump to provide physical security for the water system.
- Construct a new, approximately 0.25-mile gravel water tank access road.
- Replace approximately 850 linear feet of sewer line connecting the campground comfort stations to the existing sand filter treatment system and conduct minor grading to improve site drainage.
- Install two new conventional septic systems, one for each picnic area comfort station.

Reserve drain fields totaling approximately 1 acre have also been identified as part of selected alternative. All or part of the reserve drain fields could be used in the future if soils in the primary drain fields can no longer function properly. For analysis purposes, it is assumed that the reserve areas would not be used for at least 10 years. Any future use of the reserve areas would be subject to further analysis in accordance with NPS policies and NEPA.

The total area of ground disturbance for the selected alternative will be about 1.9 acres and approximately 1.1 acres of tree clearing will be necessary. Approximately 0.6 acres of existing forest will be permanently converted to a gravel water tank access road and about 0.5 acres will be converted to open, maintained vegetation. Approximately 0.8 acres of existing maintained grass will be temporarily disturbed and restored following construction. These figures do not include possible future use of the reserve drain fields, which could result in up to approximately 1 acre of additional ground disturbance and tree clearing.

#### RATIONALE

NPS selected Alternative 2 (proposed action and preferred alternative) because:

- It is consistent with the Park’s conservation mandate and meets the purpose and need by providing reliable and effective water and wastewater systems to serve the campground and picnic area.
- It includes mitigation measures to avoid and minimize impacts on Park resources and visitors. While some resources will experience long-term, adverse impacts from tree clearing, the area directly affected by the project would be small (approximately 1.9 acres of ground disturbance and 1.1 acres of tree clearing) and there is no potential for significant impacts to occur.

#### MITIGATION MEASURES

The selected alternative includes the following mitigation measures, which have been updated from the July 2022 EA to reflect completion of Carolina northern flying squirrel surveys in August 2022 and consultation with US Fish and Wildlife Service. These strategies were or will be used prior to, during, or following construction to avoid and minimize impacts, and are derived from NPS *Management Policies 2006*.

- Implement the following measures to avoid and minimize potential impacts on special status species:
  - Tree and vegetation clearing will be conducted between September 1 and March 14 (i.e., outside the maternity season). For the month of September, trees will be felled when temperatures are above 50 degrees Fahrenheit. This measure will avoid impacts on Carolina northern flying squirrels (*Glaucomys sabrinus coloratus*), Indiana bats (*Myotis sodalists*), northern long-eared bats (*Myotis septentrionalis*), and nesting birds.
  - All trees over 4-inch diameter at breast height (dbh) proposed for cutting were inspected (the tree and the ground surface around the tree) by a Park Wildlife Branch biologist in August of 2022 to determine tree species and to identify dreys, possible cavity dens, or other evidence of Carolina northern flying squirrel use.
  - Trees with identified dreys, possible cavity dens, or other evidence of Carolina northern flying squirrels were further inspected by a Park Wildlife Branch biologist visually using:
    - A thermal imaging scope early in the morning to detect heat signatures that may indicate a potentially occupied drey or cavity,
    - Binoculars, and
    - A peeper scope (used on accessible cavities).
  - A tree was assumed occupied if a squirrel or evidence of denning in the form of shredded birch bark either in a cavity or in/ under a tree was observed. No occupied or assumed occupied trees were identified in areas proposed for tree clearing during surveys in August of 2022.

