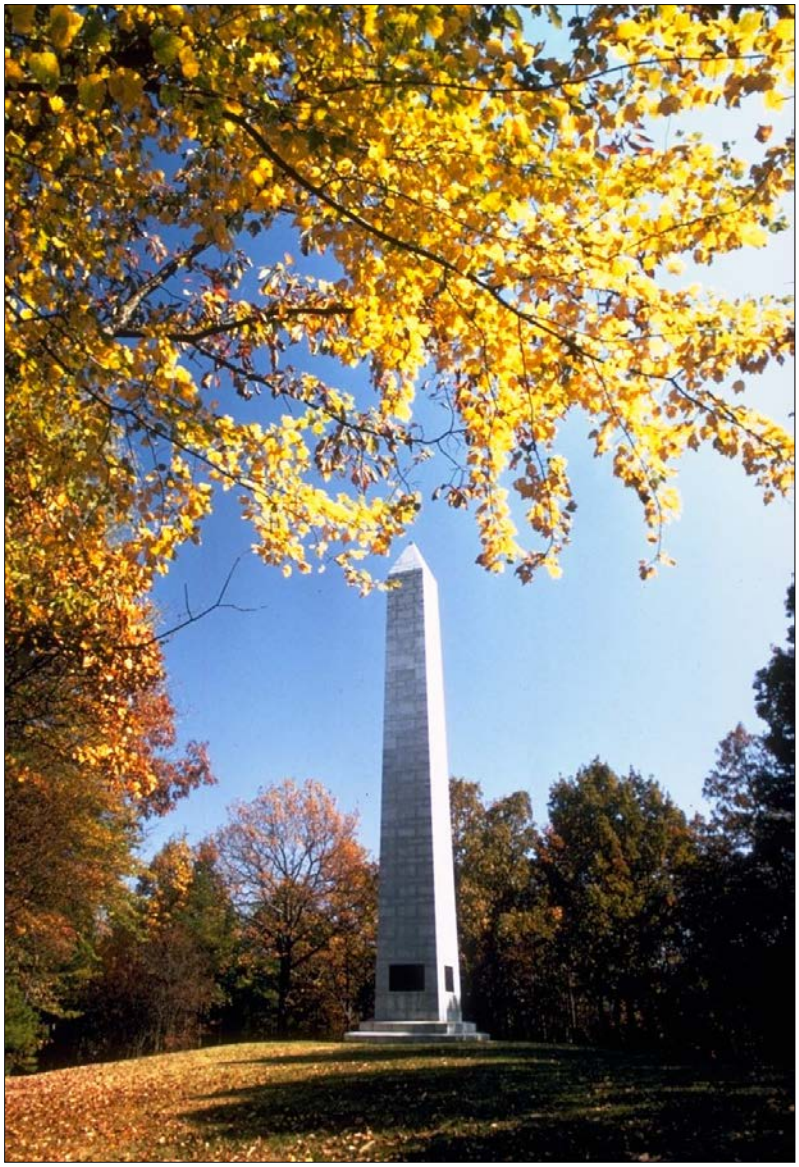
National Park Service
U.S. Department of the Interior

State of the Park Report

Kings Mountain National Military Park

South Carolina



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On the cover: U.S. Monument on Battleground Ridge in Kings Mountain National Military Park. NPS Photo.

Disclaimer. This State of the Park report summarizes the current condition of park resources, visitor experience, and park infrastructure as assessed by a combination of available factual information and the expert opinion and professional judgment of park staff and subject matter experts. The internet version of this report provides the associated workshop summary report and additional details and sources of information about the findings summarized in the report, including references, accounts on the origin and quality of the data, and the methods and analytic approaches used in data collection and assessments of condition. This report provides evaluations of status and trends based on interpretation by NPS scientists and managers of both quantitative and non-quantitative assessments and observations. Future condition ratings may differ from findings in this report as new data and knowledge become available. The park superintendent approved the publication of this report.

Executive Summary

The mission of the National Park Service (NPS) is to preserve unimpaired the natural and cultural resources and values of national parks for the enjoyment, education, and inspiration of this and future generations. NPS Management Policies (2006) state that "The Service will also strive to ensure that park resources and values are passed on to future generations in a condition that is as good as, or better than, the conditions that exist today." As part of the stewardship of national parks for the American people, the NPS has begun to develop State of the Park reports to assess the overall status and trends of each park's resources. The NPS will use this information to improve park priority setting and to synthesize and communicate complex park condition information to the public in a clear and simple way.

The purpose of this State of the Park report is to:

- Provide to visitors and the American public a snapshot of the status and trend in the condition of a park's priority resources and values;
- Summarize and communicate complex scientific, scholarly, and park operations factual information and expert opinion using non-technical language and a visual format;
- Highlight park stewardship activities and accomplishments to maintain or improve the State of the Park;
- Identify key issues and challenges facing the park to help inform park management planning.

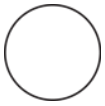
Kings Mountain National Military Park (KIMO) commemorates an important American victory on October 7, 1780 that changed the course of the Revolutionary War. The Patriot victory at Kings Mountain temporarily halted the advance of a British army northward into North Carolina and was the first in a string of British defeats that culminated in the October 1781 surrender of General Cornwallis at Yorktown, Virginia. The legislated purpose of Kings Mountain National Military Park is to "*commemorate the Battle of Kings Mountain, which was fought on October 7, 1780*."

Kings Mountain National Military Park is nationally significant for the following reasons:

- The park preserves the entire battlefield site in a natural setting evocative of the Carolina frontier of 1780 and commemorates one of the most important Patriot victories of the American Revolution and the first major patriot victory of the Southern Campaign. This battle was recognized by both sides as a turning point in the war.
- The battle at Kings Mountain was one of the few battles of the war where the American long rifle (and the associated tactics) was the primary weapon of the patriot troops and this fact was instrumental in the outcome of the battle.
- The park contains an example (the 1803 Howser House) of Pennsylvania German architecture that was a clear departure from local building traditions and reflected Howser's wealth and status in the community.
- The Chronicle Marker is the second oldest battlefield monument (1815) in the United States.
- The park contains some of the best-preserved remnants of Colonial-era roads and trails that are associated with the route marched by the troops in the Battle of Kings Mountain campaign and which are part of the Overmountain Victory National Historic Trail.
- The park contains mixed hardwood forest resembling the upper piedmont during the 18th century. The Kings Mountain National Military Park forest preserves several species of concern such as the Georgia Aster, which exists in only 2 counties in South Carolina, and the Northern Bobwhite. The size of the total area (15,000 acres) preserved in a continuous band of national and state parks, including Kings Mountain State Park in South Carolina and Crowders Mountain State Park in North Carolina, is important in preserving critical ecosystems.

The summary table, below, and the supporting information that follows, provides an overall assessment of the condition of priority resources and values at Kings Mountain National Military Park based on scientific and scholarly studies and expert opinion. The internet version of this report, available at http://www.nps.gov/stateoftheparks/kimo/, provides additional detail and sources of information about the resources summarized in this report, including references, accounts on the origin and quality of the data, and the methods and analytical approaches used in the assessments. Reference conditions that represent "healthy" ecosystem parameters, and regulatory standards (such as those related to air or water quality) provide the rationale to describe current resource status. In coming years, rapidly evolving information regarding climate change and associated effects will inform our goals for managing park resources, and may alter how we measure the trend in condition of park resources. Thus, reference conditions, regulatory standards, and/or our judgment about resource status or trend may evolve as the rate of climate change accelerates and we respond to novel conditions. In this context, the status and trends documented here provide a useful point-in-time baseline to inform our understanding of emerging change, as well as a synthesis to share as we build broader climate change response strategies with partners.

The Status and Trend symbols used in the summary table below and throughout this report are summarized in the following key. The background color represents the current condition status, the direction of the arrow summarizes the trend in condition, and the thickness of the outside line represents the degree of confidence in the assessment. In some cases, the arrow is omitted because data are not sufficient for calculating a trend (e.g., data from a one-time inventory or insufficient sample size).

Condition Status		Trend in Condition		Confidence in Assessment	
	Warrants Significant Concern		Condition is Improving		High
	Warrants Moderate Concern		Condition is Unchanging		Medium
	Resource is in Good Condition		Condition is Deteriorating		Low

State of the Park Summary Table

Priority Resource or Value	Condition Status/Trend	Rationale
Natural Resources		web ▸
Air Quality		Overall air quality warrants moderate concern. Air pollution is likely causing damage to monuments and other cultural resources. Battlefield views are sometimes obscured by pollution-caused haze. Average visual range is reduced from about 120 miles (without the effects of pollution) to about 60 miles because of pollution at the park. Ozone sometimes reaches levels that can make breathing difficult for sensitive groups and cause injury to ozone-sensitive plants. Some vegetation communities and surface water in the park may be susceptible to acidification and nutrient enrichment effects of excess sulfur and nitrogen deposition. Airborne toxics, including mercury, can deposit with rain and snow and accumulate in birds, mammals, amphibians, and fish, resulting in reduced foraging efficiency, survival, and reproductive success. Air quality indicator condition status is determined by using the latest 5-year data sets (NPS-ARD 2017).
Water Quantity and Quality		Water quality at the park is good based on evaluations of water temperature, pH, dissolved oxygen, specific conductance, and acid neutralizing capacity at stream monitoring sites. Despite occasional high concentrations, microorganisms do not pose a great threat to water quality at KIMO.
Plant Communities		Approximately 11% of the plant species documented at KIMO (58 of 508 species) were exotics including 21 that are considered aggressive invasive species within the Southeast, but this is the lowest of the 15 parks monitored by the NPS Cumberland Piedmont Inventory and Monitoring Network. The park actively controls exotic species and also possesses a very active prescribed fire program.

Priority Resource or Value	Condition Status/Trend	Rationale
Wildlife Communities		The park has a high diversity of herpetofauna, including 17 species of amphibians and 25 species of reptiles confirmed at the park. Aquatic resources at KIMO were described as "among the highest quality in the state" by one study. Park habitats support a relatively rich assemblage of native breeding forest birds, including species specializing in mature, interior forest habitats.
Dark Night Sky		The modeled Anthropogenic Light Ratio (ALR), a measure of light pollution, is 4.09, which falls within the poor condition for non-urban parks. Although KIMO lies approximately 50 km from the center of the Charlotte metropolitan area (population 2.3 million), anthropogenic light from the area affects the park's photic environment. Population growth over the past 5 years has been high for the Charlotte-Concord-Gastonia metropolitan area (>30%), resulting in a negative trend (U.S. Census Bureau 2013).
Acoustic Environment		All sound resources, whether audible or not, are referred to as the *acoustic environment* of a park. The quality of the acoustic environment affects park resources including wildlife, cultural resources, the visitor experience, and landscapes. The condition of the acoustic environment is assessed by determining how much man-made noise sources contribute to the acoustic environment through the use of a national noise pollution model. This measure is referred to as the *mean acoustic impact level*. Impact is measured in A-weighted decibels (dBA). The mean acoustic impact level at the park is 1.1 dBA, meaning that the acoustic environment is in good condition. Overall, long-term projected increases in ground-based and aircraft traffic indicate a deteriorating trend in the quality of acoustic resources at this location.
Cultural Resources		web
Archeological Resources		The 26 known archeological sites and 9 subsites at the park are all in good condition based on 2011 assessments. Less than 4% of the park has been surveyed systematically for archeological resources.
Cultural Anthropology		An Ethnographic Overview and Assessment study will provide information on the lives of people and communities with ties to the park historically and presently. The report is under contract via a Cooperative Ecosystem Studies Unit (CESU) partnership agreement with Dr. William Schumann (PI) and his Appalachian State team as of August 2014.
Cultural Landscapes		All of the cultural landscapes in the park are listed in the National Register and have complete and certified Cultural Landscapes Inventories (CLIs). CLIs were completed in 2010 for the park, Goforth-Morris Norman Farmstead, and Howser Farmstead landscapes, and a Cultural Landscape Report (CLR) is currently being written for the Howser House. A CLR for the battlefield was completed in 2003.
Historic Structures		All of the park's historic structures are listed on the List of Classified Structures (LCS) and have adequate National Register documentation, although that documentation is becoming outdated. 41% of the structures listed on the LCS are in "good" condition. Many of the structures listed in "fair" condition have been impacted by gradual deterioration of original fabric, with many of them dating to the mid-nineteenth century. Historic Structure Reports (HSRs) are needed for the Mary Morris House and Shed, Superintendent's Residence, and Administration Building, and the HSR for the Howser House written in 1974 needs to be amended.

Priority Resource or Value	Condition Status/Trend	Rationale
History		All of the historic properties in the park have adequate National Register documentation, but the most recent documentation is from 1995. The appropriate level of research preceding management decisions is not always possible because of increasing administrative workload and collateral duties for park staff. A Determination of Eligibility is needed for the park's Mission 66-era development. Importantly, KIMO is now managed in conjunction with Cowpens National Battlefield and Ninety Six National Historic Site, as well as the Overmountain Victory National Historic Trail (OVVI). Future historical research and documentation could be expanded to address the broader themes of the Southern Campaign of the American Revolution rather than for an individual park. A Historic Resource Study that covers the historic resources of those four units is recommended.
Museum Collections		The scope of the park's collections is understood. A complete archival survey is needed for the park. The park has a dire need for professional staff and funding to support the retention and management of park museum collections, archives, and records management.
Visitor Experience		web ▸
Number of Visitors		The number of visitors to KIMO in 2015 was estimated at 257,077, which was increased from the previous year (251,093) and below the average for the 10-year period of 2005–2014 (263,486). Park visitation has been relatively stable with 250,000 to 278,000 visitors annually for the last 10 years.
Visitor Satisfaction		Based on the standardized visitor satisfaction survey that is conducted each year, the percent of visitors who said they were satisfied with their visit to KIMO in 2010 through 2013 was 99% each year, and 100% in 2014.
Interpretive and Education Programs – Talks, Tours, and Special Events		The number and types of educational programs and ranger-led interpretive programs offered by the park has greatly increased over the past five years. The park hosts an annual Junior Ranger Day event that is very popular with visitors. Special events that are popular with visitors include the annual Anniversary Commemoration on October 7th, Military History Through the Ages, living history encampments and programs, Colonial Trades and Crafts, and Colonial Children's Day.
Interpretive Media – Brochures, Exhibits, Signs, and Website		Wayside signs throughout the park were upgraded in 2002 and Visitor Center exhibits were updated in 2005, and these exhibits are in good condition overall. The park orientation film is 15 years old and is in need of replacement, although the content is accurate. The content and currency of the park website needs improvement, but the park does not have enough staff to maintain and improve the website.
Scenic Resources		Development in Cherokee County (SC) is significantly impacting viewsheds inside the park from Browns Mountain and Joes Mountain. Including two peak power plants that have been built in the past 10–12 years.
Accessibility		The surface of the Battlefield Trail is paved, but it can be difficult to traverse for some visitors because of the steepness of grade or cross-slope issues in some sections. All of the museum exhibits have audio description and captions and the park film has open captioning and audio description.

Priority Resource or Value	Condition Status/Trend	Rationale
Safety		The safety of visitors is a park priority. The park works to quickly identify and mitigate potential hazards, and the number of accidents is very low. The park provides safety training to all employees, has an active Safety Committee, and has developed a Safety Incentive Program.
Partnerships		The park works with a variety of partners and continues to seek opportunities to develop new partnerships.
Park Infrastructure		web ▸
Overall Facility Condition Index		The overall Facility Condition Index for 78 assets for 2014 is 0.068, which is Good based on industry and NPS standards.

Summary of Stewardship Activities and Key Accomplishments to Maintain or Improve Priority Resource Condition

Examples of stewardship activities and accomplishments by park staff and partners to maintain or improve the condition of priority park resources and values for this and future generations are listed in Chapter 3 of this report. Selected activities include:

Natural Resources

- The park has an active prescribed fire program to help restore the natural and cultural landscape as it was at the time of the battle, as well as to protect resources and promote public safety.
- The park is in the final stages of developing a General Management Plan that will become the blueprint for the future management of the park.
- Completion of basic natural resource inventories and initiation of long-term monitoring of a subset of the park's natural resources by the NPS Cumberland Piedmont Inventory and Monitoring Network (CUPN).
- Control of invasive plants is ongoing, using chemical and mechanical treatments and prescribed fire.

Cultural Resources

- A systematic archeological survey of the battlefield was completed in the early 2000s.
- Cultural Landscape Report in progress for the Howser Farmstead and associated lands.
- Completed an oral history study of the Civilian Conservation Corps (CCC) era during which many of the park structures were constructed. The oral history study interviewed living CCC workers and family members of other CCC workers.
- Efforts ongoing to preserve and restore the Colonial Road, which was used by Patriot and Loyalist forces.

