



Overmountain Victory National Historic Trail

FEASIBILITY STUDY AND ENVIRONMENTAL ASSESSMENT FOR
A NEW HEADQUARTERS AND VISITOR CONTACT STATION



November 2010

**National Park Service
U.S. Department of the Interior**

Overmountain Victory National Historic Trail

North Carolina, South Carolina, Tennessee, Virginia



**Feasibility Study / Environmental Assessment for a New
Headquarters and Visitor Contact Station for the
Overmountain Victory National Historic Trail – PMIS 98411**

November, 2010

Printed on recycled paper.

PROJECT SUMMARY

The National Park Service (NPS) has prepared this Feasibility Study/Environmental Assessment (FS/EA) to evaluate a range of alternative sites for the location of a new Headquarters and Visitor Contact Station (HQ/VCS) for the Overmountain Victory National Historic Trail (Overmountain or Trail). The Trail is a 330-mile-long motorized and non-motorized route for public use that commemorates a turning point in the American Revolutionary War when the Overmountain Men marched south and defeated loyalist forces in the Battle at Kings Mountain. The Trail traverses portions of Virginia, Tennessee, North Carolina, and South Carolina. The new facility would accommodate the functions associated with the expanding regional presence of the Trail, which provides room for staff offices, meetings, storage, educational and interpretive exhibits, and special events in a location near the geographic center of the Trail.

In recent years, the Trail has dramatically increased its visibility and regional importance. The NPS has collaborated with more than 100 partner groups and organizations to expand the Trail into nearly 74 miles of marked trail sections available for public use, an increase of 58 miles since 2002. Currently, more than one million people use marked trail sections annually. As a result of this increased regional presence and involvement, as well as growing public support for the Trail and its history, additional NPS presence is needed to accomplish operational and administrative tasks and assist partners with various projects and initiatives. Expanded and regional NPS presence is currently inhibited by the lack of a dedicated and centrally located Overmountain facility.

The current HQ is located in loaned office space at Kings Mountain National Park, and the existing NPS staff presence is limited to the superintendent, who is the only federal employee assigned to Overmountain. This facility's remote location at the southern terminus of the Trail in Blacksburg, SC, is inefficient and hinders management, as Trail personnel must often travel farther distances to Trail-related meetings, and the distances often necessitate overnight travel.

This FS/EA presents a range of alternatives that would allow for a more centrally located HQ, and allow additional space for storage of required supplies and relevant materials, which are currently dispersed at multiple locations along the Trail. Alternatives were selected for further analysis based on several factors including cost of the land, proximity to the geographic center of the Trail and the associated opportunity for improved management and operations on the Trail, proximity to the Trail or Trail resources, access to major transportation routes, opportunities for visitor enjoyment, and opportunities to strengthen partnerships and community relations.

The Rocky Ford Access site was selected as the NPS preferred alternative because the site would be provided to the NPS at no cost, has the best opportunities for visitor enjoyment, provides a park-like experience suitable for a historic trail, and is closest to the most Trail resources. In addition, the site does not have significant constraints to development.

The centralized location, appropriate park-like setting, and proximity to Trail resources would result in long-term benefits to park management and operations, visitor use and experience, and socioeconomics. There would be short-term and long term-negligible to minor adverse impacts to soils, water resources, vegetation, and wildlife habitat, all of which could be mitigated to negligible adverse. There would be no impacts to floodplains or historic sites or structures at this site. Impacts on archeological resources are not anticipated, although the NPS would continue to work in consultation with the North Carolina State Historic Preservation Office to ensure compliance with the National Historic Preservation Act. There would be no impairment to park resources or values resulting from development of an HQ/VCS at this site.

NOTE TO REVIEWERS AND RESPONDENTS:

To comment on the FS/EA, you may mail comments or submit them online within 30 days of the publication of this FS/EA at <http://parkplanning.nps.gov/projectHome.cfm?parkID=400&projectID=25061>, and follow the appropriate links. Please be aware that your comments and personal identifying information may be made publicly available at any time. While you may request that NPS withhold your personal information, we cannot guarantee that we will be able to do so. Please mail comments to:

Paul Carson
Superintendent
Overmountain Victory NHT
2635 Park Road
Blacksburg, SC 29702

TABLE OF CONTENTS

CHAPTER 1: PURPOSE AND NEED

Introduction	1
Purpose of and Need for Action	1
Objectives	3
Project Background	3
Project Location	4
Purpose and Significance of the Overmountain Victory National Historic Trail.....	4
Applicable Federal Laws, Regulations, Executive orders, Plans, and Policies	5
Applicable Federal Laws and Regulations	5
Executive Orders/ Director’s Orders	8
Local Plans	9
NPS Management Policies 2006	10
Issues and Impact Topics	12
Impact Topics Dismissed from Further Analysis	14
Impairment	16

CHAPTER 2: ALTERNATIVES

Introduction	17
Description of Alternatives	17
Alternative 1: No Action Alternative	19
The Action Alternatives	19
Alternative A: Joseph McDowell House, Marion, NC.....	21
Alternative B: Site Adjacent to Quaker Meadows House, Morganton, NC.....	24
Alternative C: Catawba Meadows Park, Morganton, NC	26
Alternative D: Rocky Ford Access, Morganton, NC (Preferred Alternative)	28
Mitigation Measures for All Alternatives.....	30
Preferred Alternative	31
The Environmentally Preferable Alternative.....	34
How the Alternatives Meet the Objectives.....	35
Summary of Impacts	37

CHAPTER 3: AFFECTED ENVIRONMENT

Scope of the Environmental Analysis	41
Park Management and Operations	42
Visitor Use and Experience	43
Socioeconomics.....	47
Land Use	58
Floodplains	60
Soils.....	62
Water Resources.....	64
Vegetation	66
Wildlife and Wildlife Habitat.....	68
Cultural Resources	70

Archeological resources	70
Historic Sites and Structures	74

CHAPTER 4: ENVIRONMENTAL CONSEQUENCES

Introduction	77
General Methodology for Assessing Impacts.....	77
Cumulative Impacts.....	78
Park Management and Operations	81
Visitor Use and Experience	86
Socioeconomics.....	91
Land Use	99
Floodplains.....	104
Soils.....	108
Water Resources.....	112
Vegetation	118
Wildlife and Habitat	122
Cultural Resources	127
Archeological Resources.....	127
Historic Structures and Sites	132

CHAPTER 5: CONSULTATION AND COORDINATION

Public Scoping.....	137
Agency Consultation	138
Comment Period.....	140
List of Preparers	141
Contributors.....	141
References	142
Personal Communications	147
Acronyms	148
Key Word Glossary	149

APPENDICES

Consultation and Correspondence	APPENDIX A
Value Analysis	APPENDIX B
Draft Impairment Determination.....	APPENDIX C
Draft Statement of Findings	APPENDIX D
Additional Socioeconomic Data.....	APPENDIX D

TABLES

Table 1.1 – Overmountain Victory National Historic Trail History	5
Table 2.1 – How the Alternatives Meet the Project Objectives	35
Table 2.2 – Summary of the Impacts (Environmental Consequences)	37
Table 3.1 – Population of Study Area Municipalities	48
Table 3.2 – Racial and Ethnic Composition of Study Area Municipalities, Counties, and States, 2000	50

Table 3.3 – Age Characteristics of Study Area Municipalities, Counties, and States, 2000.....	51
Table 3.4 – Poverty and Median Household Income, 2000 and 2008.....	55
Table 3.5 – Police Protection in Study Area Counties	55
Table 3.6 – Firefighting Services Located in Study Area Counties	56
Table 3.7 – Hospitals and Medical Centers Located in Study Area Counties.....	56

FIGURES

Figure 1.1 – Overmountain Victory National Historic Trail Map and Proposed Sites	2
Figure 2.1 – Action Alternative Sites	20
Figure 2.2 – Joseph McDowell House	21
Figure 2.3 – Joseph McDowell Site Diagram	23
Figure 2.4 – Feasibility Study for Proposed HQ/VCS at the Joseph McDowell Site	23
Figure 2.5 – Quaker Meadows House	24
Figure 2.6 – Quaker Meadows Site Diagram	25
Figure 2.7 – Feasibility Study for Proposed HQ/VCS at the Quaker Meadows Site	25
Figure 2.8 – Catawba Meadows Park Site Diagram.....	27
Figure 2.9 – Feasibility Study for Proposed HQ/VCS at the Catawba Meadows Park Site.....	27
Figure 2.10 – Rocky Ford Access Site Diagram	29
Figure 2.11 – Feasibility Study for Proposed HQ/VCS at the Rocky Ford Access Site	29
Figure 3.1 – Kings Mountain National Military Park Map	44
Figure 3.2 – Joseph McDowell House sign (on right) and Trail emblem (on left)	45
Figure 3.3 – Commercial Properties Adjacent to the Joseph McDowell House	45
Figure 3.4 – Quaker Meadows House Office and Restroom Facilities	45
Figure 3.5 – Rocky Ford Access Wayside Display	46
Figure 3.6 – Rocky Ford Access Trailhead Parking Lot and Signage	46
Figure 3.7 – Historical Population and Current Estimates for Study Area Counties, 1969-2009	49
Figure 3.8 – 2000 and 2008 Per Capita Income for Study Area Counties, States, and the United States (in 2008\$)	52
Figure 3.9 – Study Area Counties, States, and the United States Unemployment Rates, 2000-2009	54
Figure 3.10 – Floodplain Designations for the Joseph McDowell House Property	60
Figure 3.11 – Floodplain Designations for the Rocky Ford Access Site	61
Figure 3.12 – Soils at Joseph McDowell House Property	62
Figure 3.13 – Soils at Rocky Ford Access Site	63
Figure 3.14 – Black Walnut Tree (<i>Juglans nigra</i>) at the Joseph McDowell House.....	66
Figure 3.15 – Rows of Planted Pine Trees at Catawba Meadows Park	66
Figure 3.16 – Mixed Hardwoods, Conifers, and Kudzu (<i>Pueraria lobata</i>) at Rocky Ford Access ...	67
Figure 4.1 – Catawba River Greenway Plan	78
Figure 4.2 – Catawba Meadows Park Facilities Plan	79
Figure 5.1 – Public Comment Summary	137

[This page was intentionally left blank.]