- If evidence or sightings of Carolina northern flying squirrels are unexpectedly made during project implementation, the contractor will stop work and the Park will notify the US Fish and Wildlife Service immediately. No work will resume until discussions with the US Fish and Wildlife Service have concluded.
- If tree clearing does not occur by March 14, 2023, the Park will notify the US Fish and Wildlife Service and resurvey the project action area in accordance with survey methods outlined above. Findings will be sent to the US Fish and Wildlife Service.
- If, in future surveys, trees are found to be occupied (or assumed occupied), the Park will notify the US Fish and Wildlife Service and request further guidance.
- Allow for ecological succession of the vegetation along the old 0.7-mile water tank access road.
- Implement sediment and erosion control measures consistent with the requirements and recommendations contained in the *North Carolina Erosion and Sediment Control Planning and Design Manual* (NCDEQ 2013). File a Notice of Intent with North Carolina Department of Environmental Quality to obtain coverage under the General National Pollutant Discharge Elimination System (NPDES) Permit for Discharges of Stormwater Associated with Construction Activities. Develop site-specific stormwater pollution prevention plan in accordance with Part II of the General Permit. The following requirements will be included with the stormwater pollution prevention plan:
  - Return disturbed areas to original grade or final grade as soon as practical and reseed with a Park-approved seed mix.
  - Specification of erosion control materials that are weed-free, pest-free, and do not have a risk of entangling wildlife. Specific materials prohibited in the Park include, but may not be limited to, the following: a) imported hay bales, straw bales, wood chips, or mulch. (Note that wood excelsior products and straw filter logs and blankets that are certified as fumigated and weed-free may be used). b) All forms of plastic/synthetic mesh netting, including those that are label as biodegradable or photodegradable.
- Temporarily stop work and immediately notify the Superintendent and Park Archeologist if cultural resources or archeological materials are inadvertently encountered during the project. Do not proceed with work until authorized by the Superintendent, in consultation with the Park Cultural Resources Program Manager or the Park Archeologist. Apply the discovery process defined by 36 CFR 800.13, the implementing regulations for the National Historic Preservation Act (16 United States Code [USC] 470. Evaluation of the discovery's significance will include consultation as appropriate with the state historic preservation office, the Advisory Council on Historic Preservation, and all Tribes associated with the Park. If human remains, funerary objects, sacred objects, or objects of cultural patrimony were discovered, the process defined by 43 CFR 10.4-5, the implementing regulations of the Native American Graves Protection and Repatriation Act (25 USC 3001), will be applied.
- Require the contractor to remove food trash daily or use a bear-proof dumpster.
- Implement the following measures to avoid introduction of new invasive plant species to the project area and minimize the spread of existing invasive plants:
  - Clean all earthmoving and seeding equipment prior to entering the Park.
  - Use only topsoil, rock, sand, gravel, seed mixes, or other natural materials from Park-approved sources.

## **OTHER ALTERNATIVES ANALYZED IN THE ENVIRONMENTAL ASSESSMENT**

In addition to the NPS selected alternative described above (Alternative 2), the EA analyzed the no action alternative, which was not selected because it does not meet the purpose and need. As described in Chapter 2 of the EA, NPS also considered rehabilitation of an old, 0.7-mile water tank access road, which is overgrown and unusable. This alternative was dismissed from further analysis because rehabilitation would have greater impact than construction of a new, shorter (about 0.25 miles) water tank access road. Construction of new septic systems using various treatment designs were considered for the campground. Conventional septic drain fields were dismissed because soils in the campground are not suitable for this type of system. Low pressure and drip dispersal systems were dismissed because they require electrical service, which is not available in the campground.

## **FINDING OF NO SIGNIFICANT IMPACT**

As described in the EA, which considered the degree of effects against the potentially affected environment, the selected alternative has the potential for adverse impacts on vegetation and three special status species (Carolina northern flying squirrel, Indiana bat, and northern long-eared bat). However, under the selected alternative, no significant adverse impacts were identified.

### **VEGETATION**

Under the selected alternative, tree clearing in high-elevation forest communities will be required for construction of the new water tank access road, rehabilitation of the water tank, and installation of two septic systems in the picnic area. The total area cleared will be about 1.1 acres, with about 0.6 acres being permanently converted to a gravel road and about 0.5 acres converted to open, maintained vegetation. High elevation forests are important refugia for many plant and animal species within the Park and southern Appalachians in general and are expected to increase in importance due to climate-driven changes in forest communities. Conversion of 1.1 acres from forest represents about a 3% loss of natural vegetation in the project area. All affected forest types are common in higher elevations of the Park and extend contiguously outside of the project area. Less than 0.001% of high-elevation forest in the Park would be affected under the selected alternative. Impacts on vegetation would not be significant based on the small acreage of tree clearing compared with the acreage of similar vegetation in the project area and Park.