Visitor Experience

- The Colonial Adventure Camps program allows underserved urban school children an opportunity to visit and learn about the park and the historical events that occurred here.
- Ongoing partnership with local Boy Scout troops has involved them in projects such as planting native species, trail maintenance, rehabilitation of trail bridges, and landscape restoration.
- Park staff has increased the number of programs provided to local schools.

Park Infrastructure

- A new water-delivery system has been installed in the park.
- Fire suppression and sprinkler systems have been recently installed in all key buildings with the exception of housing.
- Interpretive media in the Visitor Center have been upgraded to meet national accessibility standards for hearing and visual impairment.
- The accessibility project has been completed for the amphitheater.

Key Issues and Challenges for Consideration in Management Planning

Kings Mountain National Military Park preserves a critical Revolutionary War battlefield site which sits in an area of the piedmont Carolinas that is developing at a very fast pace despite the recent downturn in the economy. The visitor experience and understanding of the history and significance of the site is fundamentally tied to the park's natural and cultural resources as well as the park's infrastructure, all of which are summarized in this report and are managed in an integrated, holistic way. With our adjacent state park partners Kings Mountain State Park (South Carolina) and the Crowders Mountain State Park (North Carolina), we are considered an "Island of Hope" among preservationist and recreationist alike. The continuous band of national and state parks supports several species of concern and is important in preserving critical ecosystems in an area of rapid development. The park's prescribed fire program has made a tremendous impact on the restoration of the cultural landscape within the park, has improved habitat for numerous fire adaptive species of concern, and has removed endless hazardous fuels left by pine bark beetle infestations of the 1980s and 1990s.

At the forefront of all cultural resources at Kings Mountain National Military Park is the battlefield landscape and other resources associated with the battle, including the museum collection. The park museum collection has grown significantly over the past 20 years and has outgrown the museum storage space. The park has identified this need in planning documents and hopes to soon resolve this critical need through a line item construction project for an addition to the visitor center, which would house not only the park's museum collection and library collection but also provide a learning center for visiting school groups and work area for the interpretive staff.

The small size of the park staff leads to reliance upon others from the NPS, other agencies of the federal government, and partners within the community to assist in accomplishing the park's mission. Each staff member must wear multiple hats, and the park has become increasing reliant on support from specialists in the regional office, who are in turn being asked to provide support for an increasing number of parks and management issues throughout the region. Fiscal constraints, changing visitor demographics, and a need to diversify our workforce are all ushering in complex challenges for parks as the NPS enters its second century.

Kings Mountain National Military Park is fortunate to have several partnerships that have proved to be beneficial since the inception of the park. Our ties to the Daughters of the American Revolution (DAR), the Sons of the American Revolution, and other patriotic organizations have never been stronger. Annually these organizations lend support and provide yet another avenue for public outreach. Our Brigade of Friends organization continues to provide manpower and support for local small scale projects, but with fiscal cutbacks the park will look to the Friends group to provide seed money for grants and other funding opportunities especially in the area of visitor services and land protection.

Chapter 1. Introduction

The purpose of this State of the Park report for Kings Mountain National Military Park (KIMO) is to assess the overall condition of the park's priority resources and values, communicate complex park condition information to visitors and the American public in a clear and simple way, and to inform visitors and other stakeholders about stewardship actions being taken by park staff to maintain or improve the condition of priority park resources for future generations. The State of the Park report uses a standardized approach to focus attention on the priority resources and values of the park based on the park's purpose and significance, as described in the park's Foundation Document or General Management Plan. The report:

- Provides to visitors and the American public a snapshot of the status and trend in the condition of a park's priority resources and values.
- Summarizes and communicates complex scientific, scholarly, and park operations factual information and expert opinion using non-technical language and a visual format.
- Highlights park stewardship activities and accomplishments to maintain or improve the state of the park.
- Identifies key issues and challenges facing the park to inform park management planning.

The process of identifying priority park resources by park staff and partners, tracking their condition, organizing and synthesizing data and information, and communicating the results will be closely coordinated with the park planning process, including natural and cultural resource condition assessments and Resource Stewardship Strategy development. The term "priority resources" is used to identify the fundamental and other important resources and values for the park, based on a park's purpose and significance within the National Park System, as documented in the park's foundation document and other planning documents. This report summarizes and communicates the overall condition of priority park resources and values based on the available scientific and scholarly information and expert opinion, irrespective of the ability of the park superintendent or the National Park Service to influence it.

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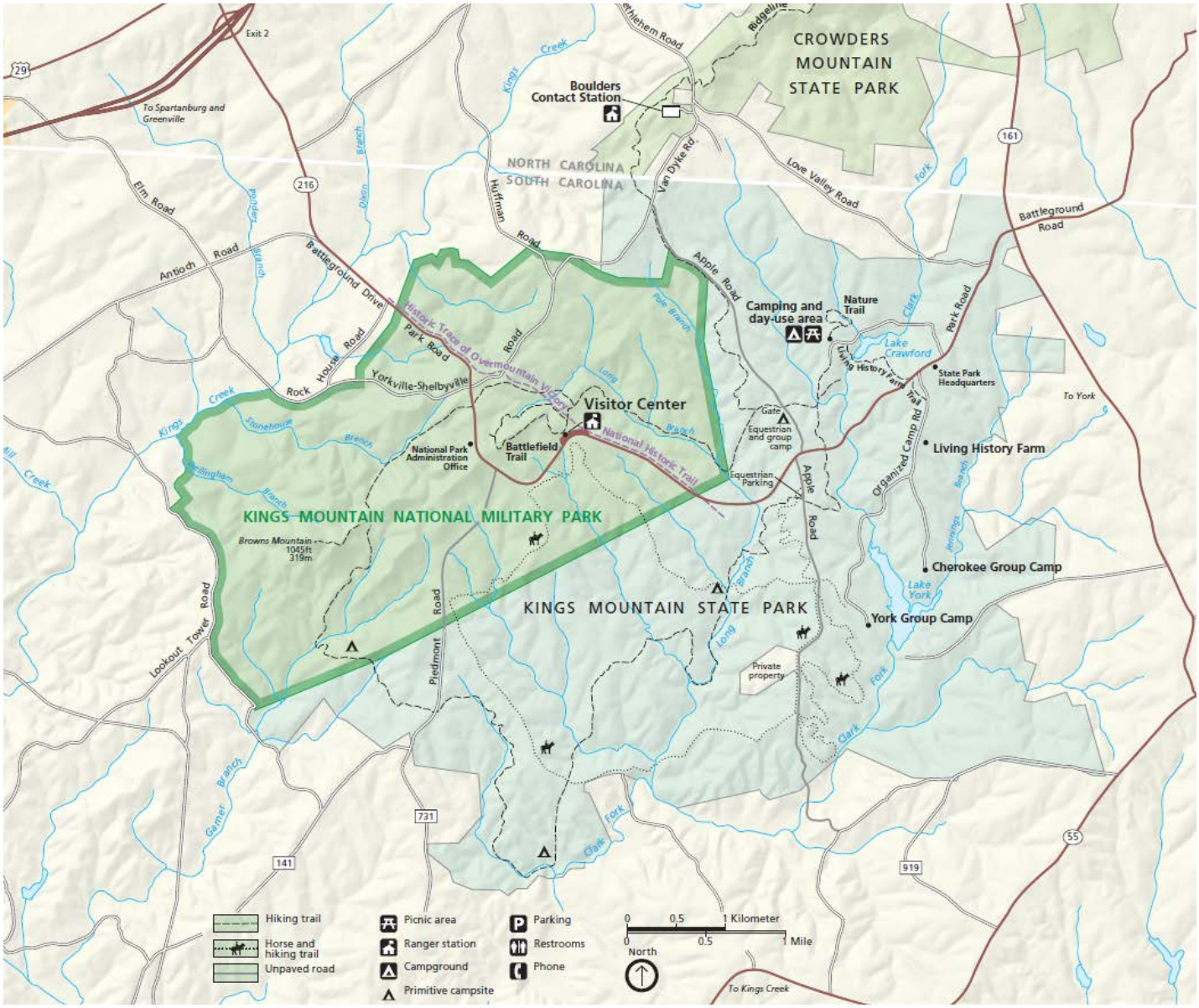
The legislated purpose of Kings Mountain National Military Park is to commemorate the Battle of Kings Mountain, which was fought on October 7, 1780.

Kings Mountain National Military Park is nationally significant for the following reasons:

- The park preserves the entire battlefield site in a natural setting evocative of the Carolina frontier of 1780 and commemorates one of the most important Patriot victories of the American Revolution and the first major patriot victory of the Southern Campaign. This battle was recognized by both sides as a turning point in the war.
- The battle at Kings Mountain was one of the few battles of the war where the American long rifle (and the associated tactics) was the primary weapon of the patriot troops and this fact was instrumental in the outcome of the battle.
- The park contains an example (the 1803 Howser House) of Pennsylvania German architecture that was a clear departure from local building traditions and reflected Howser's wealth and status in the community.
- The Chronicle Marker is the second oldest battlefield monument (1815) in the United States.
- The park contains some of the best-preserved remnants of Colonial-era roads and trails that are associated with the route marched by the troops in the Battle of Kings Mountain campaign and which are part of the Overmountain Victory National Historic Trail.
- The park contains mixed hardwood forest resembling the upper piedmont during the 18th century. The Kings Mountain National Military Park forest preserves several species of concern such as the Georgia Aster, which exists in only 2 counties in South Carolina, and the Northern Bobwhite. The size of the total area (15,000 acres) preserved in a continuous band of national and state parks, including Kings Mountain State Park in South Carolina and Crowders Mountain State Park in North Carolina, is important in preserving critical ecosystems.



Map of the Park

Chapter 2. State of the Park

The State of the Park is summarized below for four categories—Natural Resources, Cultural Resources, Visitor Experience, and Park Infrastructure—based on a synthesis of the park's monitoring, evaluation, management, information programs, and expert opinion. Brief resource summaries are provided below for a selection of the priority resources and values of the park. Clicking on the web ▸ symbol found in the tables and resource briefs below will take you to the internet site that contains content associated with specific topics in the report.

The scientific and scholarly reports, publications, datasets, methodologies, and other information that were used as the basis for the assessments of resource condition are referenced and linked throughout the report and through the internet version of this report that is linked to the NPS IRMA data system (Integrated Resource Management Applications). The internet version of each report, and the associated workshop summary report available from the internet site, provide additional detail and sources of information about the findings summarized in the report, including references, accounts on the origin and quality of the data, and the methods and analytical approaches used in data collection and the assessments of condition. Resource condition assessments reported in this State of the Park report involve expert opinion and the professional judgment of park staff and subject matter experts involved in developing the report. This expert opinion and professional judgment derive from the in-depth knowledge and expertise of park and regional staff gained from their being involved in the day-to-day practice of all aspects of park stewardship and from the professional experience of the participating subject matter experts. This expert opinion and professional judgment utilized available factual information for the analyses and conclusions presented in this report. This State of the Park report was developed in a park-convened workshop.

The status and trends documented in Chapter 2 provide a useful point-in-time baseline measured against reference conditions that represent "healthy" ecosystem parameters, or regulatory standards (such as those related to air or water quality). We also note that climate change adaptation requires us to continue to learn from the past, but attempting to manage for conditions based on our understanding of the historical "natural" range of variation will be increasingly futile in many locations. Thus, these reference conditions, and/or our judgment about resource condition or trend may evolve as the rate of climate change accelerates and we respond to novel conditions. Our management must be even more "forward looking," to anticipate plausible but unprecedented conditions, also recognizing there will be surprises. In this context, we will incorporate climate considerations in our decision processes and management planning as we consider adaptation options that may deviate from traditional practices.

2.1. Natural Resources

Air Quality

web ▸

Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Visibility	Haze Index		Visibility warrants moderate concern. This condition is based on NPS Air Resource Division benchmarks and the 2011–2015 estimated visibility on mid-range days of 7.2 deciviews (dv) above estimated natural conditions of 7.2 dv. Average natural visual range is reduced from about 120 miles (without the effects of pollution) to about 60 miles because of pollution at the park. The visual range is reduced further on high pollution days. The degree of confidence is medium because estimates are based on interpolated data from more distant visibility monitors (NPS-ARD 2017). Visibility is generally a problem during summer months.

Air Quality (continued)

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Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Ozone	Human Health: Annual 4th-highest 8-hour concentration		Human health risk from ground-level ozone warrants moderate concern. This condition is based on NPS Air Resource Division benchmarks and the 2011–2015 estimated ozone of 67.2 parts per billion (ppb). Ozone is a respiratory irritant, causing coughing, sinus inflammation, chest pains, scratchy throat, lung damage, and reduced immune system functions. Children, the elderly, people with existing health problems, and active adults are most vulnerable. The degree of confidence is medium because estimates are based on interpolated data from more distant ozone monitors (NPS-ARD 2017).
	Vegetation Health: 3-month maximum 12-hour W126		Vegetation health risk from ground-level ozone warrants moderate concern. This condition is based on NPS Air Resource Division benchmarks and the 2011–2015 estimated W126 metric of 7.2 parts per million-hours (ppm-hrs) (NPS-ARD 2017). The W126 metric is biologically-relevant and focuses on the plant response to ozone exposure during daylight hours over the growing season. A risk assessment concluded that plants in KIMO are at high risk for ozone damage (Kohut 2004; Kohut 2007). There are at least 33 ozone-sensitive plants in the park including *Liriodendron tulipifera* (tulip poplar) and *Pinus virginiana* (Virginia pine) (NPSpecies 2017). The degree of confidence is medium because estimates are based on interpolated data from more distant ozone monitors.
Deposition	Sulfur Wet Deposition		Wet sulfur deposition warrants moderate concern. This condition is based on NPS Air Resource Division benchmarks of 2.1 kilograms per hectare per year (kg/ha/yr) (NPS-ARD 2017). Ecosystems at KIMO were rated as having low sensitivity to acidification effects relative to all Inventory & Monitoring parks (Sullivan et al. 2011a, Sullivan et al. 2011b). Acidification effects can include changes in water and soil chemistry that impact ecosystem health. Acidification can also cause damage to stone, painted, and metal monuments and other cultural resources. Sulfur dioxide from combustion is the main contributor among gaseous pollutants to deterioration of stone and some metals (Charola 1998). The degree of confidence in the condition is medium because estimates are based on interpolated data from more distant deposition monitors.

Air Quality (continued)

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Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Deposition (continued)	Nitrogen Wet Deposition		Wet nitrogen deposition warrants significant concern. This condition is based on NPS Air Resource Division benchmarks and the 2011–2015 estimated wet nitrogen deposition of 3.5 kilograms per hectare per year (kg/ha/yr) (NPS-ARD 2017). Ecosystems at KIMO were rated as having very low sensitivity to nutrient-enrichment effects relative to all Inventory & Monitoring parks (Sullivan et al. 2011c, Sullivan et al. 2011d). However, the estimated total nitrogen deposition (wet plus dry) is above the minimum ecosystem critical loads for some park vegetation communities, suggesting that lichen and forest vegetation are at risk for harmful effects (NADP-TDEP 2014; Pardo et al. 2011). The degree of confidence in this condition is medium because estimates are based on interpolated data from more distant deposition monitors.
	Mercury/Toxics Deposition		Mercury/toxics deposition warrants moderate concern. Given that landscape factors influence the uptake of mercury in the ecosystem, the status is based on estimated wet mercury deposition and predicted levels of methylmercury in surface waters. The 2013–2015 wet mercury deposition was high at the park, ranging from 9.1 to 9.3 micrograms per square meter per year (NPS-ARD 2017) and the predicted methylmercury concentration in park surface waters is low, estimated to be 0.04 nanogram per liter (USGS 2015). Values for both wet deposition and predicted methylmercury were compared to NPS Air Resource Division benchmarks to determine the moderate concern status. The degree of confidence in the mercury/toxics deposition status is low because wet deposition and methylmercury concentration estimates are based on interpolated or modeled data, since there are no park-specific studies examining contaminant levels in taxa from park ecosystems. High mercury concentrations in birds, mammals, amphibians, and fish can result in reduced foraging efficiency, survival, and reproductive success. Elevated levels of mercury in humans can affect the brain, kidneys, and reproductive function. Wet and dry deposition can lead to mercury loadings in water bodies, where mercury may be converted to a bioavailable toxic form of mercury, methylmercury, and bioaccumulate through the food chain. Wetlands, especially those rich in organic matter, are important sites for methlymercury production. Elevated levels of mercury in biota, including insects and song birds, have been detected at the nearby Great Smoky Mountains National Park (Simons and Keller 2009, Buchwalter et al. 2009, Keller et al. 2014, Nelson and Flanagan Pritz 2014).