CHAPTER 1: PURPOSE AND NEED

INTRODUCTION

The National Park Service (NPS) proposes to establish a new Headquarters (HQ) and Visitor Contact Station (VCS) for the Overmountain Victory National Historic Trail (Overmountain or Trail), a 330-mile-long motorized and non-motorized route for public use that traverses portions of Virginia (VA), Tennessee (TN), North Carolina (NC), and South Carolina (SC) (Figure 1.1).

This Feasibility Study and Environmental Assessment (FS/EA) presents a range of action alternatives and assesses the impacts that could result from establishing a new HQ/VCS at one of four sites. The FS/EA also analyzes the baseline, or no action alternative, which is the continued use and operation of the current HQ at Kings Mountain National Park, located in Blacksburg, SC.

PURPOSE OF AND NEED FOR ACTION

The purpose of this action is to provide an HQ/VCS facility to accommodate the functions associated with the expanding regional presence of the Trail, including centralized space for staff offices, meetings, storage, support, educational and interpretive exhibits, and special events.

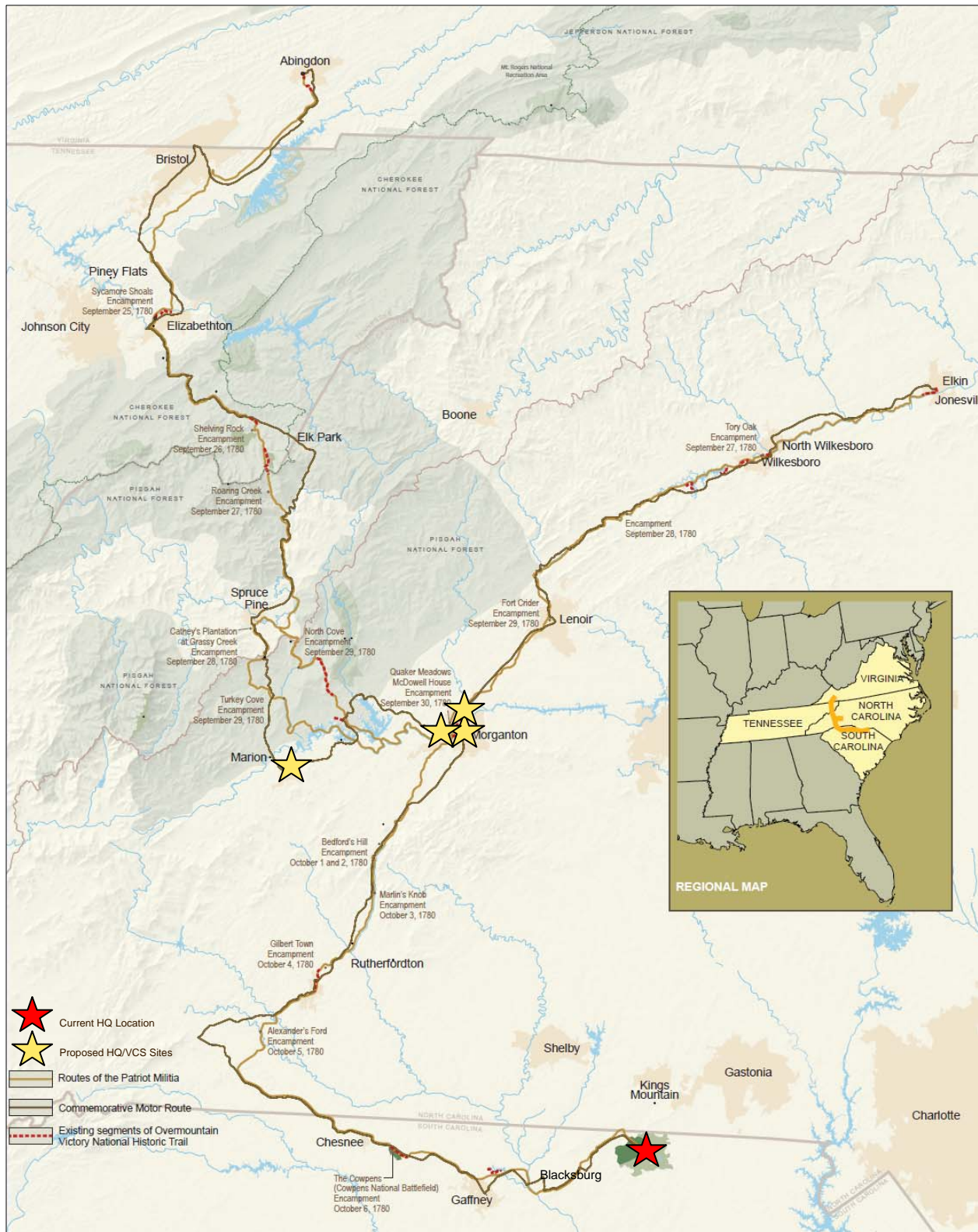
In recent years, Overmountain has dramatically increased its visibility and regional importance. The NPS has collaborated with more than 100 partner groups and organizations to expand the Trail into nearly 74 miles of marked trail sections available for public use, an increase of 58 miles since 2002. Currently, more than one million people use marked trail sections annually. As a result of this increased regional presence and involvement, as well as growing public support for the Trail and its history, additional NPS presence is needed to accomplish operational and administrative tasks and to assist partners with various projects and initiatives. However, expanded and regional NPS presence is currently inhibited by the lack of a dedicated and centrally located Overmountain facility.

The current HQ is located at the southern terminus of the trail in loaned office space at Kings Mountain National Military Park, and the existing NPS staff is limited to the superintendent, who is the only federal employee assigned to Overmountain. The expansion of the Trail itself and the increase in partner relationships necessitates additional staff; however, space is limited at the Kings Mountain office. Because this facility is located at the southern end of the route, and depending on road and weather conditions, travel time to other sections of the Trail can take up to five hours. By reducing travel time, the NPS could provide a quicker response to on-site needs along the entire route, maximizing the actual time available to perform tasks and duties. A reduction in travel time would also result in lower costs associated with vehicle maintenance and fuel.

The lack of dedicated and adequate space has resulted in the scattered storage of required supplies (such as signs and equipment) and relevant materials (such as official publications, maps, and files) at various partner facilities in multiple locations along its 330-mile length. This lack of centralized storage makes it difficult to inventory and access these materials, creating inefficiencies for park management and operations.

This FS/EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and implementing Code of Federal Regulations (CFR), 40 CFR 1500-1508, and NPS Director's Order 12 (DO-12) and Handbook, *Conservation Planning, Environmental Impact Analysis, and Decision-making* (NPS 2001).

Figure 1.1 – Overmountain Victory National Historic Trail Map and Proposed Sites



OBJECTIVES

Objectives are “what must be achieved to a large degree for the action to be considered a success” (NPS 2001) and represent more specific statements of purpose and need. All alternatives selected for detailed analysis must meet all objectives to a large degree and must resolve the purpose of and need for action. The following objectives were identified by the planning team for this project:

- Acquire space that will accommodate the growing Overmountain administrative functions and staff.
- Consolidate staff, storage, administrative functions, and maintenance operations in an HQ/VCS on one site, ensuring efficient park management and operations, visitor use, and maintenance.
- Maximize efficiency for park operations and management by siting the new facility at a location that reduces travel distance for park staff from the HQ location to the other parts of the entire route.
- Select a location that has easy access to major transportation routes or hubs and that allows for better response to on-site needs than is currently available.
- Select a site that provides a convenient venue for Trail-wide consultations and meetings.
- Select a site that facilitates the development of interpretive displays and the presentation of educational and interpretive programs and special events.
- Ensure that the selected site can accommodate the HQ/VCS in a manner that avoids or minimizes adverse impacts to environmental and cultural resources.

PROJECT BACKGROUND

The Trail was congressionally authorized in September 1980 to commemorate and preserve the primary historic route used by Patriot militia to the Battle of Kings Mountain in 1780. The legislated purpose of Overmountain is to establish a trail on, or as close as possible to, the historic route of the Overmountain Men, whose march went from Abingdon, VA, and Elkin, NC, joined at Morganton, NC, and terminated at the Battle of Kings Mountain, now located in Kings Mountain National Military Park in SC. Under the provisions of the authorizing legislation, as well as the provisions of the National Trails System Act (NTSA) and its amendments, the mission of Overmountain is to preserve related resources and interpret the story of the 1780 Kings Mountain campaign through a variety of partnerships, with the NPS serving as the administering agency for the federal government.

At its inception, the Trail stretched approximately 220 miles from Abingdon, VA, through eastern TN, and NC and SC, ending at Kings Mountain National Military Park. A 70-mile branch also extended from Morganton, NC, to Elkin, NC (NPS 2009a). In 1982, Overmountain had expanded to 310 miles, including approximately 10 miles of federally owned land divided into 1- to 3-mile sections. These segments run through the Cherokee National Forest in TN, the Pisgah National Forest in NC, the Blue Ridge Parkway and W. Kerr Scott Reservoir in NC, and Cowpens National Battlefield and Kings Mountain National Military Park in SC, (NPS 1982). In 1982, approximately 97 percent of Overmountain was on non-federally owned land including variety of land types such as urban and rural lands, forests, roads, and highways. Approximately 60 percent of the Trail followed modern roads with no unpaved segments longer than a full day’s walk (NPS 1982).

Since its creation, the route has grown to 330 miles and includes several walkable non-motorized segments, as well as a marked commemorative motor route (CMR) that utilizes existing state roadways. Overmountain also includes affiliated historic sites, museums, and wayside exhibits to enhance visitors’ interpretive and educational experience. These additions have been acquired through one of two ways: (1) expansion on federally owned land or (2) through a written cooperative agreement with landowners,

private organizations, and individuals to either provide public right-of-ways or acquire the land (NPS 1982).