### **SPECIAL STATUS SPECIES, CAROLINA NORTHERN FLYING SQUIRREL, INDIANA BAT, AND NORTHERN LONG-EARED BAT**

The selected alternative will require approximately 1.1 acres of tree clearing within potentially suitable habitat for the Carolina northern flying squirrel, Indiana bat, and northern long-eared bat. Following completion of the EA in July 2022, Park wildlife biologists conducted Carolina northern flying squirrel surveys in August 2022 of the areas proposed for clearing. No Carolina northern flying squirrels or evidence of their presence (dreys, shredded birch bark, etc.) were seen in the areas proposed for clearing. Injury or mortality to flying squirrels and bats during tree clearing is not expected based on the flying squirrel survey results and implementation of mitigation measures listed above, which include time of year restrictions to protect flying squirrels and bats. In consultation with the US Fish and Wildlife Service, NPS has determined that the selected alternative may affect, but is not likely to adversely affect Carolina northern flying squirrels, Indiana bats, and northern long-eared bats. Impacts to these special status species will not be significant because surveys indicated that trees proposed for clearing were not occupied by flying squirrels in August 2022, mitigation measures would avoid and minimize impacts on individual flying squirrels and bats, and the area of habitat loss would be minimal.

## AGENCY AND TRIBAL CONSULTATION

In accordance with section 7 of the Endangered Species Act, NPS prepared a biological evaluation and initiated informal consultation with US Fish and Wildlife Service on June 30, 2022. In an email dated August 9, 2022, US Fish and Wildlife Service provided input to NPS regarding proposed conservation (mitigation) measures, including Carolina northern flying squirrel survey methods. They also noted that potentially suitable habitat for Indiana and northern long-eared bats may be present in the project area and recommended that the time of year restrictions on tree clearing include a provision that any trees cleared in September would be felled when temperatures are above 50 degrees Fahrenheit to provide additional protection to bats.

Park Wildlife Branch biologists conducted surveys following recommended methods on August 17, 2022 and found no evidence of flying squirrels in the areas proposed for tree clearing. The Park provided survey results and updated conservation (mitigation) measures to US Fish and Wildlife Service in a letter dated August 30, 2022. On September 8, 2022, US Fish and Wildlife concurred that the selected alternative may affect but is not likely to adversely affect Carolina northern flying squirrels, Indiana bats, and northern long-eared bats.

In accordance with section 106 of the National Historic Preservation Act, NPS initiated consultation with the North Carolina State Historic Preservation Office (SHPO) and traditionally associated Native American Tribes and Nations (Cherokee Nation, Eastern Band of Cherokee Indians, Eastern Shawnee Tribe of Oklahoma, United Keetoowah Band of Cherokee Indians in Oklahoma, Muscogee Nation, and the Poarch Band of Creek Indians) on June 30, 2022. In a letter dated August 3, 2022, the North Carolina SHPO concurred that the selected alternative would not affect historic properties. In a letter dated July 12, 2022, the United Keetoowah Band of Cherokee Indians in Oklahoma concurred that the selected alternative would not affect historic properties.

## CONCLUSION

As described above, the selected alternative does not constitute an action meeting the criteria that normally requires preparation of an environmental impact statement. The selected alternative will not have a significant effect on the human environment in accordance with section 102(2)(c) of NEPA.

Based on the foregoing, it has been determined that an environmental impact statement is not required for this project and, thus, will not be prepared.

## REFERENCES

National Park Service (NPS)

2006 NPS *Management Policies 2006*.

North Carolina Department of Environmental Quality (NCDEQ)

2013 *North Carolina Erosion and Sediment Control Planning and Design Manual*.