Water Quantity and Quality

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Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Water Quantity	Flow rates		Discharge, or flow, is monitored at each of the monitoring stations. Kings Creek showed significantly higher discharge levels than other park streams. Because all streams originate in the park except Kings Creek, rainfall events are the greatest source of flow variability at KIMO (Meiman 2015).
Water Chemistry	Water temperature, pH, Dissolved Oxygen, Specific conductance, Acid Neutralizing Capacity		All Kings Mountain National Military Park waters are considered "South Carolina Outstanding Resource Waters," which hold the highest standards under the Clean Water Act as promulgated by the state. Generally, the water quality of KIMO is in good condition. Sundin et al. (2012) found no evidence of substandard water quality conditions occurring on a chronic or acute basis and evaluated water quality at KIMO as good. Water quality at the park is monitored by the NPS at six sites: Kings Creek, Upper Dellingham Branch, Garner Branch, Stonehouse Creek, Long Branch, and Cabin Creek. In 2015, low pH was observed at Upper Dellingham Branch and Stonehouse Creek. This low pH actually reflects the natural conditions of watersheds on Kings Mountain (Meiman 2015). Water quality measurements for all monitoring stations were within the "unimpaired" range, with only a few errant observations.
Microorganisms	*Escherichia coli* bacteria concentrations		Park waters may exceed the standard for *E. coli* during high flow events, but this is typically restricted to Kings Creek, which is recharged by 50 square kilometers (km2) of rural lands beyond park boundaries (Meiman 2015). In general, microorganisms do not pose a great threat to water quality at KIMO.

Plant Communities

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Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Invasive Species	Occurrence of invasive plant species		Approximately 11% of the plant species documented at KIMO (58 of 508 species) were exotics including 21 that are considered aggressive invasive species in the Southeast (White and Govus 2005). Based on recent monitoring data the occurrence and prevalence of exotic species within forest monitoring plots, KIMO is among the lowest within the NPS Cumberland Piedmont Inventory and Monitoring Network (CUPN 2013). The park actively controls exotic species and also possesses a very active prescribed fire program.
Forested Communities	Snag Abundance, Stand Structural Class, Species Diversity, Native Tree Seedling Regeneration		The park's forests are primarily composed of acidic, second growth oak forests on steep ground and successional forests on old agricultural land. Many of the forested stands are young and currently recovering from past disturbances such as cultivation and logging (White and Govus 2005). Some key measures of forest structure, such as a limited number of medium to large snags, is of some concern. In addition there is some concern about the limited number of oaks and hickories in the sapling layer (CUPN 2013). There is uncertainty surrounding the number and adequacy of snags in the park as reflected in the confidence in the assessment.
Woodland and Prairie Communities	Acreage restored; Indicator plants and wildlife restored		The park would like to restore suitable areas to open woodland and prairie communities. The most globally rare community in the park is the Piedmont Chestnut Oak – Blackjack Oak Woodland (White and Govus 2005). Rare plant species are found in these open areas, such as Eastern Turkeybeard (*Xerophyllum asphodeloides*), Georgia Aster (*Symphyotrichum georgianum*), and Sun Facing Coneflower (*Rudbeckia heliopsidis*). The park is already maintaining openness through an active prescribed fire program. More areas could be restored, providing habitat for native grassland bird species, such as bobwhite quail, loggerhead shrike, field sparrow, and prairie warbler.
Wetlands	Abundance, Groundwater Discharge, Carbon/nutrient export		Of the 74 wetlands identified by Roberts et al. (2006), 54 ranked high for functioning as groundwater discharge to streams, and 57 were ranked medium-to-high for carbon/nutrient export.

Resource Brief: Nonnative Invasive Plant Management

Nonnative invasive species are considered a major threat to native biodiversity in the southeastern U.S. It is important the park continue active suppression of nonnative invasive species in order to preserve the native flora of the Piedmont. Success with the Nonnative Invasive Management Program at KIMO began in the mid-1980s. Since then, with assistance from the NPS Southeast Region Exotic Management Team, KIMO has been successful in continuously managing nonnative invasive species. Between 2010 and 2013, over 3,887 acres of the park have been treated for nonnative invasive species using both chemical and mechanical eradication methods.

Inventory studies at KIMO in 2005 identified 21 invasive exotic plant species out of the 508 plant species found within the park. Each nonnative invasive plant species is considered an aggressive invasive species that pose severe/significant threats to the native flora of the Southeast. These species include, but are not limited to, Chinese privet (*Ligustrum sinensis*), Tree-of-Heaven (*Ailanthus altissima*), Japanese honeysuckle (*Lonicera japonica*), Chinese lespedeza (*Lespedeza cuneata*), Japanese stiltgrass (*Microstegium vimineum*), and Johnson Grass (*Sorghum halpepense*).

Pictures below represent a before and after view of treatment of Chinese lespedeza (*Lespedeza cuneata*) and Japanese Stiltgrass (*Microstegium vimineum*) on Yorkville/Shelbyville Rd.

***Left*: Before herbicidal treatment. *Right*: After herbicidal treatment. NPS Photos.**

Wildlife Communities

web

Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Amphibians and Reptiles	Species richness and diversity		The park has a high diversity of herpetofauna, including 17 species of amphibians and 25 species of reptiles confirmed in the park (Thomas 2002, Reed and Gibbons 2005). This species richness is comparable to results obtained from other protected forests in the South Carolina piedmont (Sundin et al. 2012). Several additional species could reasonably be expected to occur in the park, many of which, however, are highly cryptic and difficult to detect in short-term inventory efforts (Moore 2009). Of the five Piedmont parks surveyed, Reed and Gibbons (2005) believed KIMO was the most likely to support species sensitive to habitat fragmentation. Roberts et al. (2005) documented numerous wetlands within KIMO, several of which were utilized by amphibians.
Fish	North Carolina Fish Index of Biologic Integrity		Sundin et al. (2012) used an index of biotic integrity (IBI) to assess the condition of fish assemblages and habitat at KIMO using samples for Kings Creek and Long Branch collected by Scott (2006), and found that samples scored high within the Good category. Scott (2006) concluded that the overall composition of the fish fauna suggested that aquatic resources at KIMO were "among the highest quality in the state." However, a resurvey of fish streams in 2011 following a prolonged period of record-setting temperatures and regional drought found that overall fish abundance, species richness, and species diversity had declined since 2006, with common species more common and rare species more rare based on comparisons of the 2006 vs. 2011 data (English et al. 2012).
Birds	Species richness Bird Community Index		Recent inventory efforts concluded between 85% and 95% of species expected to occur in the park were documented (Rogers 2005), though Rogers speculated about relatively low numbers of some "common" species. Sundin et al. (2012), calculated a bird community index (BCI) based on the 2005 data and concluded the park, "contains a relatively rich assemblage of native breeding forest birds, including species specializing in mature, interior forest habitats." The BCI indicated undisturbed habitat.
Mammals	Species richness and diversity		Fields (2005) reported 21 terrestrial mammal species in KIMO. Loeb (2007) detected four species of bats, bringing the total number of reported mammal species to 25 from these two surveys. Together, these inventories represented about 66% of mammal species expected to occur in the park. Fields (2007) postulated that abundance of mammals seemed low. Loeb (2007) also observed low bat captures and overall activity at KIMO.

Resource Brief: Habitat Restoration for Bobwhite Quail and Early Successional Wildlife Species

The Northern bobwhite quail (*Colinus virginianus*) is the most widely distributed and intensively studied of all North American quail. Bobwhites also serve as indicator species for an entire suite of early successional stage wildlife species. In recent decades, however, the abundance of Bobwhites have greatly depleted throughout its native range. Much of the Bobwhite population decline can be attributed to habitat loss due to changes in land use and cleaner farm practices. Additionally, there has been an abundance of bobwhite habitat loss as a result of abandoned farmland reverting to forests, as is the case with KIMO's landscape.

A main focus of KIMO's resource managers is to restore the park's landscape to pre-Revolutionary War era. This management practice greatly coincides with Bobwhite quail habitat restoration efforts. Each practice includes restoring the savanna-oak habitat that is comprised of warm season grass and forb communities. In order to achieve restoration goals, resource managers implement a yearly rotation of prescribed burns, and mechanical and herbicidal treatments. It has been observed that these three management practices are complementary to one another and can rear successful re-introduction rates of Bobwhite quail and their habitat.

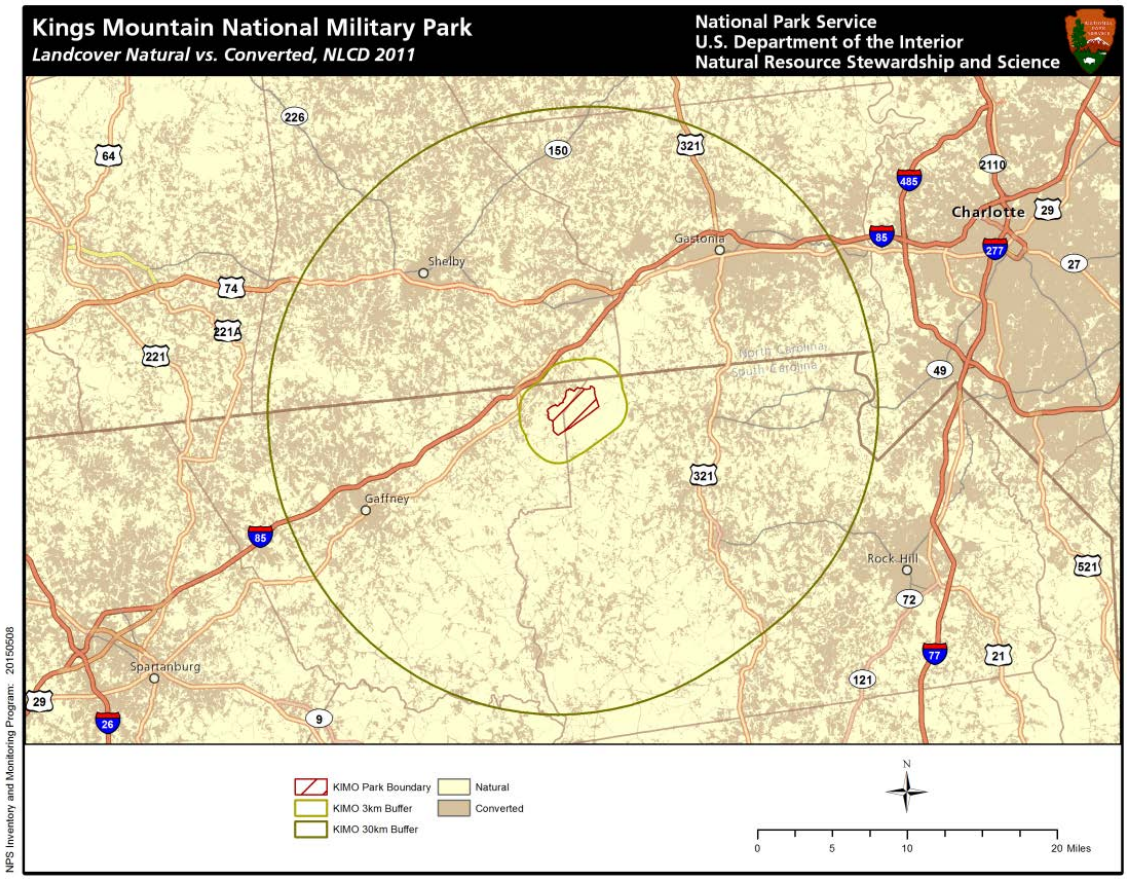
Restored Oak-Savanna habitats after using the 3 main management practices (left photograph is before treatment; right photograph is after treatment). NPS Photos.

Resource Brief: Landscape Context of Kings Mountain National Military Park

Changes in natural land cover provide a general indication of overall landscape condition and offer insight into potential threats and opportunities for conservation (Monahan et al. 2012). Landscapes cover a gradient from intact (more than 90% natural habitat remaining), to variegated (60–90% natural) to fragmented (10–60% natural) and relictual (<10% natural) (With & Crist 1995, McIntyre & Hobbs 1999, Wade et al. 2003). Based on the National Land Cover Dataset (2011), the park itself is 99% natural, and so is intact. The landscape at a 3 km buffer is 85% natural and is healthy, while the environment at the 30 km buffer contains 61% natural habitat and so is also healthy, but close to becoming fragmented; this landscape contains the growing city of Gastonia, NC. These natural areas are largely forested creating the opportunity for partnerships to conserve areas that connect important species, natural habitat, and ecological processes. However, as the map shows, just outside the 30 km boundary there are also areas with large and growing metropolitan areas such as Charlotte, NC and Greenville-Spartanburg, SC.

Some of the potential threats from nearby development include:

- Air quality issues, such as an increase in ozone sources from traffic on Interstate-85 and fossil-fuel burning power plants, two of which are within a mile of the park. Traffic and power plants emit ozone precursors, which can raise ozone to unhealthy levels causing respiratory symptoms in visitors and foliar injury to sensitive plants. KIMO is currently monitoring ozone levels on the park to determine whether this is happening.
- Water quality issues: KIMO conserves a number of pristine mountain streams that flow from the park. However, Kings Creek, the park's largest stream, drains a landscape that is partly developed, includes I-85, the town of Kings Mountain, NC, and a lithium strip mine. Pollution from all of these sources may impact the water quality and the aquatic communities of Kings Creek. Water quality monitoring is conducted at the park every other year to detect potential changes.
- As external development increases, the forested landscape around the park is becoming increasingly fragmented. On a positive note, the national park is the core of a protected area that includes Kings Mountain State Park (SC), and Crowders Mountain State Park (NC). These three parks together form a protected island that can offer a vision to a more environmentally sustainable future for this area of North and South Carolina.



Natural and Converted Land Cover in the neighborhood of Kings Mountain National Military Park.

Dark Night Sky

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Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Anthropogenic Light	Anthropogenic Light Ratio (ALR) — Average Anthropogenic Sky Glow: Average Natural Sky Luminance		The modeled Anthropogenic Light Ratio, a measure of light pollution, is 4.09, which falls within the poor condition for non-urban parks. Although KIMO lies approximately 50 km from the center of the Charlotte metropolitan area (population 2.3 million), anthropogenic light from the area affects the park's photic environment. Population growth over the past 5 years has been high for the Charlotte-Concord-Gastonia metropolitan area (>30%), resulting in a negative trend (U.S. Census Bureau 2013).

Resource Brief: Night Sky Resources at Kings Mountain National Military Park

The night sky has been a source of wonder, inspiration, and knowledge for thousands of years. Unfettered night skies with naturally occurring cycles of light and dark are integral to ecosystem function as evidenced by the fact that nearly half the species on earth are nocturnal. The quality of the nighttime environment is relevant to nearly every unit of the NPS system as the nighttime light environment and its perception of it by humans (the lightscape) are both a natural and a cultural resource and are critical aspects of scenery, visitor enjoyment, and wilderness character.

Condition and Functional Consequences
Night sky quality at Kings Mountain National Military Park is poor with a median ALR of 4.09. This is considered a poor condition for non-urban parks. At these light levels the Milky Way has lost most of its detail and is not visible near horizon. Zodiacal light is rarely seen and anthropogenic light dominates natural celestial features. Some shadows from distant lights may be seen, and dark adaption may be possible in at least some directions, though visible shadows are likely present.