Along the way, Overmountain passes through several local, state, and federally owned lands including the federal land mentioned above, and several state and county parks. Overmountain's route affords visitors unique opportunities to experience and learn about the natural heritage and history of this historic region of the United States (NPS 2009b). There are 67 miles available for pedestrian access, spread out in smaller segments along the length of the Trail. Currently, there are more than 100 different partner groups and organizations involved in the ongoing effort to expand the non-motorized route for public use.

PROJECT LOCATION

Figures 1.1 depicts the location of the Trail and the four proposed sites for the HQ/VCS. The study area, or area of analysis, for each topic addressed in this FS/EA varies by site location, resource, and anticipated impacts.

PURPOSE AND SIGNIFICANCE OF THE OVERMOUNTAIN VICTORY NATIONAL HISTORIC TRAIL

Establishment. In 1978, Congress amended the NTSA of October 2, 1968 (16 U.S.C. 1241. Seq.), giving the Department of the Interior the opportunity to include Overmountain as a national scenic or historic trail in the National Trails System. The NPS determined that the Trail qualified as a national historic trail, but not as a national scenic trail. On September 8, 1980, Congress passed the Act to Improve the Administration of the Historic Sites, Buildings, and Antiquities Act of 1935 (94 Stat. 113) and to amend Section 5(a) of the NTSA, solidifying the establishment of Overmountain as a national historic trail (NPS 1982).

As per the NTSA, Overmountain was created by a detailed identification study of the historic route. The study team relied on the 1881 historic accounts of historian Lyman C. Draper in *Kings Mountain and its Heroes* as well as the input from other local historians and descendants of battle participants. (NPS 1982)

In 1982, a comprehensive management plan (CMP) was developed. The plan proposed a commemorative and interpretive effort to enhance public appreciation of the significance of the Overmountain victory march. The CMP included the development of certain federal lands that cross the historic route and marking of the CMR (NPS 1982).

Purpose. Section 3(c) of the NTSA states the purpose of the Trail as a national historic trail is “the identification and protection of the historic route and its historic remnants and artifacts for public use and enjoyment” (NPS 1982).

Significance. Park significance statements capture the essence of a park's importance to the nation's natural and cultural heritage. Understanding park significance helps managers make decisions that preserve the resources and values necessary to the park's purpose. The areas encompassed by the Trail commemorate the route used by upcountry Patriots in their march to Kings Mountain in SC, where they would eventually defeat Loyalist forces on October 7, 1780, marking a turning point in the Revolutionary War. This march took place over the course of 14 days. However, the events leading up to the march and battle were more extensive and are listed in Table 1.1. The Trail is an important symbol of American heritage, representing American solidarity and the fight for independence from England. In addition, the Trail provides interpretive opportunities for visitors to learn about American history.

Table 1.1.—Overmountain Victory National Historic Trail History

1780	Event
September 12	Skirmish at Bedford Hill in NC between troops under Col. Charles McDowell and British Major Patrick Ferguson inspires the Overmountain expedition.
September 24	Various Overmountain troops from Nolichucky, Holston, and Watauga settlements muster and camp near the South Fork of the Holston River and at Rocky Mount, TN.
September 25	Overmountain Men under Colonels William Campbell, Isaac Shelby, John Sevier, and Charles McDowell rendezvous and overnight at Sycamore Shoals on the Watauga River.
September 26	Overmountain troops camp at Shelving Rock near Roan and Yellow Mountains.
September 27	Overmountain Men reach Roaring Creek campsite. Troops under patriot Colonels Benjamin Cleveland and Joseph Winston proceed southward along Yadkin River to meet with initial Overmountain forces from over the Blue Ridge Mountains.
September 28	Overmountain troops reach Grassy Creek campsite on the North Toe River.
September 29	Overmountain troops split at Gillespie Gap in Blue Ridge Mountains. Troops under Col. William Campbell proceed to Turkey Cove; remainder continue to North Cove. Troops under Colonels Cleveland and Winston reach Fort Crider.
September 30	Overmountain Men rendezvous with Winston and Cleveland's troops at Quaker Meadows on the Catawba River.
October 1-2	Overmountain Men reach head of Cane Creek and stay two nights due to hard driving rain. Col. Campbell of VA is elected chief commander.
October 3	Overmountain Men camp near Andrews' place on Cane Creek.
October 4	Overmountain troops reach mouth of Cane Creek and learn that British Colonel Patrick Ferguson has retreated from nearby Gilbert Town.
October 5	Overmountain troops reach Alexander's Ford of Green River. Col. Edward Lacey of SC meets them and provides intelligence on Ferguson's whereabouts. A number of weary men left behind at Green River. Of the 1,400 troops reaching Alexander's Ford, about 700 of the best-armed and best-mounted push on in search of Ferguson.
October 6	Overmountain troops rendezvous with SC militia forces under Colonels Hill, Lacey, Williams, and Graham at Cowpens in SC. Nine hundred horsemen and a squad of footmen are selected to continue pursuit of Ferguson.
October 7	Battle of Kings Mountain.

APPLICABLE FEDERAL LAWS, REGULATIONS, EXECUTIVE ORDERS, PLANS, AND POLICIES

The NPS is governed by laws, regulations, and management plans before, during, and following any management action related to the developed NEPA document. The following are those applicable to the proposed action.

APPLICABLE FEDERAL LAWS AND REGULATIONS

National Environmental Policy Act (NEPA), 1969, as Amended

The NEPA was passed by Congress in 1969 and took effect on January 1, 1970. This legislation established this country's environmental policies, including the goal of achieving productive harmony between human beings and the physical environment for present and future generations. It provided the tools to implement these goals by requiring that every federal agency prepare an in-depth study of the impacts of "major federal actions having a significant effect on the environment" and alternatives to those actions. It also required that each agency make that information an integral part of its decisions. NEPA also requires that agencies make a diligent effort to involve the interested and affected public before they make decisions affecting the environment.

Besides setting environmental planning policy goals, NEPA created the Council on Environmental Quality (CEQ), an agency of the president's office, to oversee the implementation of NEPA. CEQ published NEPA regulations in 1978 (40 CFR 1500-1508). These regulations apply to all federal agencies, and in them CEQ requires each federal agency to "implement procedures to make the NEPA process more useful to agency decision-makers and the public" (40 CFR 1500.2). Agencies are to review and update these regulations as necessary. The NPS has in turn adopted procedures to comply with the act and the CEQ regulations, as found in DO-12: *Conservation Planning, Environmental Impact Analysis, and Decision-making* (NPS 2001), and its accompanying handbook.

National Historic Preservation Act, As Amended Through 2000 (16 U.S.C. 470)

The National Historic Preservation Act (NHPA) of 1966, as amended through 2000, protects buildings, sites, districts, structures, and objects that have significant scientific, historic, or cultural value. The act established affirmative responsibilities of federal agencies to preserve historic and prehistoric resources. Effects on properties that are listed in or are eligible for listing in the National Register of Historic Places (NRHP) must be taken into account in planning and operations. Any property that may qualify for listing in the NRHP must not be inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate.

Section 106 of the NHPA

Section 106 requires federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment. The historic preservation review process mandated by Section 106 is outlined in regulations issued by ACHP. Revised regulations, "*Protection of Historic Properties*" (36 CFR Part 800), became effective January 11, 2001.

NPS Organic Act

By enacting the NPS Organic Act of 1916 (Organic Act), Congress directed the U.S. Department of the Interior and the NPS to manage units "to conserve the scenery and the natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such a manner and by such a means as will leave them unimpaired for the enjoyment of future generations" (16 USC § 1). Congress reiterated this mandate in the Redwood National Park Expansion Act of 1978 by stating that NPS must conduct its actions in a manner that will ensure no "derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress" (16 USC § 1a-1). Despite these mandates, the Organic Act and its amendments afford the NPS latitude when making resource decisions that balance resource preservation and visitor recreation. By these acts, Congress "empowered [the NPS] with the authority to determine what uses of park resources are proper and what proportion of the parks resources are available for each use" (*Bicycle Trails Council of Marin v. Babbitt*, 82 F.3d 1445, 1453 [9th Cir. 1996]).

Because conservation remains predominant, the NPS seeks to avoid or to minimize adverse impacts on park resources and values. However, the NPS has discretion to allow impacts on park resources and values when necessary and appropriate to fulfill the purposes of a park (NPS 2006, sec. 1.4.3). While some actions and activities cause impacts, the NPS cannot allow an adverse impact that would constitute impairment of the affected resources and values (NPS 2006). The Organic Act prohibits actions that permanently impair park resources unless a law directly and specifically allows for those actions (16 USC 1a-1). An action constitutes an impairment when its impacts "harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values" (NPS 2006). To determine impairment, the NPS must evaluate "the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts" (NPS 2006).

National Parks Omnibus Management Act of 1998

The National Parks Omnibus Management Act (NPOMA) (16 USC 5901 et seq.) underscores NEPA and is fundamental to NPS park management decisions. Both acts provide direction for articulating and connecting the ultimate resource management decision to the analysis of impacts, using appropriate technical and scientific information. Both also recognize that such data may not be readily available; therefore, the acts provide options for resource impact analysis should this be the case.

NPOMA directs the NPS to obtain scientific and technical information for analysis. The NPS handbook for DO-12 states that if “such information cannot be obtained due to excessive cost or technical impossibility, the proposed alternative for decision will be modified to eliminate the action causing the unknown or uncertain impact or other alternatives will be selected” (NPS 2006 sec 4.4).

National Trails System Act

Passed by Congress in 1968, the NTSA (16 USC 1241 et seq.) authorizes a national system of trails divided into four categories of national trails. This legislation seeks to provide additional outdoor recreational opportunities and to promote preservation of access to outdoor areas and historic resources.

The NTSA recognizes a lead federal agency for the administration and management of each trail. However, this act also recognizes the involvement of a variety of partners including other federal agencies, state and local agencies, American Indian Tribes, local communities, and private landowners. This legislation also underlines the importance of volunteer involvement in the development and maintenance of national trails and directs the NPS to encourage volunteer efforts.

Redwood National Park Act of 1978, as Amended

All national park system units are to be managed and protected as parks, whether established as a recreation area, historic site, trail, or any other designation. This act states that the NPS must conduct its actions in a manner that will ensure no “derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress.”