<https://deq.nc.gov/media/14649/download>

# **ATTACHMENT A - PUBLIC COMMENT RESPONSE REPORT**

**US Department of the Interior**  
**National Park Service**  
Great Smoky Mountains National Park  
Tennessee

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## Great Smoky Mountains National Park

# Rehabilitation of Balsam Mountain Campground and Heintooga Picnic Area Water and Wastewater Systems Environmental Assessment

### *Public Comment Response Report*

September 2022



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## **INTRODUCTION**

Great Smoky Mountains National Park (the Park) initiated a 15-day public comment period for the *Rehabilitation of Balsam Mountain Campground and Heintooga Picnic Area Water and Wastewater Systems Environmental Assessment* (EA) on July 11, 2022, and the public was invited to provide feedback on the document. The public was encouraged to submit comments through the National Park Service's (NPS) Planning, Environment, and Public Comment (PEPC) website (<https://parkplanning.nps.gov/BalsamHeintooga2022EA>). Comments were also accepted by US mail. Thirteen pieces of correspondence were received during the comment period. This report describes how NPS considered the public comments and provides the responses to substantive comments.

## **PUBLIC OUTREACH DURING THE COMMENT PERIOD**

NPS issued a press release on July 11, 2022, announcing the availability of the EA. NPS also sent the press release to more than 200 interested individuals and organizations notifying them of the opportunity to comment. On that date, the NPS PEPC website <https://parkplanning.nps.gov/BalsamHeintooga2022EA> was opened for the public to submit comments. NPS reviewed the information obtained during this public comment period and prepared responses to substantive comments.

## **CONCERN RESPONSE REPORT**

Thirteen correspondences, which included two substantive comments, were received during the public review process for the EA. In general, commenters supported the proposed improvements and no commenters expressed objections. Table 1 provides summaries of substantive comments and NPS responses to comments received during the EA public review period.

**TABLE 1. SUMMARY OF SUBSTANTIVE PUBLIC COMMENTS**

**Concern ID 1:** One commentor recommended stripping and stockpiling topsoil and using this material to re-cover disturbed areas following construction to facilitate vigorous re-establishment of mostly native plants.

**NPS Response:** Most of the existing waterlines are PVC materials; therefore, it is proposed to pipe burst the existing lines to minimize ground disturbance. Using this technique, stripping topsoil will not be required. The new sewer drain fields in the picnic area would be installed on a slope, where it is not practical to strip and store the topsoil for re-use. Equipment operation required for stockpiling topsoil could result in additional disturbance on the sloped ground. Also, the individual trenches for the drain field would be narrow (24 inches wide); therefore, the disturbance in this area is minimal. To the extent possible, soils would be returned to the trench in the reverse order they were removed. The top layer of cover material would include topsoil but some comingling with subsoils is likely.

**Concern ID 2:** One commenter asked if horizontal directional drilling was considered as a construction technique for waterline replacement and whether the new waterlines require installation of air release valves.

**NPS Response:** Horizontal directional drilling for waterline installation is not proposed because it would be cost prohibitive. Pipe bursting, which is another construction technique that minimizes ground disturbance, will be considered during the design process for replacement of some of the waterlines. However, pipe bursting is not feasible where existing ductile iron pipes exist. Air release valves will be part of the new water system.

## ATTACHMENT B - FINDING OF NON-IMPAIRMENT

### NON-IMPAIRMENT DETERMINATION FOR REHABILITATION OF THE BASLAM MOUNTAIN CAMPGROUND AND HEINTOOGA PICNIC AREA WATER AND WASTEWATER SYSTEMS

#### THE PROHIBITION ON IMPAIRMENT OF PARK RESOURCES AND VALUES

National Park Service (NPS) *Management Policies 2006*, section 1.4.4, explains the prohibition on impairment of park resources and values:

While Congress has given NPS the management discretion to allow impacts within parks, that discretion is limited by the statutory requirement (generally enforceable by the federal courts) that the NPS must leave park resources and values unimpaired unless a particular law directly and specifically provides otherwise. This, the cornerstone of the Organic Act, establishes the primary responsibility of the NPS. It ensures that park resources and values will continue to exist in a condition that will allow the American people to have present and future opportunities for enjoyment of them.

#### WHAT IS IMPAIRMENT?

NPS *Management Policies 2006*, section 1.4.5, What Constitutes Impairment of Park Resources and Values, and section 1.4.6, What Constitutes Park Resources and Values, provide an explanation of impairment.

Impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values.

Section 1.4.5 of NPS *Management Policies 2006* states:

An impact to any park resource or value may, but does not necessarily, constitute impairment. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant NPS planning documents as being of significance.

An impact would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values and it cannot be further mitigated.

Per section 1.4.6 of NPS *Management Policies 2006*, park resources and values that may be impaired include:

- the park's scenery, natural and historic objects, and wildlife, and the processes and condition that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural

soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structure, and objects; museum collections; and native plants and animals;

- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- the park’s role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and
- any additional attributes encompassed by the specific values and purposes for which the park was established.

Impairment may result from NPS activities in managing the park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the park. Impairment may also result from sources or activities outside the park, but this would not be a violation of the Organic Act unless the NPS was in some way responsible for the action.

#### **HOW IS AN IMPAIRMENT DETERMINATION MADE?**

Section 1.4.7 of *NPS Management Policies 2006*, states, “[I]n making a determination of whether there would be an impairment, an NPS decision maker must use his or her professional judgment.” This means that the decision maker must consider any environmental assessments or environmental impact statements required by the National Environmental Policy Act of 1969; consultations required under section 106 of the National Historic Preservation Act; relevant scientific and scholarly studies; advice or insights offered by subject matter experts and others who have relevant knowledge or experience; and the results of civic engagement and public involvement activities relating to the decision.

*NPS Management Policies 2006*, further define “professional judgment” as “a decision or opinion that is shaped by study and analysis and full consideration of all the relevant facts, and that takes into account the decision maker’s education, training, and experience; advice or insights offered by subject matter experts and others who have relevant knowledge and experience; good science and scholarship; and, whenever appropriate, the results of civic engagement and public involvement activities in relation to the decision.”

#### **NON-IMPAIRMENT DETERMINATION FOR THE SELECTED ALTERNATIVE**

This determination on impairment has been prepared for the selected alternative (Alternative 2) described starting on page 3 of the *Rehabilitation of Balsam Mountain Campground and Heintooga Picnic Area Water and Wastewater Systems Environmental Assessment*, July 2022. A non-impairment determination is made for all resource impact topics analyzed in detail in the EA for the selected alternative. Each resource or value for which impairment is assessed and the reasons why impairment will not occur is described below.

#### **Non-Impairment Findings for Vegetation**

Designated as an International Biosphere Reserve and a World Heritage Site, the Park is significant for the preservation of biodiversity, including forest types that are representative of those that exist from North Georgia to Maine. When the Great Smoky Mountains became a national park unit in 1934, up to 80% of the landscape had been clearcut. Creation of the Park preserved remaining old growth forests and allowed forests to rebound dramatically through natural processes. The scenic beauty and biodiversity experienced throughout much of the Park by today’s visitors is attributable, in large part, to these forests. Healthy forests are fundamental to the Park’s purpose.

Under the selected alternative, tree clearing in high-elevation forest communities will be required for construction of the new water tank access road, rehabilitation of the water tank, and installation of two septic systems in the picnic area. The total area cleared will be about 1.1 acres, with about 0.6 acres being permanently converted to a gravel road and about 0.5 acres converted to open, maintained vegetation. Conversion of 1.1 acres from forest represents about a 3% loss of natural vegetation in the project area. All affected forest types are common in higher elevations of the Park and extend contiguously outside of the project area. Less than 0.001% of high-elevation forest in the Park will be affected under the selected alternative. The selected alternative will not impair vegetation based on the small acreage of tree clearing compared with the acreage of similar vegetation in the project area and Park. Current and future generations will have the opportunity to experience these resources.