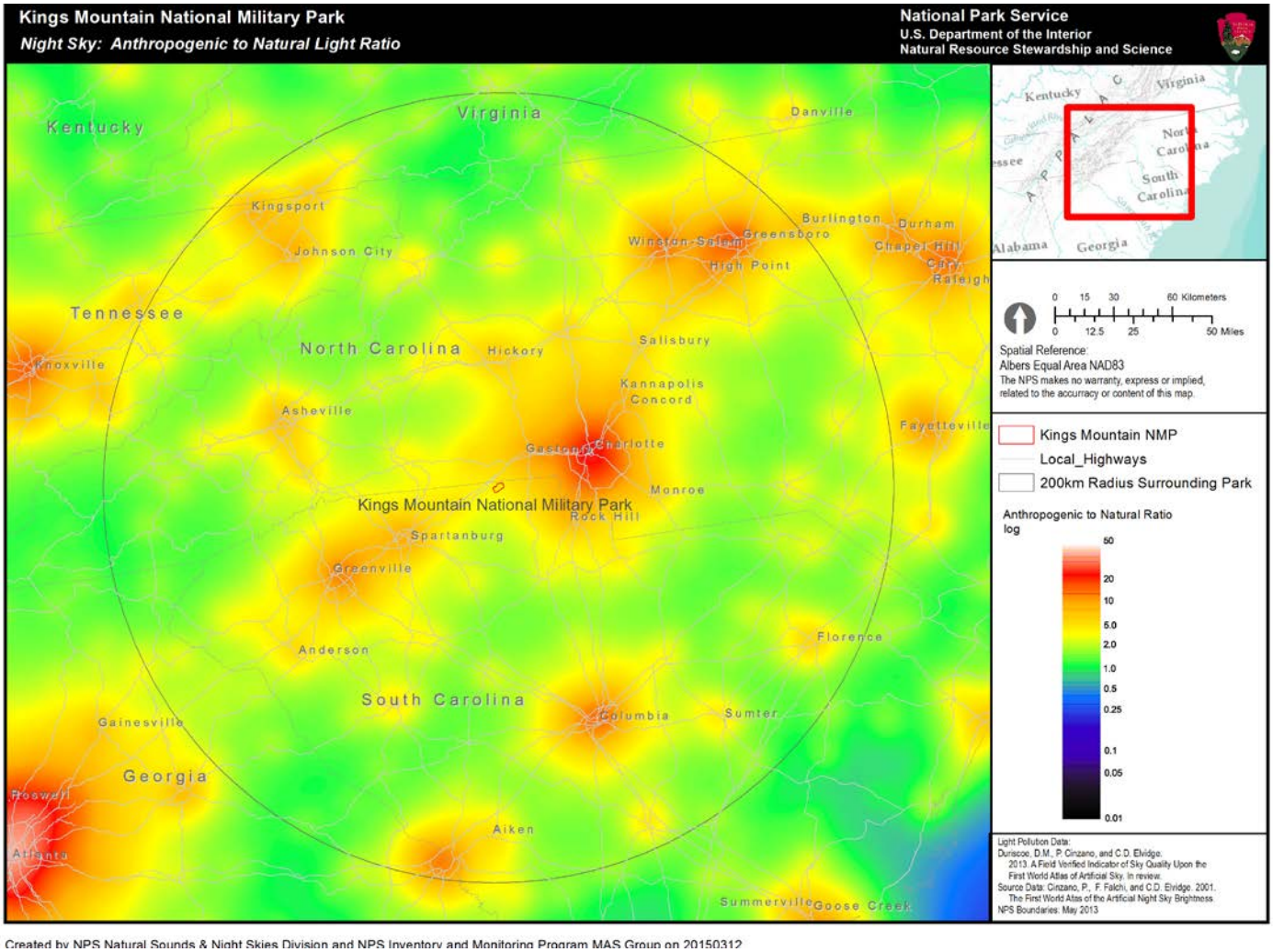
Assessment
One way the Natural Sounds & Night Sky Division (NSNSD) scientists measure the quality of the photic environment is by measuring the median sky brightness levels across a park and comparing that value to average natural night sky luminance. This measure, called the Anthropogenic Light Ratio (ALR), can be directly measured with ground based measurements, or when these data are unavailable are modeled. The GIS model, calibrated to ground based measurements in parks, is derived from the 2001 World Atlas of Night Sky Brightness, which depicts zenith sky brightness (the brightness directly above the observer). Anthropogenic light up to 200 kilometers from parks may degrade a park's night sky quality, and is considered in the neighborhood analysis. This impact is illustrated in the corresponding ALR map with a 200 km ring around the park center.

The ALR thresholds are applied spatially to the park. For both urban and non-urban parks, the designated condition (green, amber, red) corresponds to the ALR level that exists in *at least half of* (median condition) the park's landscape (see table below). Thus it is probable that a visitor will be able to experience the specified night sky quality. It is also probable that the majority of wildlife and habitats found within the park will exist under the specified night sky quality. For parks with lands managed as wilderness, the designated condition is based on the ALR level that exists in more than 90% of the wilderness area.

Criteria for Impact
Two impact criteria were established to address the issue of urban and non-urban park night sky resources. Parks within urban areas, as designated by the U.S. Census Bureau, are considered less sensitive to the impact of anthropogenic light and are assessed using higher thresholds of impact. Parks outside of designated urban areas are considered more sensitive to the impact of anthropogenic light and are assed using lower thresholds of impact. According to the U.S. Census Bureau Kings Mountain National Military Park is categorized as non-urban, or more sensitive (U.S. Census Bureau 2010). Learn more in the document Recommended Indicators of Night Sky Quality, and the NPS Natural Sounds & Night Skies Division website.

Thresholds for Level 1 and 2 Parks

Indicator	Threshold for Level 1 Parks – Non-Urban	Additional Threshold for Areas Managed as Wilderness	Threshold for Level 2 Parks – Urban
Anthropogenic Light Ratio (ALR) – Average Anthropogenic All-Sky Luminance : Average Natural All-Sky Luminance Light flux is totaled above the horizon (the terrain is omitted) and the anthropogenic and natural components are expressed as a unitless ratio The average natural sky luminance is 78 nL	ALR < 0.33 (<26 nL average anthropogenic light in sky) *At least half of park area should meet this criteria*	ALR < 0.33 (<26 nL average anthropogenic light in sky) *At least 90% of wilderness area should meet this criteria*	ALR < 2.00 (<156 nL average anthropogenic light in sky) *At least half of park area should meet this criteria*
	ALR 0.33–2.00 (26–156 nL average anthropogenic light in sky) *At least half of park area should meet this criteria*	ALR 0.33–2.00 (26–156 nL average anthropogenic light in sky) *At least 90% of wilderness area should meet this criteria*	ALR 2.00–18.00 (156–1404 nL average anthropogenic light in sky) *At least half of park area should meet this criteria*
	ALR > 2.00 (>156 nL average anthropogenic light in sky) *At least half of park area should meet this criteria*	ALR > 2.00 (>156 nL average anthropogenic light in sky) *At least 90% of wilderness area should meet this criteria*	ALR > 18.00 (>1404 nL average anthropogenic light in sky) *At least half of park area should meet this criteria*



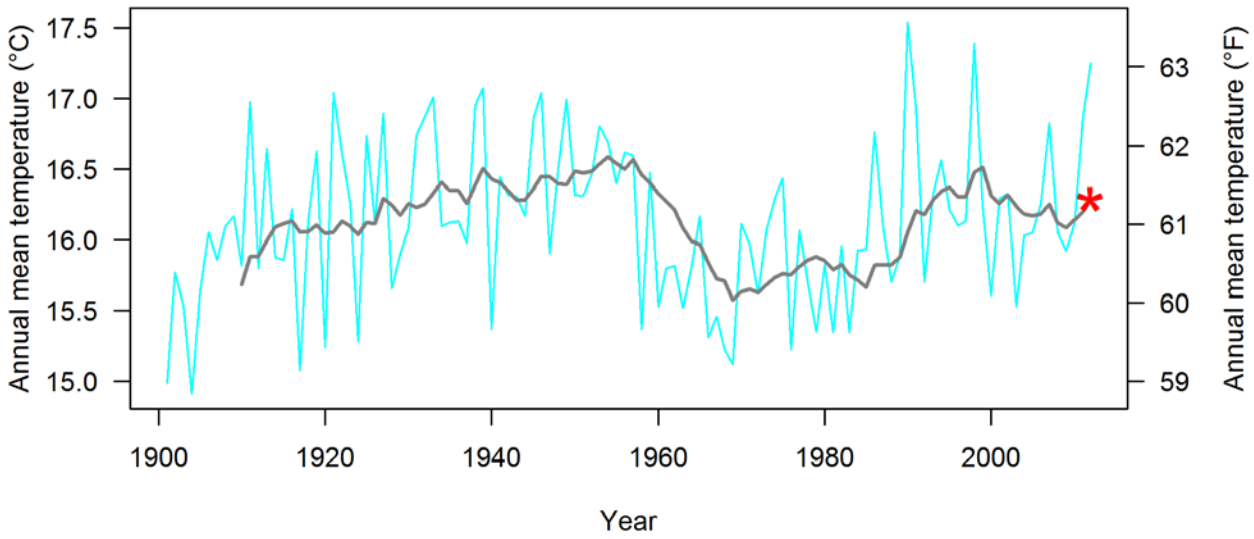
Regional view of anthropogenic light near Kings Mountain National Military Park. The circle around the park represents the distance at which anthropogenic light influences the night sky quality of the park.

Resource Brief: Recent Climate Change Exposure

To understand KIMO recent "climate change exposure"—that is, the magnitude and direction of ongoing changes in climate, we investigated how recent climate compares to historical conditions (see Monahan & Fisichelli 2014 for updates to the basic climate inventories for 289 national park units). We evaluated climate change exposure by asking which of 14 biologically relevant climate variables recently (past 10–30 years) experienced "extreme" average values relative to the 1901–2012 historical range of variability. We define "extreme" conditions (e.g., extreme warm, extreme wet) as, on average, exceeding 95% of the historical range of conditions.

To evaluate recent climate within the context of historical conditions at Kings Mountain, we used the following methods:

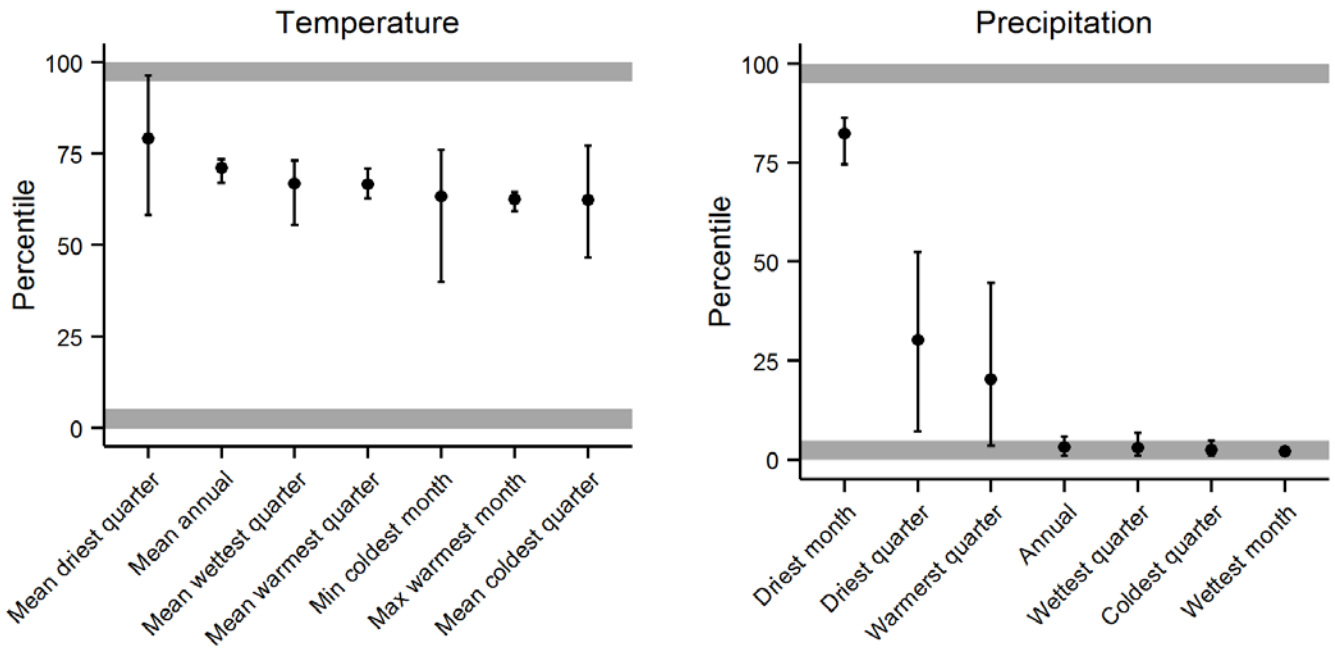
- For each temperature and precipitation variable, we analyzed data within three progressive time intervals, or "moving windows," of 10, 20, and 30 years to calculate a series of averages over the entire period of analysis (1901–2012).
- We compared the average temperature and precipitation values for each of the most recent 10, 20, and 30-year intervals (2003–2012; 1993–2012; and 1983–2012) to those of all corresponding intervals across the entire period of 1901–2012. These results (expressed as percentiles) describe "recent" conditions relative to historical conditions. As an example, a temperature percentile of 80% means that recent conditions were warmer than 80% of the historical range of conditions.
- We then averaged the percentiles of the most recent 10, 20, and 30-year time periods and classified variables <5th percentile or >95th percentile as "extreme."



Data used to characterize the historical range of variability and recent annual mean temperature at Kings Mountain National Military Park (including areas within 30-km [18.6-mi] of the park's boundary). The blue line shows temperature for each year, the gray line shows temperature averaged over progressive 10-year intervals (10-year moving windows), and the red asterisk shows the average temperature of the most recent 10-year window (2003–2012). The most recent percentile is calculated as the percentage of values on the gray line that fall below the red asterisk. Here, the most recent 10 years was warmer than 67% of the historical range of conditions.

Recent percentiles for 14 temperature and precipitation variables at KIMO appear below. Results for "extreme" variables at the park were:

- No temperature variables were "extreme warm."
- No temperature variables were "extreme cold."
- Four precipitation variables were "extreme dry: (annual precipitation, precipitation of the wettest month, precipitation of the wettest quarter, precipitation of the coldest quarter).
- No precipitation variables were "extreme wet."



Recent temperature and precipitation percentiles at Kings Mountain National Military Park (including areas within 30-km [18.6-mi] of the park's boundary). Black dots indicate average recent percentiles across the 10, 20, and 30-year intervals (moving windows). Variables are considered "extreme" if the average percentiles are <5th percentile or >95th percentile (i.e., the gray zones, where recent climate is pushing the limits of all observed climates since the year 1901). Black bars indicate the range of recent percentiles across 10, 20, and 30-year moving windows.

Resource Brief: Climate Change Effects at Kings Mountain National Military Park

Climate change is ongoing and past greenhouse gas emissions, long residence times of these gases in the atmosphere, and our current emissions trajectory suggest that future climate change will be substantial (Wigley 2005, Peters et al. 2013). Although the precise magnitude of these changes cannot be predicted, many trends are already detectable and a range of plausible future conditions can be incorporated into planning efforts.

The forests in and around KIMO are likely to change due to a warming climate in conjunction with other stressors such as tree pests (Fisichelli et al. 2014). Habitat suitability for various tree species in the region may increase, decrease, or remain unchanged under future conditions. The table below provides tree habitat suitability projections for select species at Kings Mountain. Projections are for the year 2100 under two climate scenarios ("least change" and "major change") that bracket a range of plausible future conditions based on greenhouse gas emissions and global climate model projections. Habitat suitability projections for 55 tree species at Kings Mountain and for trees at 120 other eastern U.S. parks are available at http://science.nature.nps.gov/climatechange/.

Potential changes in habitat suitability (2100 compared with 1990) for select tree species in Kings Mountain National Military Park (Fisichelli et al. 2014). Habitat change class designations are based on two future climate scenarios (the "least change" scenario represents strong cuts in greenhouse gas emissions and modest climatic changes and the "major change" scenario represents continued increasing greenhouse gas emissions and rapid warming). Change class designations are based on the ratio of future (2100) to baseline (1990) habitat suitability (output from the U.S. Forest Service Climate Change Tree Atlas).

Scientific Name	Common Name	Least Change Scenario	Major Change Scenario
Acer rubrum	red maple	small decrease	small decrease
Carya tomentosa	mockernut hickory	no change	no change
Juniperus virginiana	eastern redcedar	small decrease	small decrease
Liquidambar styraciflua	sweetgum	small increase	no change
Liriodendron tulipifera	yellow-poplar	large decrease	large decrease
Pinus echinata	shortleaf pine	small increase	small increase
Pinus taeda	loblolly pine	small increase	small increase
Pinus virginiana	Virginia pine	large decrease	large decrease
Quercus alba	white oak	small decrease	small decrease
Quercus falcata var.falcata	southern red oak	no change	small increase
Quercus nigra	water oak	small increase	large increase
Quercus prinus	chestnut oak	small decrease	no change

Longer growing seasons will increase the risk of insect outbreaks and expand ranges of some species such as scale insects and cankerworm (Ingram 2013). Near-term (2013–2027) disease and pest risks for the park include oak decline, southern pine beetle, and Sirex woodwasp (Krist et al. 2014). Warming temperatures are predicted to increase evapotranspiration, drying forest vegetation and increasing wildfire risk (Ingram 2013). Climate change may increase risk from invasive plant species. Longer growing seasons and shorter cold snaps may allow invaders to expand into new ranges (Bradley et al. 2010, Ingram 2013).