Code of Federal Regulations, 1992

Title 36, Chapter 1 of the CFR provides the regulations “for the proper use, management, government, and protection of persons, property, and natural and cultural resources within areas under the jurisdiction of the NPS.” (16 USC 3).

Americans with Disabilities Act and Architectural Barriers Act Guidelines

Pursuant to the Americans with Disabilities Act of 1990 and the Architectural Barriers Act of 1968, all public buildings, structures, and facilities must comply with specific requirements related to architectural standards, policies, practices, and procedures that accommodate people with hearing, vision, or other disability; and other access requirements. Public facilities and places must remove barriers in existing buildings and landscapes, as necessary and where appropriate. The NPS must comply with Architectural Barriers Act Accessibility Standard (ABAAS) as well as Americans with Disabilities Act standards for this project.

Endangered Species Act of 1973, as Amended

This act requires all federal agencies to consult with the secretary of the interior on all projects and proposals that have the potential to impact federally endangered or threatened plants and animals.

EXECUTIVE ORDERS/ DIRECTOR'S ORDERS

Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

On February 11, 1994, President Clinton issued Executive Order 12898. This order directs agencies to address environmental and human health conditions in minority and low-income communities to avoid the disproportionate placement of any adverse effects from federal policies and actions on these populations.

Executive Order 11593 – Protection and Enhancement of the Cultural Environment

This executive order directs the NPS to support the preservation of cultural properties and to identify and nominate to the NRHP cultural properties within the park and to “exercise caution . . . to assure that any NPS-owned property that might qualify for nomination is not inadvertently transferred, sold, demolished, or substantially altered.”

Director's Order 17: National Park Service Tourism

The purpose of DO-17 is to promote and support sustainable, responsible, informed, and managed visitor use through cooperation and coordination with the tourism industry. It is in each park unit's best interest to work with the tourism industry. Tourism can help provide park funding as well as contribute to the local and regional economies. However, NPS managers must take into account the negative as well as positive impacts of tourism on the park and park neighbors.

DO-17 states that through planning efforts, the NPS must seek to “provide cost-effective park visitor orientation and information services to visitors in parks and, as funding and partnerships allow, at the visit planning stage, at park gateway communities, and at appropriate threshold locations within park units.” These planning efforts can address park facilities and maintenance needs as well as long-term, tourism-related trends.

Director's Order 38: Real Property Leasing

DO-38 applies to the leasing of NPS real property under the authority of 36 CFR Part 17 and 36 CFR Part 18. It supersedes any conflicting guidance with respect to leasing, including section 5.3.3 of NPS *Management Policies 2001*, which became obsolete when Part 18 of the CFR was adopted.

Director's Order 42: Accessibility for Visitors with Disabilities in National Park Service Programs and Services

DO-42 approaches the issue of accessibility in a comprehensive, organized way, rather than on a project-by-project basis. The primary goal of the program is to develop and coordinate a system-wide, comprehensive approach to achieving the highest level of accessibility that is reasonable, while ensuring consistency with the other legal mandates of conservation and protection of the resources that the NPS manages. Since 1980, the NPS has been working with accessibility coordinators in each regional office, and in parks and program offices, to: (1) assess the level of accessibility of various parks; (2) identify the barriers to accessibility; (3) develop policies and guidelines regarding appropriate methods and techniques for improving access; and (4) provide technical assistance and in-service training on effective approaches and program implementation. When providing facilities, rather than employing design principles for only a portion of the population, the NPS employs the principles of universal design for everyone, including those persons with invisible disabilities such as cardiac and respiratory problems, those who have temporary disabilities such as broken arms or legs, and parents with strollers and wheeled devices.

Director's Order 45: National Trails System

The purpose of this legislation is to clarify the designation and categorization of the components of the National Trails System and to give guidance for how trails are assigned, managed, and maintained. DO-45 seeks to create consistency in how units of the National Trail System are managed and administered. All management decisions and actions of the Trail must follow the guidelines set forth in this document.

Director's Order 77: Natural Resource Protection

The purpose of this document is to provide guidance to park managers for all planned and ongoing natural resource management activities. Managers must follow all federal laws, regulations, and policies. This document provides the guidance for park management to design, implement, and evaluate a comprehensive natural resource management program that will guide other management decisions so park resources are not impaired.

DO-77 directs park management to make decisions, such as where to build facilities, based on knowledge of the park resources and their conditions. A program of natural and social science research including inventory and monitoring should be conducted to help facilitate and provide an accurate scientific basis for management decisions. Managers must establish baseline conditions to be able to monitor or detect changes resulting from management decisions.

Director's Order 77-2: Floodplain Management

DO 77-2 was issued in response to Executive Order 11988, Floodplain Management. This order applies to all proposed NPS actions that could adversely affect the natural resources and functions of floodplains or increase flood risks. This includes those proposed actions that are functionally dependent upon locations in proximity to the water and for which non-floodplain sites are not practicable alternatives.

Director's Order 89: Acquisition and Management of Leased Space

This document describes program policies and procedures governing the acquisition, utilization, and disposal of leased space for official use by park units and other NPS organizational elements. This DO provides background on the basic procedures of the General Services Administration in their dealings with customer agencies, which are available in the CFR, Subchapter C - Real Property (41 CFR 102-71 through 102-85), policies and procedures controlling the acquisition of real property by lease. The General Services Administration has lead authority and responsibility within the federal government for leasing space to meet the needs of civilian agencies.

LOCAL PLANS

Overmountain Victory National Historic Trail Comprehensive Management Plan (1982)

In September 1982, the NPS completed the Overmountain Victory National Historic Trail CMP, prepared pursuant to Section 5(c) of the NTSA. The plan specifies objectives and practices to be observed in the management of the trail including the identification of all significant natural, historical, and cultural resources to be preserved; details of anticipated cooperative agreements to consummated with state and local governmental agencies or private organizations; and the process to be followed by the Secretary of the Interior to implement the marking requirements of the act.

City of Morganton, Mission 2030 Plan: A Vision for Economic Success (Comprehensive Plan)

The City of Morganton completed its comprehensive plan in 2009. This plan sets out policies and goals by which the city will manage its large programs, and guides land use, zoning, transportation, parks and recreation, and other related issues. This document details the plans for developing and expanding the

Catawba River Greenway, the current northernmost terminus of which is the site of one of the HQ/VCS alternatives, and parts of which are certified as Overmountain Trail segments.

City of Marion, NC, Comprehensive Plan

There is currently no working comprehensive plan for the City of Marion. The city is in the process of writing a comprehensive plan (City of Marion, Cotton, pers. comm. 2010).

McDowell County Greenway Master Plan

This plan guides the alignment and development of the McDowell Trail Greenway, which will run along the Catawba River in Marion and McDowell counties. The trail is planned to link several historic sites and properties adjacent to the river, and provide recreational opportunities for residents and visitors. It will eventually connect to trails in adjoining Burke and Buncombe counties.

Master Plan for Catawba Meadows Park

This plan lays out the ultimate configuration for Catawba Meadows Park, a large regional recreational facility in Morganton, NC, and the site for two of the HQ/VCS alternatives. This plan shows locations of park access roads, ball fields, parking, comfort stations, stream restoration areas, the Catawba Greenway Trail, and other amenities.

NPS MANAGEMENT POLICIES 2006

The NPS *Management Policies 2006* (NPS 2006) is the basic NPS-wide policy document, adherence to which is mandatory unless specifically waived or modified by the NPS director or certain departmental officials, including the secretary of the interior. Actions under this FS/EA are in part guided by these management policies. Sections which are particularly relevant to the proposed visitor center are described below.

Section 4.1.3 - Evaluating Impacts on Natural Resources

The NPS will ensure that the environmental costs and benefits of proposed actions are fully and openly evaluated before taking implementing actions that may impact the natural resources of parks. The process of evaluation must include public engagement; the analysis of scientific and technical information in the planning, evaluation, and decision-making processes; the involvement of interdisciplinary teams; and the full incorporation of mitigation measures and other principles of sustainable park management.

Section 4.6.34 – Water Quality

The NPS will avoid, whenever possible, the pollution of park waters (or in this case, waters on or adjacent to the NPS property) by human activities occurring within and outside the parks. The Service will work with appropriate governmental bodies to obtain the highest possible standards available under the Clean Water Act for the protection; take all necessary actions to maintain or restore the quality of surface waters within or adjacent to the parks or park property consistent with the Clean Water Act and all other applicable federal, state, and local laws and regulations; and enter into agreements with other agencies and governing bodies, as appropriate, to secure their cooperation in maintaining or restoring the quality of park water resources.

Section 4.6.4 - Floodplains

The NPS will manage for the preservation of floodplain values; minimize potentially hazardous conditions associated with flooding; and comply with all other federal laws and executive orders related to the management of activities in flood-prone areas, including Executive Order 11988 (Floodplain Management). NPS will protect, preserve, and restore the natural resources and functions of floodplains;

avoid the long- and short-term environmental effects associated with the occupancy and modification of floodplains; and avoid direct and indirect support of floodplain development and actions that could adversely affect the natural resources and functions of floodplains or increase flood risks. Where avoidance of floodplains is not possible, the NPS will ensure that structures and facilities are designed to be consistent with the intent of the standards and criteria of the National Flood Insurance Program (44 CFR Part 60).

Section 4.8.2.4 - Soil Resource Management

The NPS will actively seek to understand and preserve the soil resources of parks and to prevent, to the extent possible, the unnatural erosion, physical removal, or compaction of soils. Management actions will be taken to prevent or minimize adverse impacts to soils. These actions include obtaining adequate soil survey information, soil conservation, and to every extent possible, avoiding soil excavation.

Section 9.1.1.2 - Integration of Facilities into the Park Environment

Whenever feasible and authorized by Congress, major park facilities—especially those that can be shared with other entities—should be developed outside park boundaries. The NPS will encourage the private sector to meet facility needs in gateway communities and thus contribute to local economic development, encourage competition, increase choices for visitors, and minimize the need for in-park construction. Where possible, appropriate, and authorized, the NPS will cooperatively establish and maintain administration/information facilities with other federal, state, or local entities.