### **Non-Impairment Findings for Special Status Species, Carolina Northern Flying Squirrel, Indiana Bat, and Northern Long-eared Bat**

As noted above, the Park is significant for the preservation of biodiversity and its unique flora and fauna, including the federally listed Carolina northern flying squirrel (*Glaucomys sabrinus coloratus*), Indiana bat (*Myotis sodalist*), and northern long-eared bat (*Myotis septentrionalis*). The selected alternative will require approximately 1.1 acres of tree clearing within potentially suitable habitat for these species. Injury or mortality to flying squirrels and bats during tree clearing is not expected based on implementation of mitigation measures, which include pre-construction surveys for flying squirrels and time of year restrictions to protect flying squirrels and bats. In consultation with the US Fish and Wildlife Service, NPS has determined that the selected alternative may affect, but is not likely to adversely affect Carolina northern flying squirrels, Indiana bats, and northern long-eared bats. The selected alternative will not impair these special status species because mitigation measures will avoid and minimize impacts on individuals and the area of habitat loss would be minimal.

### **Conclusion**

NPS has determined that implementation of the selected alternative will not constitute an impairment of the resources or values of the Park. This conclusion is based on consideration of the Park's purpose and significance; a thorough analysis of the environmental impacts described in the environmental assessment; comments provided by the public and other agencies; and the professional judgment of the decision maker guided by the direction of NPS *Management Policies 2006*.

### **REFERENCES**

National Park Service, US Department of the Interior (NPS)

- 2006 *Management Policies*. US Department of the Interior, National Park Service, Washington, DC. [https://www.nps.gov/policy/MP\\_2006.pdf](https://www.nps.gov/policy/MP_2006.pdf).

## ATTACHMENT C - TEXT CHANGE ERRATA

The following text changes have been made to the EA to correct information or add new information.

**Page 1 original text:** “The campground and picnic area consist of about 40 acres...”

**Changed to:** “The campground and picnic area consist of about 50 acres...”

**Page 6:** Deleted the first six bullets and inserted updated mitigation measure text to reflect completion of Carolina northern flying squirrel surveys in August 2022 and consultation with US Fish and Wildlife Service:

- “Implement the following measures to avoid and minimize potential impacts on special status species:
  - Tree and vegetation clearing will be conducted between September 1 and March 14 (i.e., outside the maternity season). For the month of September, trees will be felled when temperatures are above 50 degrees Fahrenheit. This measure will avoid impacts on Carolina northern flying squirrels (*Glaucomys sabrinus coloratus*), Indiana bats (*Myotis sodalists*), northern long-eared bat (*Myotis septentrionalis*), and nesting birds.
  - All trees over 4-inch diameter at breast height (dbh) proposed for cutting were inspected (the tree and the ground surface around the tree) by a Park Wildlife Branch biologist in August of 2022 to determine tree species and to identify dreys, possible cavity dens, or other evidence of Carolina northern flying squirrel use.
  - Trees with identified dreys, possible cavity dens, or other evidence of Carolina northern flying squirrels were further inspected by a Park Wildlife Branch biologist visually using:
    - A thermal imaging scope early in the morning to detect heat signatures that may indicate a potentially occupied drey or cavity.
    - Binoculars, and
    - A peeper scope (used on accessible cavities).
  - A tree was assumed occupied if a squirrel or evidence of denning in the form of shredded birch bark either in a cavity or in/ under a tree was observed. No occupied or assumed occupied trees were identified during surveys in August of 2022.
  - If evidence or sightings of Carolina northern flying squirrels are unexpectedly made during project implementation, the contractor will stop work and the Park will notify the US Fish and Wildlife Service immediately. No work will resume until discussions with the Service have concluded.
  - If tree clearing does not occur by March 14, 2023, the Park will notify the US Fish and Wildlife Service and resurvey the project action area in accordance with survey methods outlined above. Findings will be sent to the US Fish and Wildlife Service.
  - If, in future surveys, trees are found to be occupied (or assumed occupied), the Park will notify the US Fish and Wildlife Service and request further guidance.”

**Page 10:** Inserted text after second bullet:

- **“Special status species, Indiana bat (*Myotis sodalists*) and northern long-eared bat (*Myotis septentrionalis*):** Tree clearing would occur in areas that are potentially suitable summer roosting habitat for the Indiana bat and northern long-eared bat. Tree clearing may affect individual bats if this habitat is occupied.”

**Page 15 original text:** “Conversion of 1.1 acres from forest represents about a 2% loss of natural vegetation in the proposed project area...”