Effective climate change adaptation requires collaboration among land managers across large landscapes. The South Atlantic Landscape Conservation Cooperative is one of a network of Cooperatives planning for a sustainable landscape in the face of climate change. The Cooperative is a good place to find partners to work together to adapt natural and cultural resources to climate change.

Acoustic Environment

web

Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Acoustic Impact Level	A modeled measure of the noise (in dBA) contributed to the acoustic environment by man-made sources.		The condition of the acoustic environment is assessed by determining how much noise man-made sources contribute to the environment through the use of a national noise pollution model. The mean acoustic impact level at the park is 1.1 dBA, meaning that the acoustic environment is in good condition. Overall, long-term projected increases in ground-based (Federal Highway Administration 2013) and aircraft traffic (Federal Aviation Administration 2010) indicate a deteriorating trend in the quality of acoustic resources at this location.

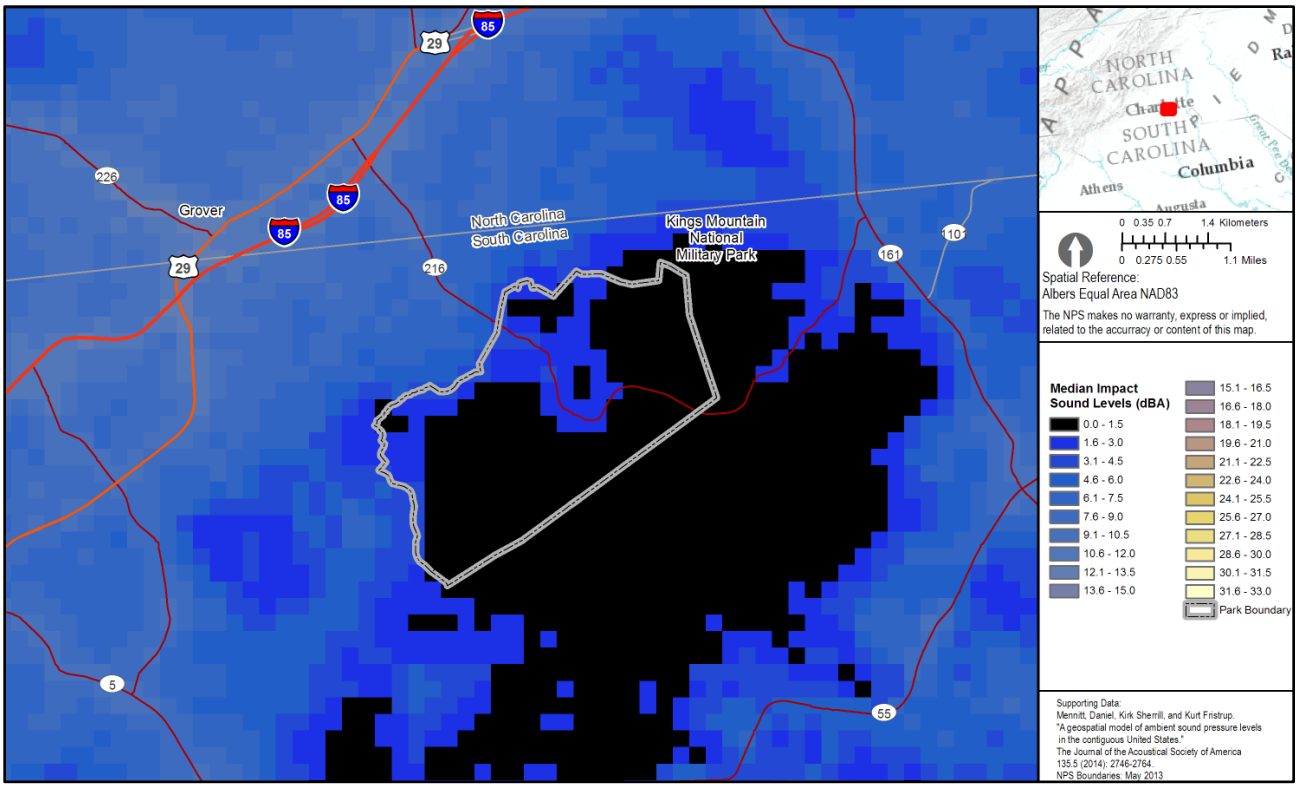
Resource Brief: Acoustic Environment at Kings Mountain National Military Park

To characterize the acoustic environment, the NPS has developed a national model of noise pollution (Mennitt et al. 2014). This model predicts the increase in sound level due to human activity on an average summer day. The model is based on measured sound levels from hundreds of national park sites and approximately 100 additional variables such as location, climate, vegetation, hydrology, wind speed, and proximity to noise sources such as roads, railroads, and airports. The model reveals how much quieter parks would be in the absence of human activities. The quality of the acoustic environment affects visitor experience and ecological health. Acoustic resource condition, both natural and cultural, should be evaluated in relation to visitor enjoyment, wilderness character, ecosystem health, and wildlife interactions. Learn more in this document (Recommended indicators and thresholds of acoustic resources quality for NPS State of the Park Reports), and the NPS Natural Sounds and Night Skies Division website. Additionally, the results of a 2012 long-term acoustic study at the park are summarized in the document Kings Mountain National Military Park: Acoustical monitoring 2012.

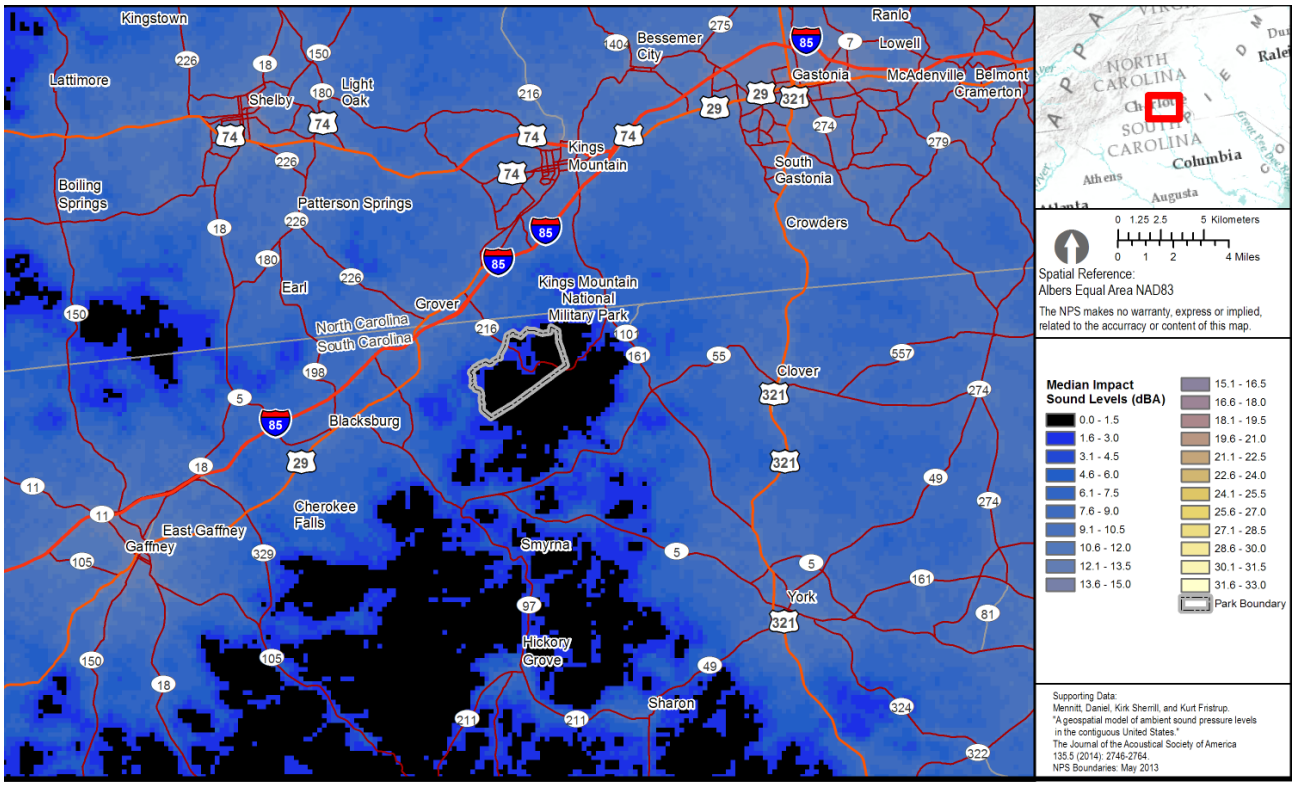
For State of the Park Reports, NPS has established acoustic standards (green, amber, red) and two sets of impact criteria for urban parks and non-urban parks. A park's status (urban or non-urban) is based on data from the U.S. Census Bureau (U.S. Census 2010). Parks outside designated urban areas typically possess lower sound levels, and exhibit less divergence between existing sound levels and predicted natural sound levels. These quiet areas are highly susceptible to subtle noise intrusions. Park units inside designated urban areas typically experience more interference from noise sources. Condition thresholds for non-urban parks are listed in the table at right. Just as smog limits one's ability to survey a landscape, noise reduces the area in which important sound cues can be heard. Therefore, thresholds in the table are also explained in terms of listening area.

Indicator	Threshold (dBA)
Acoustic Impact Level A modeled measure of the noise (in dBA) contributed to the acoustic environment by man-made sources.	Threshold ≤ 1.5 *Listening area reduced by ≤ 30%*
	1.5 < Threshold ≤ 3.0 *Listening area reduced by 30–50%*
	3.0 < Threshold *Listening area reduced by > 50%*

Condition thresholds for the acoustic environment in non-urban parks



Map of predicted acoustic impact levels in the park for an average summer day. The color scale indicates how much man-made noise increases the sound level (in A-weighted decibels, or dBA), with 270 meter resolution. Black or dark blue colors indicate low impacts while yellow or white colors indicate greater impacts. Note that this graphic may not reflect recent localized changes such as new access roads or development.



NPS Natural Sounds & Night Skies Division and NPS Inventory and Monitoring Program MAS Group 20150309

Map of predicted acoustic impact levels in the park and the surrounding area for an average summer day. The color scale indicates how much man-made noise increases the sound level (in A-weighted decibels, or dBA), with 270 meter resolution. Black or dark blue colors indicate low impacts while yellow or white colors indicate greater impacts. Note that this graphic may not reflect recent localized changes such as new access roads or development.

2.2. Cultural Resources

Archeological Resources

web

Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Knowledge	Sufficient research is conducted to understand the relationship of the park's archeological resources to the historic contexts for the park.		Date ranges have been estimated for 21 sites (80%), although most of those ranges are very broad ones based on limited information. Seven sites (27%) have both known historic contexts and date ranges.
	Scope of archeological resources in the park is understood and a determination has been made whether or not they are a fundamental or other important resource.		A complete Archeological Overview and Assessment needs to be completed and full Archeological Survey should be completed for the entire park. Currently the only archeological data exists for the Battlefield Trail, Howser House Complex, and random sampling in areas where prescribed fire has requested clearance for implementing prescribed fire holding lines.
	Scope of archeological resources in the park is understood and a determination has been made whether or not they are a fundamental or other important resource.		Less than 4% of the park has been surveyed. The battlefield is well understood. However, the use of the land by early settlers and by aboriginal peoples is poorly understood.
Inventory	Percentage of park intensively surveyed.		Less than 4% of the park has been surveyed adequately. The only inventory-type survey was a metal detecting project in 2000 that focused only on battle-related questions. There is reason to assume that there are sites from other time periods in the park. Eight sites were recorded in 2011 after their locations, based on a 1908 map, were confirmed in the field. Only one prehistoric site has ever been recorded. All projects (inventory and compliance) have been added to the cultural resources GIS.
	Percentage of archeological resources with complete, accurate, and reliable State site forms.		Only 3 of the 26 (11%) known sites have site forms submitted. This is a major deficiency.
Documentation	Percentage of known sites with adequate National Register documentation.		One site (3.8%) listed, 5 (19.2%) listed administratively, 2 (7.7%) recommended ineligible, and 18 (69.2%) are unevaluated. Documentation status for 2 sites (7.7%) is considered to be good, while the remainder are fair (13, 50%) or poor (11, 42.3%). All of the known sites have been added to the cultural resources Geographic Information System (GIS).

Archeological Resources (continued)

web

Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Documentation (continued)	Research results are disseminated to park managers, planners, interpreters, and other NPS specialists and incorporated into appropriate park planning documents.		All recent studies are shared with appropriate staff and disseminated to park partners who have a shared mission. All sensitive data is sanitized from the document to insure resource protection.
Certified Condition	Percentage of archeological resources certified as complete, accurate, and reliable in the Archeological Sites Management Information System (ASMIS) in good condition.		All 26 sites (100%) were assessed in 2011 and found to be in good condition. This represents no change from condition assessments conducted in 2005.

Cultural Anthropology

web

Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Knowledge	Sufficient research is conducted to understand the relationship of the park's ethnographic resources to the historic context(s) for the park.		An Ethnographic Overview and Assessment study is currently underway through a cooperative agreement with Appalachian State University. Additional site significance could be increased by learning about and interpreting the lives of people and communities with ties to the park historically and presently, including contemporary park neighbors and ethnic or occupational communities that have been associated with a park for multiple generations. Research topics might include (1) a focus on the lifeways and history of women and the multiple roles they played in the battle and continue to play in park history and interpretation, and (2) a focus on free people of color, enslaved Africans and their descendants, runaways, indentured servants, and others with complex roles and relationships to park resources and history that have not been directly interpreted to date but could prove to be one way of diversifying and increasing park visitation.

Cultural Anthropology (continued)

web

Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Inventory	Appropriate studies and consultations document resources and uses, traditionally associated people, and other affected groups, and cultural affiliations.		Documents and studies completed to date provide a limited foundation for understanding people and communities associated with the park. More research is needed to provide the depth and nuance that a cultural anthropological focus on the site would reveal including identifying underrepresented groups and their associations with the park historically and presently. For example, there is a significant connection between this park and the role of women as a key cultural group in the interpretation of national heritage.
Documentation	Resources eligible for the National Register of Historic Places as traditional cultural properties are identified.		Any traditional cultural properties identified will be screened for National Historic Register eligibility.
	Research results are disseminated to park managers, planners, interpreters, and other NPS specialists and incorporated into appropriate park planning documents.		All recent studies are shared with appropriate staff and disseminated to park partners who have a shared mission. All sensitive data is sanitized from the document to insure resource protection

Cultural Landscapes

web

Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Knowledge	Sufficient research exists to understand the relationship of the park's cultural landscapes to the historic context(s) for the park.		There is sufficient research to provide an understanding of the relationship between the park's cultural landscapes and historic contexts. In 2003, a Cultural Landscape Report (CLR) for the overall park landscape was written. A CLR for the Howser House is currently being written.
	Scope of cultural landscapes in the park is understood and a determination has been made whether or not they are a fundamental or other important resource.		The cultural landscapes are understood and are looked at holistically in conjunction with the natural resources that are a component of each respective cultural landscape.

Cultural Landscapes (continued)

web

Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Knowledge (continued)	Adequate research exists to document and preserve the cultural landscape's physical attributes, biotic systems and uses when those uses contribute to historical significance.		The park completed three Cultural Landscapes Inventories (CLI) in 2010. The CLI listed the Kings Mountain National Military Park, Goforth-Morris Norman Farmstead, and Howser Farmstead landscapes in fair condition. In 2003, a CLR for the overall park landscape was written. A CLR for the Howser House is currently being written. The Resource Stewardship Strategy (RSS) listed the battlefield as the Fundamental Resource and the Howser House landscape as an Important Resource.
Inventory	Percentage of landscapes eligible for the National Register in the Cultural Landscapes Inventory with certified complete, accurate, and reliable data.		All of the cultural landscapes in the park are listed in the National Register and have complete and certified CLIs.
Documentation	Percentage of cultural landscapes with adequate National Register documentation.		The cultural landscapes within the park are listed in the National Register nomination and addressed in the Historic Resource Study. This documentation adequately addresses contributing features, though additional documentation of vegetation patterns may contribute to a better understanding of the historic setting.
Certified Condition	Percentage of cultural landscapes certified as complete, accurate, and reliable in the Cultural Landscapes Inventory in good condition.		KIMO has three cultural landscapes listed in the CLI with complete inventories. All three of those cultural landscapes have up to date, accurate, and reliable condition assessments in the CLI. As of March 2017, two sites are in good condition, one is in fair condition (Howser Grounds).
	Percentage of Maintained Landscapes (historic) in the Facility Management Software System (FMSS) with a Facility Condition Index (FCI) indicating good condition.		KIMO has three (3) Maintained Historic Landscapes in FMSS. As of March 2017, two have an FCI that indicates good condition, while a third (Howser Grounds) is in fair condition.