Section 9.1.1.5 - Siting Facilities to Avoid Natural Hazards

The NPS will strive to site facilities where they will not be damaged or destroyed by natural physical processes. Natural hazard areas include sites with unstable soils and geologic conditions, fault zones, thermal areas, floodplains, flash-flood zones, fire-prone vegetation, and coastal high-hazard areas. In areas where dynamic natural processes cannot be avoided, developed facilities should be sustainably designed.

When it has been determined that facilities must be located in such areas, their design and siting will be based on (1) a thorough understanding of the nature of the physical processes; and (2) avoiding or mitigating the risks to human life and property, and the effect of the facility on natural and physical processes and the ecosystem.

Section 9.1.3 - Construction

The NPS will incorporate sustainable principles and practices into design, siting, construction, building materials, utility systems, recycling of all unusable materials, and waste management. Best management practices will be used for all phases of construction activity, including preconstruction, actual construction, and post-construction. Although construction of new assets is often a viable alternative for meeting visitor needs or protecting resources, the NPS will consider non-build alternatives to meet its needs. The non-build alternative is developed and evaluated as part of the early facility planning and design process.

Section 9.2.2.7 - National Trails

Several components of the National Trails System which are administered by the NPS have been designated as units of the national park system. These trails are therefore managed as national park areas and are subject to all the policies contained in *Management Policies 2006*, as well as to any other requirements specified in the NTSA.

With all trails, the NPS will cooperate with other land managers, nonprofit organizations, and user groups to facilitate appropriate trail use in accordance with the laws and policies applicable to such trails, and to the extent that trail management and use would not cause unacceptable impacts.

Section 9.3.1 - Informational and Interpretive Facilities

Informational and interpretive facilities may be provided to assist park visitors in appreciating and enjoying the park and understanding its significance, provided the facilities can be developed without impairing the park's natural or cultural resources.

Section 9.3.1.3 - Visitor Centers

When necessary to provide visitor information and interpretive services, visitor centers may be constructed at locations identified in approved plans. To minimize visual intrusions and impacts on major park features, visitor centers will generally not be located near such features. Where an in-park location would create unacceptable environmental impacts, authorization should be obtained to place a visitor center outside the park.

Visitor centers are not substitutes for personal or self-guided, on-site interpretation. They will be constructed only when it has been determined that indoor media are the most effective means of communicating major elements of the park story and that a central public contact point is needed.

As appropriate, a visitor center may include information services, sales of educational materials and theme-related items, audiovisual programs, museums, museum collections storage, exhibits, and other staffed or self-help programs and spaces necessary for a high-quality visitor experience. Additionally, the need for restrooms, drinking fountains, and other basic visitor requirements will be considered during the planning and design stage. The size and scope of all visitor centers will be evaluated using the Visitor Center Planning Model or similar tool before submitting any visitor center project to the director for approval.

ISSUES AND IMPACT TOPICS

NEPA regulations require an "early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action." To determine the scope of issues to be analyzed in depth within this FS/EA, meetings were conducted with NPS staff, interested stakeholders, and members of the public. An internal scoping meeting was held with the NPS in February 2009 at the Overmountain HQ. Subsequently in November 2009, a series of public meetings were also held. At these meetings, several issues were identified that required further analysis in this document.

Issues describe problems or concerns associated with current impacts from environmental conditions or current operations as well as problems that may arise from the implementation of any of the alternatives. Park staff identified potential issues associated with the siting or construction of the Trail HQ/VCS during internal scoping. The NPS' primary concern is to ensure that any alternative considered will allow for minimal disturbance of resources and meet project objectives and selection criteria. The issues and concerns identified during scoping were grouped into impact topics that are discussed in "Chapter 3: Affected Environment" and are analyzed in "Chapter 4: Environmental Consequences."

Park Management and Operations

Impacts related to park management and operations could result from both the construction and daily operation of the new HQ/VCS. Relocation of the current park headquarters to any of the proposed sites could help maximize efficiency of response time to all segments of the Trail. In addition, the new structural design would potentially maximize efficiency of building maintenance and operations over the expected life of the building; therefore, this resource area was addressed as an impact topic in this FS/EA.

Visitor Use and Experience

The proposed HQ/VCS would result in impacts to visitor use and experience by providing a VCS. All of the proposed sites would have easy access to major transportation routes, provide a convenient venue for trail-wide consultations and meetings, and facilitate interpretive displays and presentations with proximity to Trail resources. As a result of the potential impacts to visitor use and experience that would occur from all alternatives, this resource area is addressed as an impact topic in this FS/EA.

Socioeconomics

NEPA requires an analysis of impacts to the human environment, including economic, social, and demographic elements in the affected area. Construction activities associated with the proposed actions may bring minimal increases in employment opportunities for the construction workforces and revenues for local businesses. Implementation of the proposed actions could affect the surrounding community's economy by attracting more visitors and in turn affecting the community's overall income and employment base. The proposed actions could also change land use and potentially impact local business or other agencies; therefore, this resource area is addressed as an impact topic in this FS/EA.

Land Use

NPS *Management Policies 2006* provides for the protection of parklands, federal lands, and privately owned land adjacent to park units. The proposed actions could potentially alter the existing land use of the selected sites; therefore, this resource area is addressed as an impact topic in this FS/EA.

Floodplains

Executive Order 11988: Floodplain Management provides for the protection of floodplain values, while NPS DO 77-2: Floodplain Management (NPS 2003) provides the NPS with requirements for implementing the executive order. Two of the proposed sites are within the Federal Emergency Management Agency's (FEMA) 100-year floodplain and could potentially be impacted by the siting of the HQ/VCS; therefore, this resource area is addressed as an impact topic in this FS/EA.

Soils

The construction of an HQ/VCS at any of the proposed sites would involve excavation and movement of soils. In addition, several of the sites require vegetation removal, which could potentially lead to soil erosion. As a result of these potential impacts to soil resources at the proposed sites, this resource area is addressed as an impact topic in this FS/EA.

Water Resources

Three of the proposed sites are located in the Catawba River basin adjacent to the river, although on different reaches. Two of the sites have drainage swales leading from the proposed HQ/VCS location to the water body. The proposed actions at all four sites have potential to impact water resources; therefore, this resource area is addressed as an impact topic in this FS/EA.

Vegetation

The proposed construction of an HQ/VCS at any of the alternative sites would involve vegetation removal and relocation of a variety of vegetation types including shrubs, trees, and turf; therefore, this resource area is addressed as an impact topic in this FS/EA.

Wildlife and Habitat

The proposed sites for the HQ/VCS contain some riparian buffers that can provide habitat for wildlife and migratory birds. Although the disturbance of these areas for the proposed project would be limited, there

would be some disturbance, and other projects could also affect wildlife habitat; therefore, wildlife habitat is addressed as an impact topic in this FS/EA.

Archeological Resources

Archeological resources have been found in previous surveys and assessments on or adjacent to two of the proposed sites. The proposed actions would involve construction and excavation that could potentially impact these resources; therefore, this resource area is addressed as an impact topic in this FS/EA.

Historic Sites and Structures

One of the proposed sites has a home of historic significance onsite, although there is evidence that it is not eligible for the NRHP, while another of the alternatives is adjacent to a home listed on the NRHP. Both are identified by the Trail's 1982 CMP as non-federal historic resources that are directly or indirectly related to the Trail, and both are certified sites of the Trail (NPS 1982). The construction of an HQ/VCS on either of these sites would potentially impact these historic resources; therefore, this resource area is addressed as an impact topic in this FS/EA.

IMPACT TOPICS DISMISSED FROM FURTHER ANALYSIS

Several impact topics that originated from the NPS Environmental Screening Form, or that were initiated during the scoping process, were initially considered for analysis in this FS/EA but were eliminated from further analysis following discussions with the park staff and public scoping input.

Air Quality and Climate Change

Impacts of the siting of the proposed HQ/VCS on air quality and climate change would be mainly due to emissions of nitrous oxides and carbon dioxide from the burning of fuel from vehicles and construction equipment. However, the proposed HQ/VCS would follow Leadership in Environmental Excellence and Design principles, reducing emissions. These emissions could cause increases in "greenhouse gases" that contribute to global climate change by trapping heat from solar radiation in the lower atmosphere. Most of the observed global temperature increase can be attributed to human activities that contribute heat-trapping "greenhouse gases" to the atmosphere (IPCC 2007). However, emissions associated with construction of the HQ/VCS would be negligible in comparison to other local and regional sources of greenhouse gas emissions. Therefore, this impact topic was dismissed from further analysis.

Environmental Justice

On February 11, 1994, President Clinton issued Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." This order directs agencies to address environmental and human health conditions in minority and low-income communities to avoid the disproportionate placement of any adverse effects from federal policies and actions on these populations. Local residents may include low-income populations, and there is a significantly larger minority population in Morganton in comparison with the surrounding county population, but effects are not expected to be adverse, and these populations would not be particularly or disproportionately affected by the proposed HQ/VCS; therefore, this impact topic was dismissed from further analysis.

Ethnographic Resources

Ethnographic resources are defined by the NPS as any "site, structure, object, landscape, or natural resources feature assigned traditional, legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it" (NPS 1998). In this analysis, the NPS' term "ethnographic resources" is equivalent to the term "Traditional Cultural Property," which is more widely used in cultural resource management. A Traditional Cultural Property is generally eligible for inclusion in the National Register "because of its association with cultural practices or beliefs of a living

community that are rooted in that community's history, and which are important in maintaining the continuing cultural identity of the community" (NPS 1998). Guidance for the identification of ethnographic resources is found in National Register Bulletin 38, Guidelines for Evaluating and Documenting Traditional Cultural Properties (NPS 1998). No properties on or near the candidate sites meet the definition of a Traditional Cultural Property; therefore, this impact topic was dismissed from further analysis in this document.

Geohazards

Geologic constraints that might affect a project include avalanche zones, slide areas, and earthquake zones. There are no known geohazards within the project area; therefore, this impact topic was dismissed from further analysis.

Geology

Section 4.8 of NPS *Management Policies 2006* states that the NPS will maintain, preserve, and protect geologic resources as integral components of the park's natural system. There are no unique geologic features within the project area and no geologic constraints that would affect the proposed actions; therefore, this impact topic was dismissed from further analysis.