**Changed to:** “Conversion of 1.1 acres from forest represents about a 3% loss of natural vegetation in the proposed project area...”

**Page 16:** Inserted text after last paragraph:

“Park wildlife biologists conducted Carolina northern flying squirrel surveys in August 2022 of the areas proposed for clearing. No Carolina northern flying squirrels or evidence of their presence (dreys, shredded birch bark, etc.) were seen in the areas proposed for clearing.”

**Page 18 original text:** “...which represents about a 2% loss of suitable habitat in the proposed project area...”

**Changed to:** “ which represents about a 3% loss of suitable habitat in the proposed project area...”

**Page 20:** Inserted text:

## “SPECIAL STATUS SPECIES, INDIANA AND NORTHERN LONG-EARED BATS

### AFFECTED ENVIRONMENT

Suitable summer roosting habitat for Indiana and northern long-eared bats has typically been described as forested areas of the Park below 4,500 feet. The campground and picnic area are well above 4,500 feet at approximately 5,300 feet. Indiana and northern long-eared bats were not carried forward for detailed analysis in the July 2022 EA because suitable habitat was presumed absent based on elevation. As part of the Endangered Species Act informal section 7 consultation process for the proposed action, US Fish and Wildlife Service noted that suitable habitat for Indiana bat and northern long-eared bat may be present in the proposed project area. Therefore, forested habitats within the project area, as described in the Vegetation section of the EA, are considered potentially suitable summer roosting habitat for Indiana and northern long-eared bats for analysis purposes.

Indiana and northern long-eared bats hibernate in caves during the winter. Several known hibernacula for Indiana and northern long-eared bats exist in or adjacent to the Park, including one that is designated as critical habitat for the Indiana bat. However, none are within 25 miles of the project area.

### Reasonably Foreseeable Environmental Trends and Planned Actions

Declines in Indiana and northern long-eared bat populations have occurred range wide and within the Park. Currently, white-nose syndrome, a disease that affects hibernating bats and is caused by a fungus, is the primary threat to these species.

As noted in the Vegetation section above, most of the Park’s high-elevation forests and other forests that provide potential summer roosting habitat for bats are within areas that are managed as wilderness. Construction/maintenance impacts in these forests have been minimal for many years. Past, present, and other future planned actions would have a minimal adverse impact on these forests and summer habitat for Indiana and northern long-eared bats.

### ENVIRONMENTAL CONSEQUENCES

#### Alternative 1—No Action

Under the no action alternative, there would be no tree clearing and no change to existing vegetation. Therefore, no new impacts on Indiana or northern long-eared bats are anticipated. Other planned actions in the project area, including road repaving and continuation of forest management practices, would not result in tree removal or other adverse impacts to Indiana or northern long-eared bats and their habitat.



Therefore, cumulative impacts to Indiana or northern long-eared bats are not anticipated under Alternative 1.

### **Alternative 2—Proposed Action and NPS Preferred Alternative**

Within the 36 acres of potential summer bat roosting habitat in the project area, approximately 1.1 acres of tree clearing would be required for the proposed water and wastewater improvements. Potential impacts to Indiana and northern long-eared bats would be avoided by implementing mitigation measures, which were developed in consultation with US Fish and Wildlife Service and would include time of year restrictions on tree clearing.

NPS has completed informal consultation with the US Fish and Wildlife Service pursuant to section 7 of the Endangered Species Act. In a letter dated September 8, 2022, US Fish and Wildlife Service concurred with the Park's determination that the selected alternative may affect but is not likely to adversely affect Indiana and northern long-eared bats.

Alternative 2 would result in clearing of approximately 1.1 acres of potentially suitable summer roosting habitat for Indiana and northern long-eared bats. When the incremental impacts from Alternative 2 are combined with the impacts from past, present, and reasonably foreseeable actions, the overall cumulative impact on Indiana and northern long-eared would be adverse. The proposed tree clearing under Alternative 2 is not expected to have measurable effect on future trends in overall forest health or habitat quality based on the relatively small area affected.