Historic Structures

web

Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Knowledge	Historic Structures are identified and evaluated using historical contexts.		Although 100% of the park's historic structures have been evaluated, those evaluations and the historical contexts developed for them are becoming outdated. All of the park's historic structures could benefit from the application of new interpretive frameworks. Also, the structures associated with the Mission 66 period of development in the park need to be assessed.
	Adequate research exists to document and preserve the historic structure's physical attributes that contribute to historical significance.		The treatment documents for all historic structures within the park are not existent or are more than twenty years old.
Inventory	Percentage of historic structures eligible for the National Register in the List of Classified Structures (LCS) with accurate, complete, and reliable data.		100% of the park's historic structures that are listed on the LCS have adequate National Register documentation. That documentation is becoming outdated (see History section).
Documentation	Percentage of historic structures with adequate National Register documentation.		Aside from the park's Historic Resource Study (Blythe et al. 1995) and National Register nomination, documentation to the level required for the proper management of several historic structures is still needed. Historic Structure Reports (HSRs) are needed for the Mary Morris House and Shed, the Superintendent's Residence, and the Administration Building. The Howser House had an HSR written in 1974, but it is in need of an amendment. The other historic structures in the park such as markers, roads, and monuments, while not usually candidates for formal HSRs, could still benefit from new interpretive frameworks (see History section).
Certified Condition	Percentage of historic structures certified as complete, accurate, and reliable in the List of Classified Structures (LCS) in good condition.		41% of the structures listed on the LCS are in good condition. Many of the structures listed in fair condition have been impacted by gradual deterioration of original fabric, with many of them dating to the mid-nineteenth century.
	Percentage of historic structures in the Facility Management Software System (FMSS) with a Facility Condition Index (FCI) indicating good condition.		75% (8 of 12) of KIMO Historic Structures listed in FMSS are in good condition. This percentage should be improving with the completion of upcoming projects at the Library Conference Center (old Superintendent's House) and road maintenance on Main Park Drive.

History

web

Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Knowledge	Sufficient research is conducted to understand the national significance and historical contexts for the park.		The park's Historic Resource Study is over twenty-years old, as is the additional National Register documentation that was included as an appendix (Blythe et al. 1995). Both sources of documentation provide sufficient research to understand the significance of the site, although each was created before the development of the Park Service's revised Thematic Framework (1996). The latter should be used as a guide in any subsequent historical research and documentation. The park's Administrative History, which is a valuable tool for both interpretation and for comparative analysis of management practices over the years, needs to be updated.
	Research at the appropriate level of investigation (exhaustive, thorough, or limited) precedes planning decisions involving cultural resources.		The appropriate level of research preceding management decisions is not always possible due to insufficient staffing.
	Research is conducted by qualified scholars.		Over the past five years, the park has developed an excellent working relationship with university professors and other professionals in the field. All proposed construction in the park is reviewed by the NPS Southeast Regional office.
Documentation	Percentage of historic properties with adequate National Register documentation.		100% of historic properties in the park have adequate National Register documentation. As noted above, the most recent National Register documentation for the park is from 1995; a Determination of Eligibility is needed for the park's Mission 66 development. Because KIMO is managed in conjunction with Cowpens National Battlefield (COWP) and Ninety Six National Historic Site, (NISI), as well as the Overmountain Victory Trail (OVVT), a Historic Resource Study that covers the historic resources of those four units using the theme of the Southern Campaign of the American Revolution is recommended.

Resource Brief: Commemorations of the Battle

The earliest commemoration on the battlefield at Kings Mountain occurred on July 4, 1815, thanks to the efforts of Dr. William McLean of Lincoln County, North Carolina. McLean, then a candidate for Congress, and many local citizens returned to the rocky battlefield to properly bury the scattered remains of the dead. At his own expense, Dr. McLean placed the first monument on the battlefield (and second oldest battlefield marker in the U.S.) to honor his fallen comrades: Major William Chronicle, Captain John Mattocks, William Rabb, and John Boyd.

A second memorial celebration, held on October 4, 1855, marked the battle's seventy-fifth anniversary and attracted more than 15,000 spectators. Military companies, volunteer militia, and the Masonic Order all participated. Former Navy Secretary George Bancroft delivered an inspirational address, and plans for the creation of a national military park began.

The anniversary wreath-laying ceremony at the U.S. Monument. NPS Photo.

In 1879, the citizens of Yorkville, South Carolina and Kings Mountain, North Carolina began to make preparations for the battle's upcoming centennial celebration. The Kings Mountain Centennial Association, or KMCA, was formed to organize the celebration and purchase a suitable monument. Under the leadership of former Confederate Colonel Asbury Coward, the Association began seeking public and private contributions to purchase the core of the battlefield and build the new monument. On February 20, 1880, the KMCA purchased 39 ½ acres at the heart of the battlefield. On July 30, the Masonic Lodge performed the elaborate cornerstone-laying ceremony on the battlefield site purchased by the KMCA. The monument marked the site of the most intense fighting and celebrated the reversal of Patriot losses during the Southern Campaign. The celebration began on October 5, 1880 and lasted three days, attracting more than 15,000 people. The KMCA built a grandstand and flew the flags of the thirteen original colonies. Four young women representing South Carolina, North Carolina, Tennessee, and Virginia unveiled the monument, accompanied by fireworks.

After years of petitions from the Kings Mountain Chapter of the Daughters of the American Revolution (DAR) and Carolina Congressional Representatives, Congress agreed in 1906 to erect a national monument on the battlefield. The body appropriated $30,000 of federal money for the construction of the U.S. Monument. The 1909 ceremony dedicating this monument, arranged by the Kings Mountain DAR, attracted 8,000 spectators and the governors of Virginia, Tennessee, Georgia, North Carolina, and South Carolina. Local state militia performed a reenactment of the battle, and the Yorkville Band accompanied singers in performing the "Kings Mountain Lyric." However, no official U.S. representative attended—it was largely a local celebration of a national monument.

The 1930 sesquicentennial celebration marked the culmination of the DAR's efforts to concentrate national attention on Kings Mountain. U.S. President Herbert Hoover brought the prestige of his office to the commemoration by giving the keynote address on October 7, 1930 to a crowd of approximately 75,000 people, and his speech was broadcast through the United States and Great Britain. More than one-hundred news organizations, including the New York Times, covered the event. The dedication of a new stone to mark Patrick Ferguson's grave, given by R.E. Scroggins and the citizens of Charlotte and received by Ronald Campbell of the British Embassy, was one of the many highlights of the day.

Kings Mountain National Military Park continues to celebrate the anniversary of the battle annually with a wreath laying ceremony at the U.S. Monument, followed by a keynote speaker; as well as a weekend encampment event filled with a variety of activities and demonstrations.

Museum Collections

web

Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Knowledge	Sufficient research and analysis exists to understand the relationship of the park's museum collection to the historic context(s) for the park.		The revisions to the park's Scope of Collections Statement (SOCS) have improved the relationship and understanding of the park's role and function in the area of museum collections. The range of collections span from the time of the battle through park development. Natural history collections have been added to the collection over the past 20 years to document baseline inventories.
	Scope of museum collection in the park is understood and a determination has been made whether or not they are a fundamental or other important resource.		A Scope of Collections Statement was completed in 2001 and is supported by the Enabling Legislation, resource management goals and objectives, and interpretive themes. The SOCS should be reviewed and updated every 3–5 years.
Inventory	Percentage of existing collection that is accaccessioned and cataloged.		Based on the FY 2013 Collection Management Report, 97.08% of the museum collections are catalogued (Total collection = 46,861 items). The park needs an archival survey to identify park archives, and project to identify natural history collections and archives during administrative park operations.
	Scope of Collection is consistently implemented; items or objects are researched to determine their appropriateness for inclusion in the museum/archive collection.		The park closely evaluates the appropriateness of artifacts and archives that are offered to the park as a donation or loan. The park is working hard to survey/eliminate items that were cataloged in the 1970s when the new museum was built. These items are largely reproductions.
Documentation	Accession and deaccession files are complete with all appropriate signatures.		All recent transactions have appropriate signatures. The park is working to update delinquent backlog.
Certified Condition	Percentage of museum collection storage facilities in the Facility Management Software System (FMSS) with a Facility Condition Index (FCI) indicating good condition.		A Collections Condition Survey was completed in 2002 and another in 2006. The Collection Storage Plan (CSP) dates to 2007. A site visit in July 2013 identified issues in museum storage that need to be corrected, and a PMIS statement should be submitted to cover a review and equipment replacement project. The park has a dire need for professional staff and funding to support the retention and management of park archives and records management.

2.3. Visitor Experience

Visitor Numbers and Visitor Satisfaction

web

Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Number of Visitors	Number of visitors per year		The number of visitors to KIMO in 2015 was estimated at 257,077, an increase from the previous year (251,093). Park visitation has been relatively stable with 250,000 to 278,000 visitors annually for the last 10 years.
Visitor Satisfaction	Percent of visitors who were satisfied with their visit		Based on the standardized visitor satisfaction survey that is conducted each year, the percent of visitors who said they were satisfied with their visit to KIMO in 2010 through 2013 was 99% each year, and 100% in 2014.

Interpretive and Education Programs – Talks, Tours, and Special Events

web

Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Education Programs	Number and quality of programs, and number of participants		The number and types of educational programs offered by the park has greatly increased over the past five years.
Ranger Programs	Number and quality of programs and attendance		The number and types of ranger-led programs has also greatly increased over the past five years, including battlefield walks, weapons demonstrations, living history demonstrations, and various special events.
Junior Ranger Programs	Number of programs and attendance		Junior Ranger program numbers continue to increase. The park hosts an annual Junior Ranger Day event that is very popular with visitors. A Junior Firefighter program was developed and available beginning in 2015.
Special Events	Number and variety of events, community involvement		The park's special event programming has increased over the past several years, including the annual Anniversary Commemoration on October 7th, Military History Through the Ages, living history encampments and programs, Colonial Trades and Crafts, and Colonial Children's Day.

Resource Brief: Education Programs

Kings Mountain National Military Park offers a variety of educational programs to school groups and general audiences throughout the year. Rangers regularly demonstrate the primary weapons of the battle of Kings Mountain and the trades and crafts of the day in 18th-century period clothing; they also lead visitors in walks along the battlefield trail, allowing visitors to put themselves in the shoes of those on both sides who fought over 230 years ago.

School groups who visit the park can participate in a variety of ranger programs, ranging from weapons demonstrations, to battle talks and walks, to musket drills with wooden guns. Also available is the station-based program "Haversack Happenings," in which students become Loyalist or Patriot and rotate through activities designed to immerse them in nature, colonial life, and the life of an 18th-century soldier. Twice a year—in the spring and in the fall—Kings Mountain hosts "Education Day": schools rotate through station-based activities including cartridge rolling, militia drill, colonial song and dance, signing the militia oath, colonial games, spinning, 18th-century medicine, and archeology. The programs presented to school groups match North Carolina and South Carolina teaching standards.

Both schools and the general public can request the Junior Ranger program: youth complete a variety of booklet activities centered on the National Park Service, 18th-century soldiers, nature, and the battle of Kings Mountain. Upon completion, they earn a certificate and badge.

The militia commander gives his new recruits their military physical—making sure they have two opposing teeth. NPS Photo.

Resource Brief: Special Events

A ranger shows young wildland firefighters how to use a bladder bag to put out fire on Junior Ranger Day. NPS Photo.

Kings Mountain National Military Park hosts a variety of special events from March through November. Visitors see Patriot, Loyalist, and British living history interpreters demonstrate colonial trades and crafts, military camp life, life on the Carolina frontier, and the weapons used during the American Revolution. On Memorial Day weekend, the park features "Military through the Ages," during which groups representing the majority of American wars from the French and Indian War to today's War on Terror discuss and demonstrate the weapons and tactics of their respective wars. Kids enjoy Junior Ranger Day, where they can get hands-on experience in the jobs that park rangers do—telling stories with park artifacts, putting out wildland fires, and protecting the park and its visitors. Youth also relish Colonial Children's Day as they don colonial clothes, learn the musket drill with wooden guns, make their own cornhusk doll, and more. Visitors have the opportunity to experience the battlefield as it would have looked the night after the battle on guided lantern tours on Kings Mountain's anniversary weekend.

Resource Brief: Colonial Adventure Camp

Kings Mountain National Military Park hosts Colonial Adventure Camps, two-night campouts in the park that introduce urban youth ages 9 to 12 to their local colonial history and the beauty of the natural world. The Colonial Adventure Camps provide youth from area Boys and Girls Clubs, YMCA after-school programs and City Recreation centers with positive, enriching experiences of the park's cultural and natural resources.

From the start, participants immerse themselves in the park's colonial history. Youth change into 18th-century period clothing and help set up their own canvas tents. They learn how colonial Americans worked and played: they make their own good-smelling sachets and toss-toy games, create sparks from flint and steel, and learn a group colonial dance. Youth lend a hand in preparing meals over the open campfire, peeling vegetables, and washing dishes with hot water and straw scrubbers. To get a hands-on experience of the Revolutionary War battle of Kings Mountain, youth carry lanterns on a nighttime walk around the battlefield. Following in the footsteps of colonial Americans, they write about their experiences in handmade journals.

Participants at Kings Mountain NMP Colonial Adventure Camp all dressed up for a trip back in time. NPS Photo.

The weekend campouts also emphasize Kings Mountain's natural surroundings. Youth embark on a 3-mile hike to the adjacent Kings Mountain State Park. During their journey, they search for the birds, animals, insects, spiders, tracks, scat, and trees highlighted in the educational booklets provided by the park. At Kings Mountain State Park, they canoe in the lake and fish with cane poles and worms. Nighttime darkness does not slow their adventure down—the Charlotte Stargazers, a local astronomy club, bring powerful telescopes that magnify the constellations, Saturn's rings, and the distant Sombrero galaxy. The campfire's brightness encourages storytelling as the kids toast s'mores.

KIMO's Colonial Adventure Camps takes a creative approach to the traditional youth campout, combining cultural and natural history to create a fulfilling, unique event. For many of the participants, this is their first time camping and fully experiencing the outdoors.

Interpretive Media – Brochures, Exhibits, Signs, and Website

web

Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Wayside Signs	Condition and currency of signs		Wayside signs throughout the park were upgraded in 2002 and are in good condition overall. The signs provide visitors with a good understanding of the battle and associated historical events, but improvements are needed to natural history information that is relevant to understanding the significance of the park. Currently, limited information is available about connectivity to other parks in the Southern Campaign of the American Revolution.
Park Directional Signs (off-site)	Usefulness, quantity, and placement		The usefulness and placement of signs directing visitors to the park is good for visitors approaching the park from the I-85 corridor, but directional signage from the I-77 corridor is lackluster and improvements are needed. Way-finding signage from local communities is not existent.

Interpretive Media – Brochures, Exhibits, Signs, and Website (continued)

web

Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Visitor Center Exhibits	Condition and accuracy		Visitor center exhibits were updated in 2005 and are in good condition overall. The park continues to look for opportunities to find additional Kings Mountain artifacts to include in the exhibits. Currently, limited information is available at the park about connectivity to other parks in the Southern Campaign of the American Revolution.
Print Media	Accuracy and availability of park brochure		The content of the park brochure is accurate and up to date, and copies are readily available to visitors at the park and online. Currently, limited information is available at a park about connectivity to other parks in the Southern Campaign of the American Revolution.
Audio-visual (AV) Media	Orientation Films		The park orientation film is 15 years old and is in need of replacement, although the content is accurate. Currently, limited information is available at a park about connectivity to other parks in the Southern Campaign of the American Revolution.
	Other AV material		Each of the visitor center exhibits has an audio-visual component. The AV materials meet Americans with Disabilities Act (ADA) standards.
Websites and Technology-related Media	Currency and scope of website		The content and currency of the park website needs improvement, but the park does not have enough staff to maintain and improve the website to the level that is needed. The visitor center does not have internet access. Currently, limited information is available at a park about connectivity to other parks in the Southern Campaign of the American Revolution. Interactive media needs to be explored.
	Social media presence		The park established a Facebook account in 2013 and provides bi-weekly updates, but content is not provided as often as would be desired because of staffing levels and lack of internet access at the visitor center. Interactive media needs to be explored.