Hazardous Waste

One of the alternatives involves renovation, removal of additions, and adaptive reuse of a structure that was altered in the middle to late decades of the twentieth century. Because of the age of this structure and its additions, it is likely to contain special hazards such as lead-based paint (LBP) and asbestos containing materials (ACM). Before initiating any demolition activities, the potential of environmental impacts related to ACM and LBP would be evaluated and addressed as specified in the appropriate regulatory requirements. Demolition that involves LBP or ACM would be evaluated for compliance with the Occupational Safety and Health Administration standard at 29 CFR Part 1926.62; U.S. Environmental Protection Agency and Housing and Urban Development standards; and state and federal regulations. Measures to control airborne asbestos and lead dust would be implemented. All work would be performed by certified and licensed contractors. Hazardous materials would be disposed of at a licensed facility in accordance with applicable regulations. No adverse effects would be anticipated; therefore, this impact topic was dismissed from further analysis.

Museum Collections

None of the proposed actions would have any direct effect upon recognized museum collections (historic artifacts, natural specimens, and archival and manuscript material); therefore, this topic was dismissed from further analysis.

Prime Farmland

Prime farmland is defined as land with the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and which is also available for these uses. Prime farmland is protected under the Farmland Protection Policy of 1981 to minimize the extent to which federal programs contribute to the unnecessary or irreversible conversion of farmland to nonagricultural uses. There are no known prime farmland soils occurring in the vicinity of the proposed sites; therefore, this impact topic was dismissed from further analysis.

Public Health and Safety

The proposed alternatives would have no impacts to visitor and employee safety upon completion. There could be potential impacts to visitor and employee safety during construction. However, none of the sites have pre-existing employee facilities. Although several of the sites have visitor attractions nearby,

barriers, signs, and announcements would be used to divert the public from potentially dangerous situations at the construction site. In addition, construction workers and employees would follow an approved health and safety plan which would incorporate all applicable regulations. As a result, any potential adverse impacts would be negligible; therefore, this impact topic was dismissed from further analysis.

Threatened, Endangered, Rare, and Special Concern Species

Early in the Feasibility Study process, it was unclear if there would be any species of concern on the alternative sites, although none were expected, as there was no apparent supporting habitat for the species listed. All of the sites for the action alternatives are in urban/suburban settings. Consultation with the U.S. Fish and Wildlife Service (USFWS) and the North Carolina Natural Heritage Program, which occurred after the CBA/VA report published in Appendix B was completed, confirmed that there are no rare, threatened, or endangered species or habitat known or expected to occur at the proposed sites. Correspondence with these agencies may be found in Appendix A. There are South Carolina species of concern in Kings Mountain National Military Park, but not in the vicinity of the existing Trail headquarters and there would be no change to the exterior at the Kings Mountain site. This topic has therefore been dismissed from further analysis in this FS/EA.

Wetlands

Although there was original concern about wetlands on some of the proposed alternative sites, research of National Wetland Inventory maps, soil maps, and the site visit shows no potential wetlands in the project areas using the NPS definition of wetlands. This resource topic was therefore dismissed from further analysis.

IMPAIRMENT

According to NPS *Management Policies 2006*, an action constitutes an impairment when an impact “would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values” (NPS 2006, sec. 1.4.5). Whether an impact meets this definition depends on the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts. An impact on any park resource or value may constitute an impairment, but an impact would be more likely to constitute an impairment to the extent that it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park or to the opportunity for enjoyment of the park; or
- identified as a goal in the park’s general management plan or other relevant NPS planning documents

Impairment findings are not necessary for park management and operations, visitor use and experience, socioeconomics, and land use, because impairment findings relate to park resources and values. However, these impact areas are not generally considered to be park resources or values according to the Organic Act, and cannot be impaired the same way that an action can impair park resources and values. A draft impairment determination for the NPS preferred alternative is provided in Appendix A of this document. Park resources considered in this determination include floodplains, soils, water resources, vegetation, wildlife habitat, archeological resources, and historic sites and structures. A final impairment determination will be provided in the decision document developed on the findings of this FS/EA.

CHAPTER 2: ALTERNATIVES AND FEASIBILITY

INTRODUCTION

NEPA requires that federal agencies explore a range of reasonable alternatives. The alternatives under consideration must include the “no action” alternative as prescribed by 40 CFR 1502.14. Any alternative analyzed must meet the management objectives of the park, either wholly or partially, while also meeting the purpose of and need for the project.

Project alternatives may originate from the proponent agency, local government officials, or members of the public. Alternatives may also be developed during the early stages of project development at public meetings or in response to comments from coordinating or cooperating agencies.

This chapter describes the range of alternatives considered, which includes a discussion of the feasibility of locating an HQ/VCS on each site.

DESCRIPTION OF ALTERNATIVES

The alternatives in this document are the result of internal scoping and public scoping and include the feasibility analysis of four prospective sites for the new Trail HQ/VCS as well as the no action alternative, which is the continued use of the existing Trail HQ.

The impacts on the four proposed sites and their respective surrounding areas have been assessed based on the potential construction and operation of the Trail HQ/VCS rather than on a specific configuration or layout of site components and landscape features. The feasibility of each site has been based on its suitability to accommodate an HQ/VCS of approximately 5,000 gross square feet (it is estimated that between 4,800 and 5,100 gsf would be necessary). The facility would house office space, meeting space, storage for equipment, and visitor contact and comfort facilities. In addition, it would also provide parking space for 24 vehicles and five buses and/or recreational vehicles.

As an element common to each action alternative, in the short-term, the NPS would vacate their current HQ and move into temporary leased space near the selected site while the HQ/VCS is under construction. It is assumed that no exterior changes would be necessary for the leased properties and that adequate parking and other site needs would be provided as part of the lease.

Consideration of Potential Sites

As stated in chapter 1, the purpose of the proposed action is to provide an HQ/VCS facility to accommodate the functions associated with the expanding regional presence of the Trail including centralized space for staff offices, meetings, storage, support, educational and interpretive exhibits, and special events. The centralized location would enable efficiencies in park management and operations and visitor use and experience.

To support the purpose and need of the project, the NPS identified numerous sites on the basis of several factors, including the ability of the site to provide:

- proximity to the Trail or important Trail resources;
- access to major transportation routes or hubs;
- opportunities for visitor enjoyment;
- improved management and operations for the Trail, to some extent through the location of the new facility in a more centralized location on the Trail; and
- opportunities to strengthen partnerships and community relations.

Initial Sites Considered

The alternatives selection process began with a public comment period on October 29, 2009, and lasted through December 18, 2009. In November 2009, the NPS held a series of public meetings at various places along the Trail: Elizabethton, TN; Marion, NC; Morganton, NC; and Gaffney, SC. The purpose of these meetings was to solicit input on the proposed locations to be analyzed in the FS/EA. Over 400 comments were submitted by individuals, organizations, and government representatives, the majority of which articulated support for siting the new HQ/VCS in the commenter's local community.

Over the duration of the public comment period, the NPS received 18 proposals for sites to be considered for the new HQ/VCS. The NPS evaluated each site based on how well it met the purpose, need, and objectives of the project. Of the 18 proposals received, NPS dismissed several sites from further consideration because they did not satisfy the purpose and need statements or objectives. These sites were too far from the geographic center of the Trail and would not significantly reduce inefficiencies in park management. The sites that were dismissed in the preliminary round of consideration are noted with an asterisk (*) below:

- Muster Ground Site, Abingdon, VA*
- Abingdon Technical Park, Abingdon, VA*
- Abingdon Artisan Center, Abingdon, VA*
- Sycamore Shoals State Historic Area, Elizabethton, TN*
- Eastern Trailhead Recreational Center, Elkin, NC*
- Joseph McDowell House, Marion, NC
- Lake James State Park, Burke County, NC
- Quaker Meadows House, Morganton, NC
- Property adjacent to Quaker Meadows House, Morganton, NC
- Catawba Meadows Park, Morganton, NC
- Overmountain Vista, Morganton, NC
- Rocky Ford Access, Morganton, NC
- Bellevue Plantation, Morganton, NC
- Pleasant Hill Baptist Church, Rutherford County, NC*
- Historic Ruth School, Rutherford County, NC*
- Old Mill Spring School, Polk County, NC*
- Land Tract - SR-11/I-85, Gaffney, SC*
- Textile Mill, Gaffney, SC*
- Cherokee Historical Society Museum, Gaffney, SC*

Following the conclusion of the public comment period in February 2010, the NPS held a Choosing by Advantages/Value Analysis (CBA/VA) workshop to evaluate the remaining site proposals and to recommend four alternatives to be evaluated in this FS/EA. The NPS determined that the cost and ease of procuring the property was a paramount criterion in establishing a viable alternative. Those sites that presented a potential financial or legal challenge to NPS were considered less desirable and eliminated from further consideration. During this round of NPS evaluation, certain sites (Lake James State Park, Overmountain Vista, and Bellevue Plantation) were dismissed from further analysis since they did not have good access to major transportation hubs or the cost of procurement would have been prohibitive. Following NPS deliberation, and in addition to the no action alternative, four potential sites were carried forward for further analysis as the action alternatives within this FS/EA. These sites are the Joseph McDowell House property in Marion, the site next to the Quaker Meadows House in Morganton, the field at the entrance to Catawba Meadows Park in Morganton, and the Rocky Ford Access site, also in Morganton. During the site visit, Quaker Meadows House was dropped from consideration because of the challenges of adaptively reusing the NRHP-listed property to meet the needs of the NPS. The small parcel adjacent to the house and museum remained available and was carried forward for further

consideration, however, since it met all of the objectives and criteria except that it was available to the NPS for a fair market value.

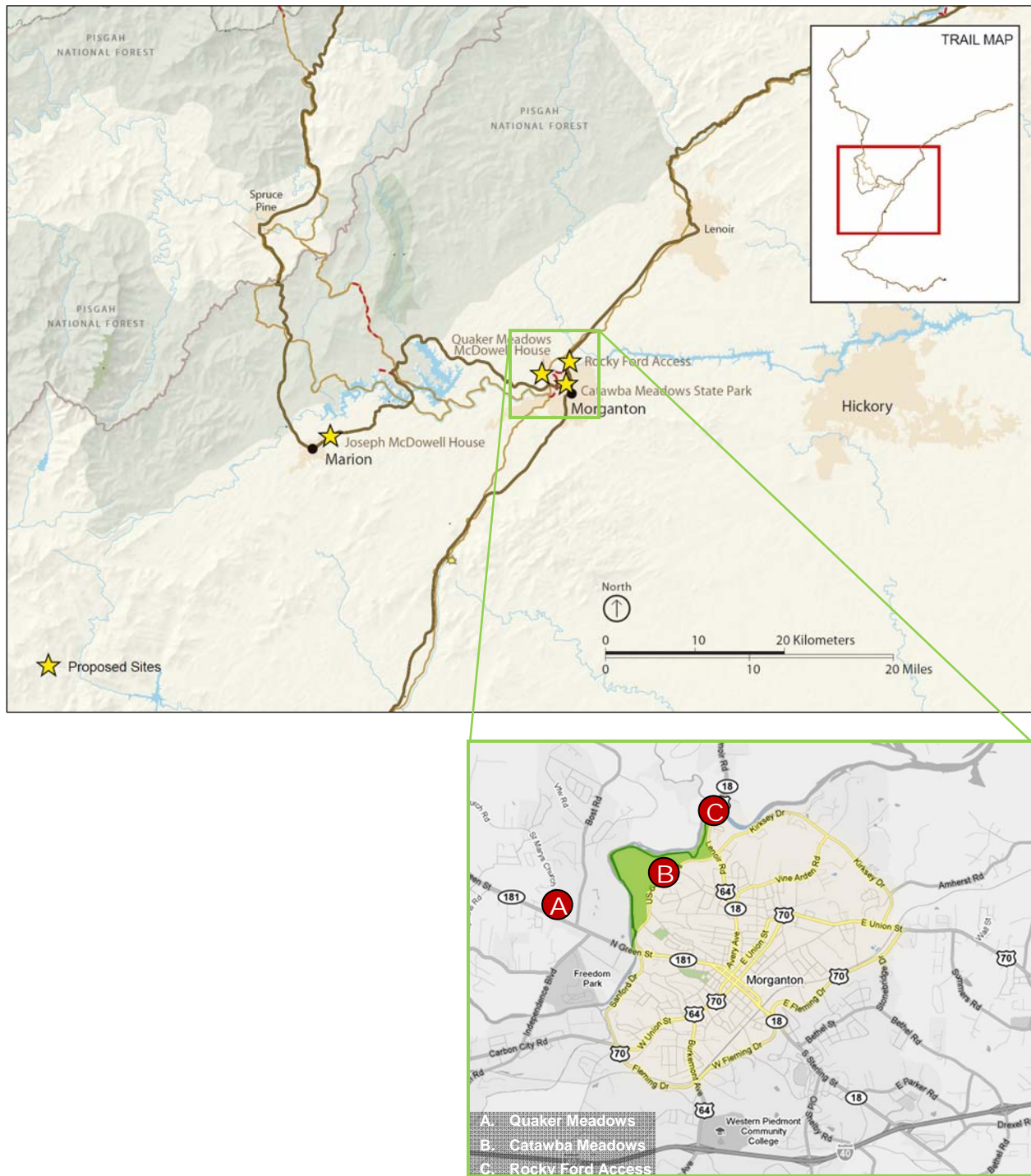
ALTERNATIVE 1: NO ACTION ALTERNATIVE

Under the no action alternative, the existing loaned office space at Kings Mountain National Military Park would continue to be used as the Trail HQ, and no VCS would be built. The Trail would continue to use various facilities along the 330-mile-long trail for interpretive opportunities and to store supplies. The existing educational and interpretive exhibits at the Kings Mountain National Military Park and at a U.S. Forest Service facility in Nebo, NC, would continue to serve as the Trail's only formal presence outside the HQ.

THE ACTION ALTERNATIVES

The four proposed sites include the Rocky Ford Access (Morganton, NC); Catawba Meadows Park (Morganton, NC); parcel next to the Quaker Meadows House (Morganton, NC); and Joseph McDowell House (Marion, NC). These sites are shown in the context of the Trail in Figure 2.1.

Figure 2.1 – Action Alternative Sites



ALTERNATIVE A: JOSEPH McDOWELL HOUSE, MARION, NC

Location

The Joseph McDowell House is a 2,400-gsf structure located on a 4.09-acre site located along the North Fork of the Catawba River and U.S. Highway 70 West, approximately 0.1 mile from the intersection with Highway 221 in Marion, NC.

Proximity to Trail resources

Historically known as Pleasant Gardens, the house was built in 1787 by Colonel Joseph McDowell, the founder and namesake of McDowell County and a prominent figure in the Battle of Kings Mountain (NPS 1982).

The site is located on the CMR for the Overmountain Trail. In the Trail's 1982 CMP, the house was identified as one of 34 non-federal historical resources which are directly or indirectly related to the Trail. The 1982 CMP also recommends the house as a potentially certifiable segment and/or site of the Trail (NPS 1982). In September 2008, the Joseph McDowell House was dedicated as an official site of the NPS Overmountain Victory National Historic Trail (McDowell County Tourism Development Authority 2009).

The county has identified the property as a future access point for the McDowell Greenway Trail that will run along the river.

Land Ownership

The Joseph McDowell House is currently owned and operated by McDowell County through an inter-local agreement between McDowell County Tourism Authority, the City of Marion, NC, and McDowell County, NC. At present, the house has been leased to a local business and nonprofit organization, while the county considers renovations to restore and renovate the property (McDowell County Tourism Development Authority 2009).

Adjacent Land Use

The property is located in a commercial area between two fast food restaurants. It is zoned C-2, or General Commercial.

Site Feasibility

The site is principally constrained by its location within the 100-year and 500-year floodplains (see figure 2.3). The property is entirely within a regulated floodplain, mostly the 100-year floodplain, although an embankment at the rear of the property is in the 500-year floodplain before falling away to the river. In addition, there is also a potentially significant archeological site present. As a result, any new development that exceeds the current footprint of the existing buildings could be problematic. Nevertheless, the property represents a viable location for the placement of the new HQ/VCS and its size would adequately accommodate the program elements.

The development of this site would necessitate the restoration of the existing house and adaptive reuse of the interior for NPS administrative functions. Approximately 2,500 additional gsf of new construction would be required onsite to support the remaining NPS program. There are several additions currently attached to the rear (north) of the house that would be demolished prior to construction. The additional new construction would fit within the footprint of these existing structures, probably the eastern addition, to minimize impacts to the existing floodplain. Parking and driveways would also be placed in the floodplain, and would be finished with porous paving to minimize impacts to the floodplain, and also provide some opportunities for stormwater to recharge.

Figure 2.2 – Joseph McDowell House

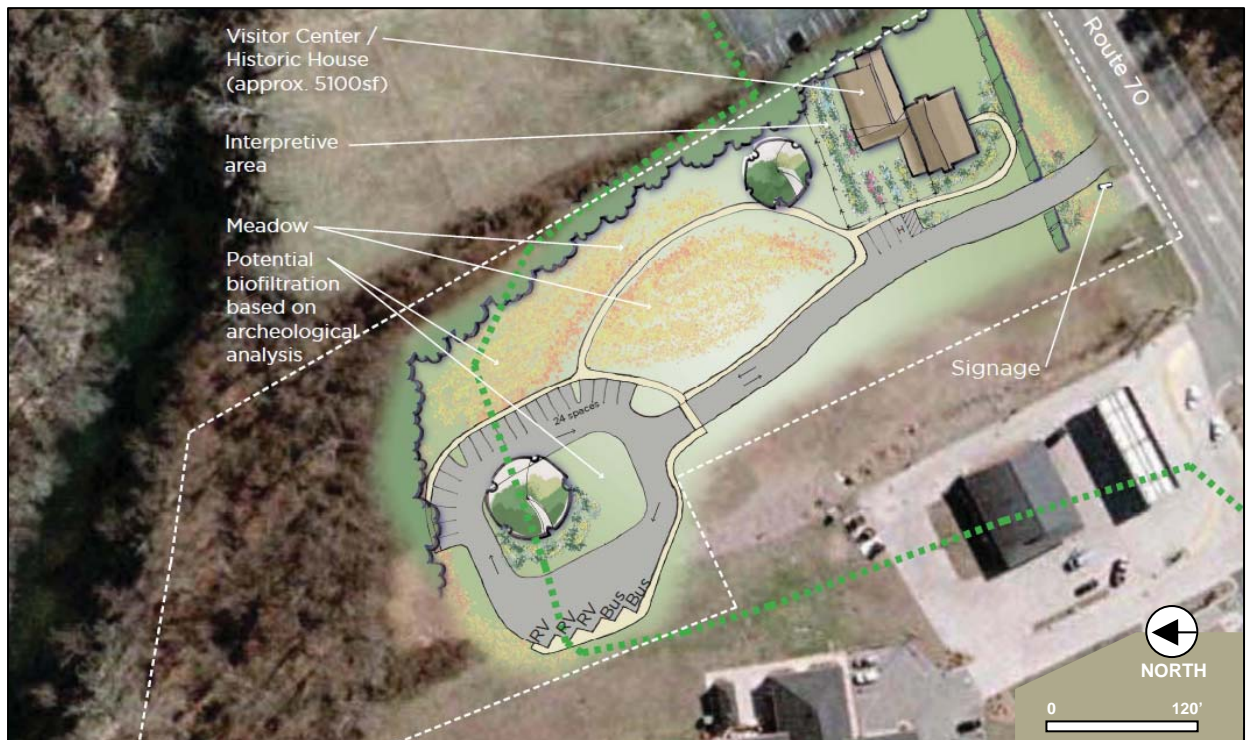


Primary access to and from the site would be from the east off U.S. Highway 70, with parking to the west of the property. Because of the embankment, the site slopes upward toward the north so any new development in that area would require some grading to maintain positive drainage. On-site stormwater management would be implemented using biofiltration, or another similar low impact development measure appropriate to the site. Biofiltration is a stormwater management approach that treats stormwater on site, and uses vegetation and underlying porous media such as sand to attenuate runoff volume and remove pollutants. It is one of several approaches considered to be “low impact development” approach.