Resource Brief: OnCell Battlefield Audio Tour

Kings Mountain National Military Park offers a cell phone audio tour of the battlefield through the provider OnCell. Small, brown-and-black signs dotted along the trail present visitors with the opportunity to listen to accounts of the action and the years that followed from the Patriot and Loyalist soldiers and citizenry that directly experienced it. Placed at sites of important deeds and events along the battlefield trail, these signs allow visitors to stand in the places where the action occurred, from the vantage point of those who fought in the battle and those who struggled to properly memorialize and protect the battlefield years later. The tour traces the story of Kings Mountain from the opening shots of the battle, to the gaining of the crest by the surging Patriots, to the death of Loyalist commander Major Patrick Ferguson and the imminent Patriot victory, to the celebrations and monuments that followed in the years after October 7th, 1780. There is no cost to visitors to take part in the tour beyond their normal usage plans, and they have the chance to leave auditory feedback about their tour experience for park staff.

Scenic Resources

web

Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Scenic Views	Scenic Views Quality & Protection		Several scenic vistas exist at Kings Mountain especially in the fall when the canopy opens up after leaf fall. There are at least three good vantage points from the battlefield trail and several along the Browns Mountain Trail. The park has worked very hard with the adjoining Kings Mountain State Park (SC) and the Crowders Mountain State Park (NC) to insure scenic views are protected. There is concern for the preservation of the scenic views especially with the growth rate of the surrounding area, which is affected by the explosive growth of the Charlotte Metro area. The park has worked with York County (SC) and Cherokee County (SC) to establish setbacks. Scenic views are being impacted by residential development along access roads to the park.

Accessibility

web

Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Mobility	Battlefield Trail		Park received project funding in FY15 and replaced the battlefield trail surface. This reduced cross-slopes and improved accessibility.
	Visitor Center		All visitor center facilities have been upgraded to meet accessibility compliance with the exception of the steepness of access within the auditorium.
Visual and Auditory Accommodation	Current standards met		All of the museum exhibits have audio description and captions and the park film has open captioning and audio description. Assisted listening devices are available at the park. The park map in the Visitor Center has a legend in braille. The Ferguson Rifle exhibit has tactile elements.
Multi-lingual Resources	Audio and print materials in multiple languages		The park brochure has been translated to Spanish, but the park is seeking funding to print the Spanish-language version.

Resource Brief: Hiking Trails in the Park

Kings Mountain National Military Park boasts access to 28 miles of hiking trails: a 16-mile Recreation Trail loop shared with Kings Mountain State Park, and the 12-mile Ridgeline Trail, which connects 3 area parks: Kings Mountain National Military Park, Kings Mountain State Park in South Carolina, and Crowders Mountain State Park in North Carolina. Kings Mountain National Military Park and Kings Mountain State Park's Recreation Trail system runs through moderate-to-steep terrain and passes through a hardwood forest of chestnut oak, blackjack oak, maple, eastern red cedar, and tulip poplar. Flowering plants are abundant along the trails: during spring, hikers encounter dogwood, mountain laurel, wild azalea, azure bluet, black-eyed Susan, and cardinal flower. A diverse population of animals calls this forest home: deer, rabbit, box turtle, chipmunk, squirrel, and wild turkey can be seen during the day as well as several species of lizards and snakes.

In the streams and lakes, water fowl—such as wood ducks, red-necked ducks, and great egrets—can be found, as well as fantailed darters, Carolina darters, spring peepers, bullfrogs, and beavers.

Pileated woodpeckers, eastern bluebirds, Carolina chickadees, and American goldfinches are a few of the birds that make their home in the parks year-round. During the summer, birdwatchers can catch glimpses of scarlet tanagers, broad-winged hawks, yellow-throated warblers, and yellowed-billed cuckoos, while dark-eyed juncos, yellow-bellied sapsuckers, and golden-crowned kinglets can be seen in the winter.

A visitor enjoying a walk in the woods at Kings Mountain National Historic Park. NPS Photo.

Together, the three parks comprise more than 15,000 acres of diverse Piedmont woodlands. Much of it is mature climax forest of hardwoods, including chestnut, oak, American beech, hickory, red maple, and birch. On the forest floor can be found a wide variety of ferns, including some that grow more than 6 feet tall. Geologically, the area is anchored by monadnocks—isolated peaks such as Crowder's Mountain itself—and craggy ridges that give way to the rolling, forested hillsides on the South Carolina side. The higher reaches are home to species such as rhododendrons and Virginia pine in a dwarf state, while flowering dogwood and mountain laurel are abundant throughout the three parks.

Safety

web

Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Visitor Safety	Recordable incidents		The safety of visitors is a park priority. The park works to quickly identify and mitigate potential hazards, and the number of accidents is very low.
Staff Safety and Training	Number of staff trained		Operational Leadership Training has been completed by park staff, and cardiopulmonary resuscitation (CPR), First Aid, and automated external defibrillator (AED) training is offered to staff. A Job Hazard Analysis is conducted before jobs are initiated throughout the park. The park has an active Safety Committee and has developed a Safety Incentive Program. Regular safety messages are given and distributed to staff members.

Partnerships

web

Indicators of Condition	Specific Measures	Condition Status/Trend	Rationale
Volunteers	Number and hours contributed		The number of volunteers contributing individually or as part of various groups has increased during the past five years.
Partnerships	Number and effectiveness of partnerships		The park works with a variety of partners and continues to seek opportunities to develop new partnerships. Good working relationships have been established with public and private partners and federal, state, and county entities, especially with Kings Mountain State Park in South Carolina and Crowders Mountain State Park in North Carolina. The Brigade of Friends group provides financial and logistical support to the park.

2.4. Park Infrastructure

Overall Facility Condition Index

web

The National Park Service uses a facility condition index (FCI) to indicate the condition of its facilities and infrastructure. FCI is the cost of repairing an asset, such as a building, road, trail, or water system, divided by the cost of replacing it. The lower the FCI number, the better the condition of the asset. The condition of the buildings and other infrastructure assets at each park is determined by regular facility inspections, or "condition assessments," including daily informal inspections and formal yearly inspections. Deficiencies identified from these assessments are documented in the NPS Facility Management Software System and the cost for each repair determined. Repairs that cannot be completed within the year count against the condition of a structure. The total cost of these deferred repairs divided by the total cost to replace the structure results in the FCI, with values between 0 and 1 (the lower the decimal number, the better the condition). The FCI is assigned a condition category of Good, Fair, Poor, or Serious based on industry and NPS standards. Deferred maintenance projects that require additional funding are identified based on FCI. Planned preventive maintenance on critical components occurs during the year, using a park's base budget. For additional information about how park managers use information about the condition of facilities and infrastructure to make decisions about the efficient use of funding for maintenance and restoration activities at the park, Click Here.

Asset Category	Number of Assets 2009 / 2017	FCI 2009 / 2017	Condition Status/Trend	Rationale
Buildings	20 / 20	0.22 / 0.10		Most of the park buildings are in good condition. The fair condition rating is mostly a result of the need to install an air conditioning system and drainage system in the historical Library/ Conference building, and a storage trailer that would cost more to fix than to replace. A new roof was recently installed on the Library/ Conference building and its interior and exterior were painted. The park received funding to replace the roof on the visitor center and this project occurred in 2016.
Trails	5 / 5	0.13 / 0.12		The five trails in the park are in fair condition overall, and are regularly maintained by park staff. The trail surface of the Battlefield Trail was resurfaced in 2015 with a new base and recycled tire topcoat.
Waste Water System	1 / 1	0.21 / 0.00		The wastewater plant is no longer online and is scheduled for demolition as soon as funding becomes available. The plant was replaced by a traditional two tank septic system.
Water System	1 / 1	0.34 / 0.07		The park's water system was recently upgraded with a new well, tank, chlorination system, and pipes.
Unpaved Roads	19 / 19	0.61 / 0.07		Many of the 19 unpaved roads in the park have deferred maintenance and the park has requested funding to improve them.
Paved Roads, Parking Areas, Bridges, Tunnels	5 / 5	0.17 / 0.36		The main park road and several parking areas have deferred maintenance and the park has requested funding to repave them. Funding to address these concerns has not been provided to date.

Overall Facility Condition Index (continued)

web

Asset Category	Number of Assets 2009 / 2017	FCI 2009 / 2017	Condition Status/Trend	Rationale
All Others	13 / 24	0.005 / 0.056		The All Others category includes the stone monuments, cemeteries, amphitheater, trail waysides, and the park's computer, fuel, and radio systems, which overall are in good condition.

Resource Brief: Green Parks Plan

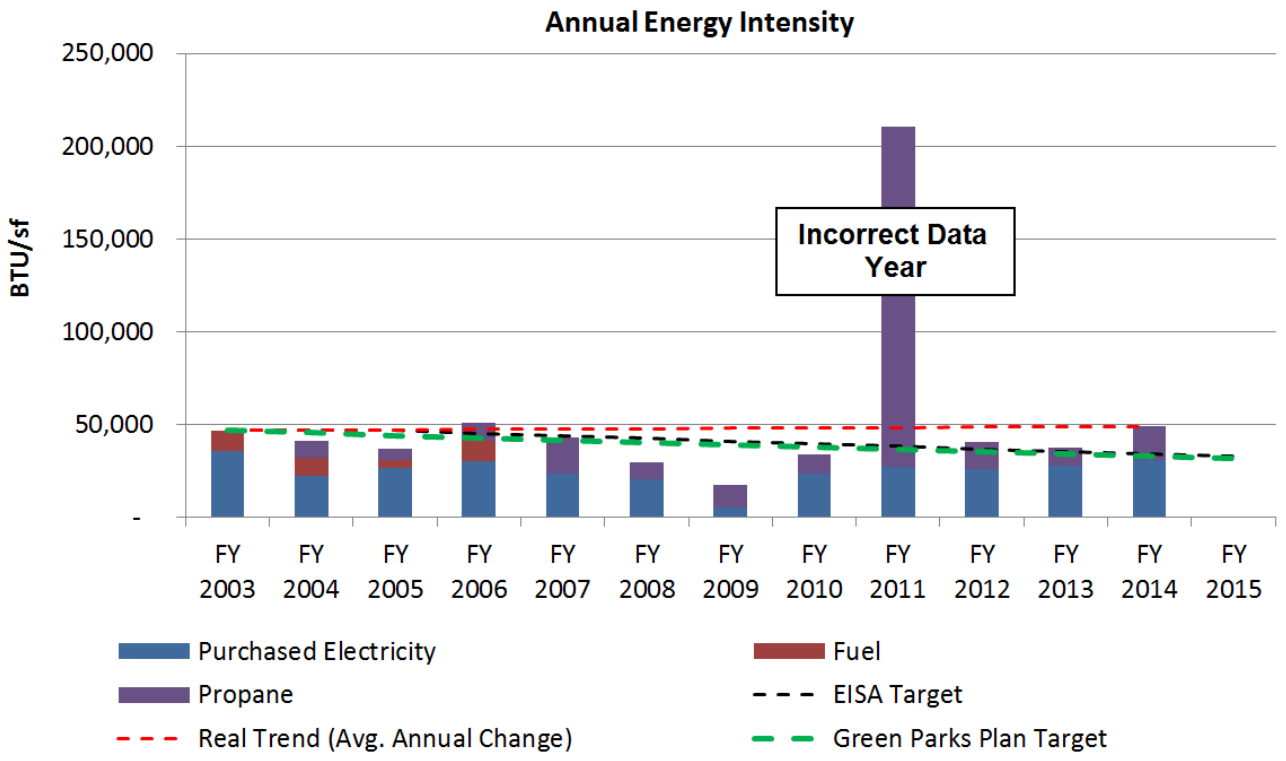
The NPS manages the largest number of constructed assets of any civilian agency in the Federal Government. It operates more than 67,000 structures that account for more than 50 million square feet of constructed space such as visitor centers and historic structures. The Green Parks Plan (GPP) defines a collective vision and a long-term strategic plan for sustainable management of NPS operations. A critical component of the implementation of the GPP will be informing and engaging parks' staff, visitors, and community partners about climate change and sustainability to broaden opportunities to foster change.

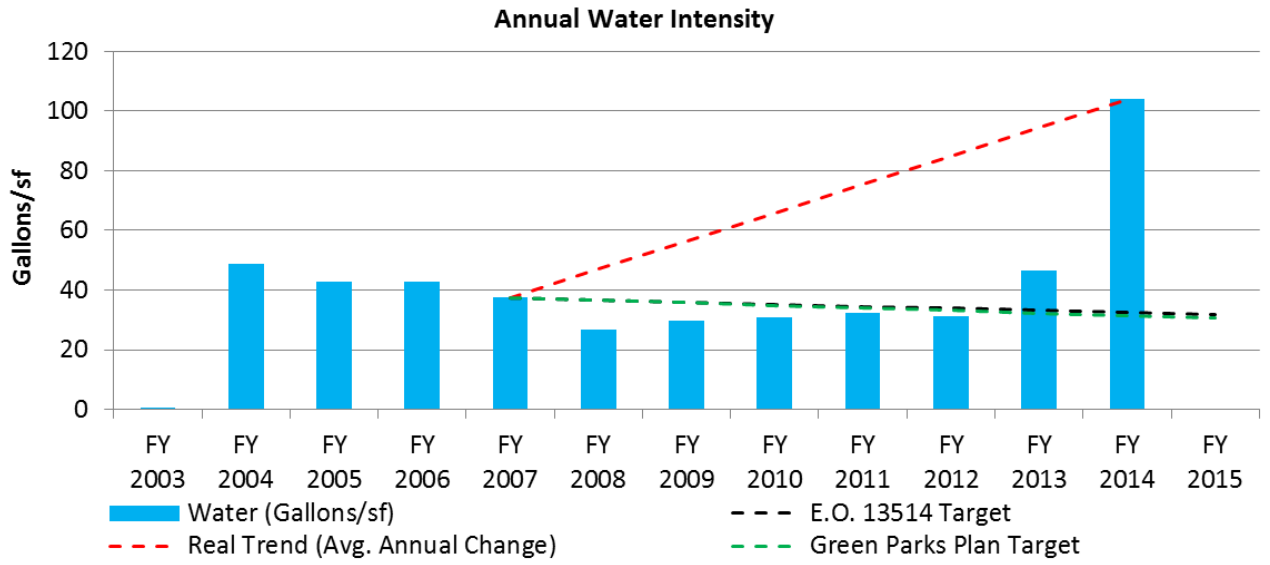
The Vision defined in the GPP plan is, "The NPS will preserve park resources unimpaired for the enjoyment of current and future generations by reducing its environmental impact through sustainable operations, design, decisions, and management at every level of the organization." The plan is based on nine strategic goals that focus on the impact of facilities on the environment and human welfare. Two of those goals are closely aligned with Park Infrastructure as defined in this State of the Park report. Those are:

- Be Energy Smart: The NPS will improve facility energy performance and increase reliance on renewable energy; and
- Be Water Wise: The NPS will improve facility water use efficiency.

For Energy, one of the performance objectives is to reduce Servicewide building energy intensity by 35 percent by 2016 from the 2003 baseline, where energy intensity is energy consumption per square foot of building space. For Water, one of the performance objectives is to reduce potable water use intensity by 30 percent by 2020 from the 2007 baseline.

Historical data for energy and water consumption reported by KIMO and available in the Energy Data Reporting Tool (EDRT) is shown below.





Highlights for KIMO include:

- Park has reduced annual energy consumption since FY 2003, despite anomalous numbers in 2011.
- While fluctuating from year to year, the park's annual water consumption had declined since FY 2003, but has shown an increase from FY 2008 to present.
- A water leak caused the increased water use in 2013 and 2014, which has now been repaired.

Chapter 3. Summary of Key Stewardship Activities and Accomplishments

Activities and Accomplishments

The list below provides examples of stewardship activities and accomplishments by park staff and partners to maintain or improve the condition of priority park resources and values for this and future generations:

Natural Resources

- The park has an active prescribed fire program to help restore the natural and cultural landscape as it was at the time of the battle, as well as to protect resources and promote public safety.
- The park is in the final stages of developing a General Management Plan that will become the blueprint for the future management of the park.
- Completion of basic natural resource inventories of plants and vertebrate animals, and initiation of long-term monitoring of water quality, air quality, vegetation, forest pests, and invasive plants by the NPS Cumberland Piedmont Inventory and Monitoring Network (CUPN).
- Control of invasive plants is ongoing, using chemical and mechanical treatments and prescribed fire.
- A Natural Resource Condition Assessment to evaluate and summarize existing natural resource data was completed.
- A Resource Stewardship Strategy to guide stewardship of natural and cultural resources over a 10–20 year timeframe was completed.
- Fire internship program developed with Clemson University.

Cultural Resources

- A systematic archeological survey of the battlefield was completed in the early 2000s.
- Cultural Landscape Report in progress for the Howser Farmstead and associated lands.
- Completed an oral history study of the Civilian Conservation Corps (CCC) era during which many of the park structures were constructed.
- Efforts ongoing to preserve and restore the Colonial Road, which was used by Patriot and Loyalist forces.
- Research study completed to document the participants in the Battle of Kings Mountain.
- Gravestone restoration completed at Howser Cemetery in 2010.
- Repairs completed to dry stone walls at the Howser House.
- Completed scanning and digitization of archival materials as well as archiving to cold storage (microfiche).
- An oral history project for CCC participants was completed in 2014 by Appalachian State University.
- An Ethnographic Overview and Assessment is currently underway through a cooperative agreement with Appalachian State University. Results from this Assessment should be forthcoming in early 2016.
- A 2015 project is under development for contracting to prepare a Historic Structure Report for CCC Era Structures/Features in both the National Military Park and the adjoining Kings Mountain State Park, which is a former Recreation Demonstration Area (RDA).

Visitor Experience

- The Colonial Adventure Camps program allows underserved urban school children an opportunity to visit and learn about the park and the historical events that occurred here.
- Excellent partnership with local Boy Scout troops has involved them in projects such as planting native species, trail maintenance, rehabilitation of trail bridges, and landscape restoration.
- Park staff has increased the number of programs provided to local schools.
- First Bloom Garden created to educate visitors about native plants.

- The park participates in the NPS Teacher Ranger Teacher (TRT) program, a professional development opportunity for educators from K–12 schools.
- Backcountry Militia Volunteers group held events every other month between March and November, 2014.
- *Military Through the Ages* special event is held each year on Memorial Day.
- Youth Conservation Corps contribute each year to trail maintenance, preparing for prescribed burns, and invasive plant eradication.
- GIS/mapping collaboration organized with Kings Mountain State Park in South Carolina and Crowders Mountain State Park in North Carolina. An extensive GIS mapping database has been developed for the three parks.

Park Infrastructure

- A new water-delivery system has been installed in the park.
- Fire suppression and sprinkler systems have been recently installed in all key buildings with the exception of housing.
- Interpretive media in the Visitor Center have been upgraded to meet national accessibility standards for hearing and visual impairment.
- The accessibility project has been completed for the amphitheater.
- There is an active recycling program at the park to reduce waste.
- The composting effort at park headquarters uses vegetation from the maintenance of park grounds. Additional funding in FY15 increased composting capabilities.
- Water-conservation fixtures were installed in Visitor Center restrooms in summer of 2014 to reduce water consumption in the park.
- The park is continuing replacement of interior lights with energy efficient Light-emitting Diode (LED) compatible fixtures.
- The waste water plant has now been decommissioned and replaced with a new septic system.
- Park heating systems have been converted from fuel oil to propane or electricity to reduce the park's carbon emissions and energy costs.

Chapter 4. Key Issues and Challenges for Consideration in Management Planning

Kings Mountain is the only unit of the National Park system that commemorates a Revolutionary War battle for which the entire battlefield is preserved and protected within the unit. The geography, topography, and forest of the region directly influenced the conduct and eventual outcome of the campaign and battle, and the presence of water on the site was one rationale for why the Loyalist troops selected the area to defend. While the vegetation of the forest has changed through succession and early logging, the unchanged topography of the battlefield and surrounding land base provide an excellent opportunity for visitors to understand the details of the approach of the patriots and the loyalists to the battle scene. The visitor experience and understanding of the history and significance of the site is thus fundamentally tied to the park's natural and cultural resources as well as the park's infrastructure, all of which are summarized in this report and are managed in an integrated, holistic way.

The park preserves a critical Revolutionary War battlefield site which sits in an area of the piedmont Carolinas that is developing at a very fast pace despite the recent downturn in the economy. With our adjacent state park partners Kings Mountain State Park (SC) and the Crowders Mountain State Park (NC), we are considered an "Island of Hope" among preservationist and recreationist alike. While having a state park immediately adjacent to much of our North and East boundary is a huge benefit to us in dealing with development concerns, it also offers some challenges especially in dealing with issues such as recreational use, control of invasive exotic plants, wildfire protection and fuels reduction, and law enforcement issues.

Natural Resources

The park contains mixed hardwood forest resembling the upper piedmont during the 18th century. The Kings Mountain National Military Park forest preserves several species of concern such as the Georgia Aster, which exists in only two counties in South Carolina, and the Northern Bobwhite. The size of the total area (15,000 acres) preserved in a continuous band of national and state parks, including Kings Mountain State Park in South Carolina and Crowders Mountain State Park in North Carolina, are important in preserving critical ecosystems. A number of invasive plants already have a foothold on the land base and the park must remain proactive in its efforts to limit their continued expansion.

The park's prescribed fire program, which started in the year 2000, has made a tremendous impact on the restoration of the cultural landscape within the park and has removed endless hazardous fuels left by pine bark beetle infestations of the 1980s and 1990s. The implementation of the prescribed fire program has opened up the forest canopy by eliminating many pioneer species, which would not have been present in the 18th-century landscape. Prescribed fire has been instrumental in improving habitat for numerous fire adaptive species of concern. We have experienced even greater benefits in select areas where fire alone cannot feasibly eliminate the heavy fuel loading and reduce the stems per acre in a timely and desirable manner. Some of our greatest success stories in habitat and cultural landscape restoration have been in small plots where we have utilized prescribed fire on one or two occasions and followed up the next year with a mastication treatment. While many of these areas are small in nature, 3–5 acres, we have seen a dramatic change in plant and wildlife diversity. The continuance of the prescribed fire program is critical to the restoration of the cultural landscape and biodiversity of the forest.

Cultural Resources

At the forefront of all cultural resources at Kings Mountain National Military Park is the battlefield landscape and other resources associated with the battle, including the museum collection. The park museum collection has grown significantly over the past 20 years and has outgrown the museum storage space. The park has identified this need in planning documents and hopes to soon resolve this critical need through a line item construction project for an addition to the visitor center, which would house not only the park's museum collection and library collection but also provide a learning center for visiting school groups and work area for the interpretive staff.

The park and the adjoining Kings Mountain State Park are filled with a rich history of the Civilian Conservation Corps. Stonewalls, stone lined terraces, and historic buildings all serve as a constant reminder of that critical period in the park's past. The completion of an oral history program with the last surviving CCC participants will serve as a baseline for future education and interpretation of this nationally recognized program of the depression era.

The Henry Howser House (circa 1803) and its related landscape along with the Mary Morris-Norman landscape provide some challenges to the park especially in maintenance of these properties and interpretation of each respective period. A Cultural Landscape Report for the Howser House and related lands is currently underway and will provide a baseline for future management decisions on the cultural landscape and interpretive activities. A Historic Furnishings Report is needed to provide detailed information regarding the historic finishes and furnishings inside the structure. There is a great deal of local interest in the Howser House from local family

members and other residents. With declining fiscal resources, the success of preserving and interpreting this structure will require seeking new partnerships and outside fiscal resources.

The commemorative period that began as early as 1815 with the Chronicle Marker (2nd oldest battlefield monument in the country) and ended in 1931 with the stone marker at the Ferguson cairn provides some challenges. Many of these stone markers were created from local stone that is very soft and brittle. Little is known about the impacts that climate change and other natural elements could have on preservation of these markers and monuments.

Park Operations and Infrastructure

With the exception of the park visitor center (circa 1975), the Library-Conference Building (former Superintendent's residence, circa 1941) and the park headquarters (circa 1941) the majority of the buildings within the park were constructed during the Mission 66 era (50th anniversary of the National Park Service), and are now over fifty-years old. The Mission 66 development in the park should be assessed for potential National Register eligibility within the context of that program.

Park infrastructure, specifically the 1975 visitor center and the 1940 park headquarters building, do not provide adequate space or proper conditions for storing and preserving museum collections. The park staff has outgrown the existing facilities with the addition of the fire program and the addition of staff to the facility management program. The visitor center is somewhat behind the curve in technology-based equipment. There is no internet or network capability at the visitor center. This greatly impacts the ability of the staff to utilize social media to advance the interpretive program. It also limits the staff's ability to perform many required job functions without traveling to the headquarters building. This is very problematic when we normally operate with a limited staff at the visitor center.

Changes in climate with continued increases in air temperatures and predicted changes in storm frequency and storm intensity are expected to bring about great changes in the park's ecological communities, as well as having implications for visitors (e.g., seasonal use patterns, hiking, camping, and other visitor opportunities). However, with the likely extirpation of some species and the new introductions of others, the full ramifications of those changes (and how to plan for them) remain unpredictable. These changes will have direct implications on resource management and park operations and on the way visitors use and experience the park.

Management and Staffing

Staffing is very limited and we lack key positions in cultural resource management (Museum Technician) and Natural Resources Management (Biological Technician or Integrated Resources Manager). The interpretive staff size has decreased especially in light of increased visitation and demand for new programs, especially technology based programs via social media. The park has a critical need for additional interpretive staff that would serve as an Educational Specialist.

The small staff size leads to reliance upon others from the NPS, other agencies of the federal government, and partners within the community to assist in accomplishing the park's mission. Each staff member must wear multiple hats, and the park has become increasing reliant on support from specialists in the regional office, who are in turn being asked to provide support for an increasing number of parks and management issues throughout the region.

Fiscal constraints, changing visitor demographics, and a need to diversify our workforce are all ushering in complex challenges for parks as the NPS enters its second century. The State of the Park Report will help us strategically access and communicate park conditions and our current plan for the future. Our ability to plan ahead necessitates that we have objective baseline data to assess our park operations and articulate plans that address the multifaceted needs of the parks.

Partnerships and Community Involvement

Kings Mountain National Military Park is fortunate to have several partnerships that have proved to be beneficial since the inception of the park. Our ties to the Daughters of the American Revolution, the Sons of the American Revolution, and other patriotic organizations have never been stronger. Annually these organizations lend support and provide yet another avenue for public outreach. Our Brigade of Friends organization continues to provide manpower and support for local small scale projects, but with fiscal cutbacks the park will look to the Friends group to provide seed money for grants and other funding opportunities especially in the area of visitor services and land protection.

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See the State of the Park Report for the Park website for a more complete list of references to documents and data sets upon which the assessments in this State of the Park report are based. References for several of the key documents cited in this report are as follows:

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See Also:

Collection of Natural Resource-Related References

Collection of Cultural Resource-Related References

Collection of Visitor Experience-Related References

Glossary

See the State of the Parks home page for a link to a complete glossary of terms used in State of the Park reports. Definitions of key terms used in this report are as follows:

Americans with Disabilities Act (ADA)	Law enacted by the federal government that includes provisions to remove barriers that limit a disabled person's ability to engage in normal daily activity in the physical, public environment.
Archeological Sites Management Information System (ASMIS)	The National Park Service's standardized database for the basic registration and management of park prehistoric and historical archeological resources. ASMIS site records contain data on condition, threats and disturbances, site location, date of site discovery and documentation, description, proposed treatments, and management actions for known park archeological sites. It serves as a tool to support improved archeological resources preservation, protection, planning, and decision-making by parks, centers, regional offices, and the national program offices.
Baseline Documentation	Baseline documentation records the physical condition of a structure, object, or landscape at a specific point in time. A baseline provides a starting point against which future changes can be measured.
Cultural Landscapes Inventory (CLI)	A Cultural Landscapes Inventory describes historically significant landscapes within a park. The inventory identifies and documents each landscape's location, size, physical development, condition, characteristics, and features, as well as other information useful to park management.
Cumberland Piedmont Network (CUPN)	One of 32 I&M networks established as part of the NPS Inventory and Monitoring Program. The Cumberland Piedmont Network provides scientific data and expertise for natural resources in 14 parks located in Alabama, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.
Curation	National parks are the stewards of numerous types of objects, field notes, publications, maps, artifacts, photographs, and more. The assemblage of these materials comprises a museum collection. Curation is the process of managing, preserving, and safeguarding a collection according to professional museum and archival practices.
Exotic Plant Management Team (EPMT)	One of the ways the NPS is combating invasive plants is through the Exotic Plant Management Team Program. The program supports 16 Exotic Plant Management Teams working in more than 225 park units. EPMTs are led by individuals with specialized knowledge and experience in invasive plant management and control. Each field-based team operates over a wide geographic area and serves multiple parks.
Facility Condition Index (FCI)	FCI is the cost of repairing an asset (e.g., a building, road, bridge, or trail) divided by the cost of replacing it. The lower the FCI number, the better the condition of the resource.
Foundation Document	A park Foundation Document summarizes a park's purpose, significance, resources and values, primary interpretive themes, and special mandates. The document identifies a park's unique characteristics and what is most important about a park. The Foundation Document is fundamental to guiding park management and is an important component of a park's General Management Plan.
Fundamental and Other Important Resources and Values	Fundamental resources and values are the particular systems, processes, experiences, scenery, sounds, and other features that are key to achieving the park's purposes and maintaining its significance. Other important resources and values are those attributes that are determined to be particularly important to park management and planning, although they are not central to the park's purpose and significance. These priority resources are identified in the Park Foundation Document and/or General Management Plan. The short-cut name that will be used for this will be Priority Resources.

Historic Integrity	Historic Integrity is the assemblage of physical values of a site, building, structure, or object and is a key element in assessing historical value and significance. The assessment of integrity is required to determine the eligibility of a property for listing in the National Register.
Indicator of Condition	A selected subset of components or elements of a Priority Resource that are particularly "information rich" and that represent or "indicate" the overall condition of the Priority Resource. There may be one or several Indicators of Condition for a particular Priority Resource.
Interpretation	Interpretation is the explanation of the major features and significance of a park to visitors. Interpretation can include field trips, presentations, exhibits, and publications, as well as informal conversations with park visitors. A key feature of successful interpretation is allowing a person to form his or her own personal connection with the meaning and significance inherent in a resource.
Invasive Species	Invasive species are non-indigenous (or non-native) plants or animals that can spread widely and cause harm to an area, habitat, or bioregion. Invasive species can dominate a region or habitat, out-compete native or beneficial species, and threaten biological diversity.
List of Classified Structures (LCS)	LCS is an inventory system that records and tracks the condition of the approximately 27,000 historic structures listed in the National Register of Historic Places that are the responsibility of NPS.
Museum Collection	NPS is the steward of the largest network of museums in the United States. NPS museum collections document American, tribal, and ethnic histories; park cultural and natural resources; park histories; and other aspects of human experience. Collections are managed by professionally-trained NPS staff, who ensure long-term maintenance of collections in specialized facilities.
Natural Resource Condition Assessment (NRCA)	A synthesis of existing scientific data and knowledge, from multiple sources, that helps answer the question: what are current conditions of important park natural resources? NRCAs provide a mix of new insights and useful scientific data about current park resource conditions and factors influencing those conditions. NRCAs have practical value to park managers and help them conduct formal planning and develop strategies on how to best protect or restore park resources.
Priority Resource or Value	This term refers to the Fundamental and Other Important Resources and Values of a park. These can include natural, cultural, and historic resources as well as opportunities for learning, discovery, and enjoyment. Priority Resources or Values include features that have been identified in park Foundation Documents, as well as other park assets or values that have been developed or recognized over the course of park operations. Priority Resources or Values warrant primary consideration during park planning and management because they are critical to a park's purpose and significance.
Project Management Information System (PMIS)	A servicewide intranet application within the National Park Service to manage information about requests for project funding. It enables parks and NPS offices to submit project proposals to be reviewed, approved, and prioritized at park units, regional directorates, and the Washington Office.
Resource Management	The term "resources" in NPS encompasses the many natural, cultural, historical, or sociological features and assets associated with parks. Resource management includes the knowledge, understanding, and long-term stewardship and preservation of these resources.
Specific Measure of Condition	One or more specific measurements used to quantify or qualitatively evaluate the condition of an Indicator at a particular place and time. There may be one or more Specific Measures of Condition for each Indicator of Condition.

Wilderness	A designation applied to certain federal lands set aside for preservation and protection in their natural condition, in accordance with the Wilderness Act of 1964.