Figure 2.3 – Joseph McDowell Site Diagram



Figure 2.4 – Feasibility Study for Proposed HQ/VCS at the Joseph McDowell Site



ALTERNATIVE B: SITE ADJACENT TO QUAKER MEADOWS HOUSE, MORGANTON, NC**Location**

This 2.75-acre parcel is located at the intersection of NC 181 and St. Mary's Church Road in Morganton, Burke County, NC.

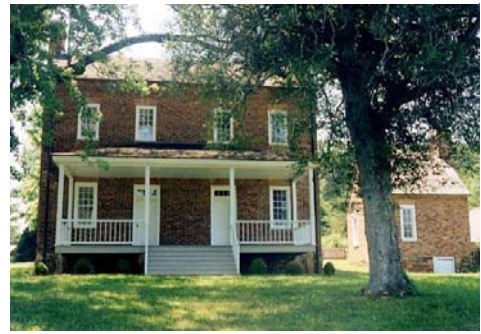
Proximity to Trail resources

The Quaker Meadows House, or Quaker Meadows McDowell House, a certified site on the Trail, is located on the adjacent parcel to the north of the parcel being considered for development as the HQ/VCS. The Quaker Meadows House is listed on the NRHP, and was built in 1812 by Colonel Charles McDowell, Jr. The site is historically significant because on September 30, 1780, Colonel Charles McDowell, Major Joseph McDowell, and other Overmountain Men convened on the property prior to marching to the Battle of Kings Mountain (NPS 1982).

The Quaker Meadows House itself was dismissed as a possible alternative at the site visit, as the office and visitor contact uses needed by the NPS would be incompatible with the current use of the property as a museum, and modern improvements to the house needed for these functions would be difficult to achieve in keeping with the Secretary of Interior's Standards (NPS 1992).

The Trail's 1982 CMP lists the house and site as non-federal historical resources that directly relate to the Overmountain Victory National Historic Trail (NPS 1982). The Quaker Meadows House is currently owned and operated by the Historic Burke Foundation, Inc. and is open to the public on Sunday afternoons from 2:00 p.m. to 4:00 p.m. from April to November (HBF, Inc. 2010).

Figure 2.5 – Quaker Meadows House

**Land Ownership**

It is currently owned by Reliant Power and is available to the NPS at fair market value.

Adjacent Land Use

The property is currently undeveloped and is adjacent to low-density commercial development and the Quaker Meadows House. The parcel is zoned HI, or Heavy Industrial.

Site Feasibility

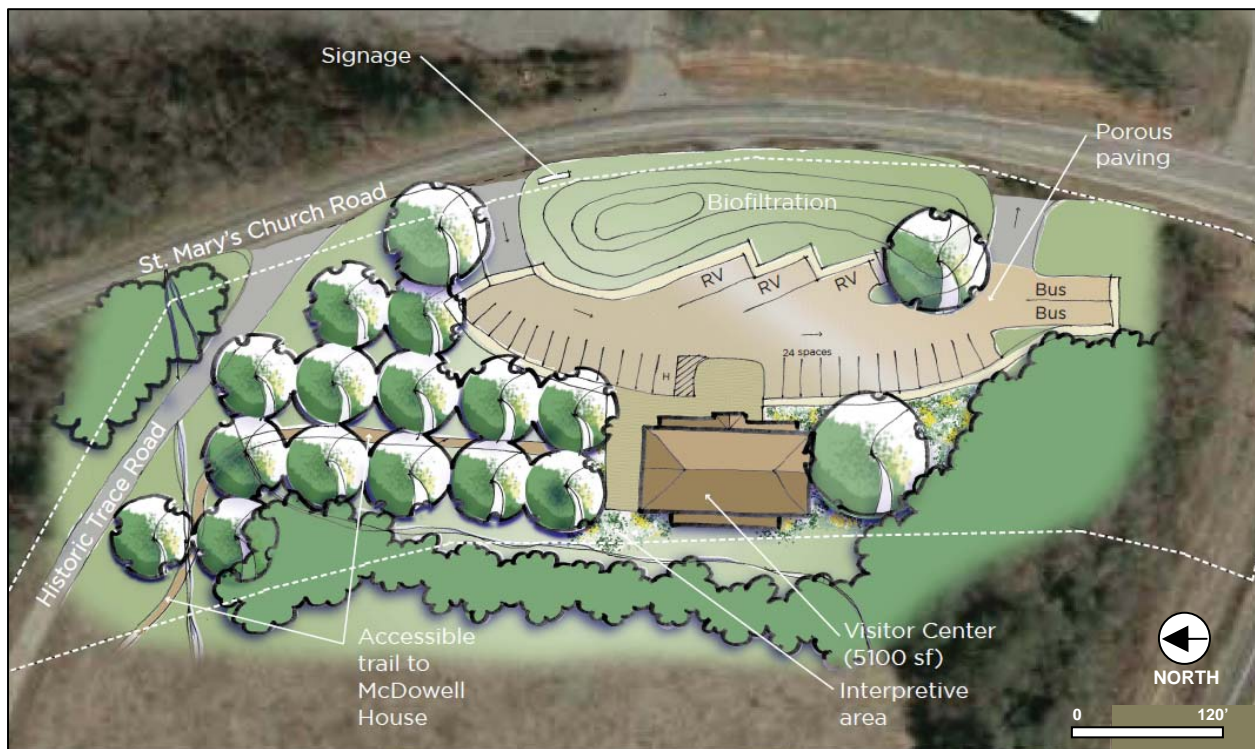
The site is relatively flat and currently undeveloped, but traces of its former use as a dairy distribution facility still remain (mainly two concrete pads) and would be demolished prior to any new construction. There are no other natural or manmade site constraints that would impede development. As a result, the property represents a viable location for the placement of the new HQ/VCS, and its size would adequately accommodate the program elements.

The development of this site would necessitate the new construction of a 5,100-gsf building, access road, parking area, and landscaped interpretive area. On-site stormwater management would be implemented using biofiltration.

Figure 2.6 –Site Diagram for Parcel Next to Quaker Meadows House



Figure 2.7 – Feasibility Study for Proposed HQ/VCS at the Quaker Meadows Site



ALTERNATIVE C: CATAWBA MEADOWS PARK, MORGANTON, NC**Location**

The proposed site is located in Morganton, NC, along the banks of the Catawba River within Catawba Meadows Park, a 200-acre regional recreational park. The site is approximately 5.7 acres and is located adjacent to the main entrance of the park (City of Morganton 2009). The remainder of the park is being developed as a regional facility for softball and baseball.

Proximity to Trail Resources

The site is adjacent to the Catawba River Greenway (Greenway) recreational trail, which runs along the river through the park. A 2.5-mile section of the greenway has been designated as a non-motorized portion of the Trail. The Greenway runs along the river where the Overmountain Men forded the river before gathering at the Quaker Meadows estate in the valley below the original Quaker Meadows House.

Land Ownership

The site is owned by the City of Morganton and would be provided to NPS at no cost; maintenance costs would be shared.

Adjacent Land Use

The property is located in Catawba Meadows Park, a recreational area that includes ball fields, picnic areas, rental cabins, playgrounds, and an extensive trail system connecting to the Greenway, an extensive bike and pedestrian path network with nearly four miles of paved, accessible trails, and planned extensions. The parcel is zoned RL-MF, or low density residential/multi-family. There is no recreational or park zone in Morganton. Nearby properties are large-lot residential.

Site Feasibility

The site is located immediately inside the main entrance of Catawba Meadows Park which is accessed off the US 64 bypass (Sanford Drive). The offered site is currently undeveloped and used as a recreational playing field. There is a low fence around the perimeter of the site on the sides adjacent to the road and entrance drive into the park. There are no other natural or manmade site constraints that would impede development. As a result, the property represents a viable location for the placement of the new HQ/VCS, and its size would adequately accommodate the program elements. There is a North Carolina Clean Water Management Trust Fund conservation easement on the entire park parcel that stipulates no more than 10% of the park property may be impervious surface (North Carolina Clean Water Management Trust Fund, Smith, pers. comm. 2010).

The development of this site would necessitate the new construction of a 5,100-gsf building, access road, parking area, and landscaped interpretive area. The site would be accessed via a new access road off the Catawba Meadows Park entrance road (see figure 2.9). On-site stormwater management would be implemented using biofiltration.

Figure 2.8 –Catawba Meadows Park Site Diagram



Figure 2.9 – Feasibility Study for Proposed HQ/VCS at the Catawba Meadows Park Site



ALTERNATIVE D: ROCKY FORD ACCESS, MORGANTON, NC (PREFERRED ALTERNATIVE)**Location**

The Rocky Ford Access site is approximately 6 acres on the banks of the Catawba River in Morganton, NC, along US 64/NC 18, and adjacent to the bridge.

Proximity to Trail Resources

The site is part of the same property as Catawba Meadows Park, although it was acquired separately by Morganton, and serves as the northernmost trailhead for the Catawba River Greenway trail. At this location, the Greenway is part of the established pedestrian trail segments and the CMR of the Trail.

Land Ownership

The site is owned by the City of Morganton and would be provided to NPS at no cost.

Adjacent Land Use

The property is located within the boundaries of Catawba Meadows Park. The parcel is zoned RL-MF, or low-density residential/multi-family. The property across US 64/NC 18 is a large, continuing care retirement community.

Site Feasibility

The site is currently undeveloped and partially wooded to the west, with an unpaved parking area for access to the Greenway trail to the east. Access to the site is provided off a steep unpaved road from US 64/NC 18 to the south. The western portion of the property is very steep and would require extensive grading and site clearing prior to any construction. The site may require relocation of the entrance by several yards, and the addition of acceleration/deceleration lanes on the road to ensure safety. There are no other natural or manmade site constraints that would impede development. As a result, the property represents a viable location for the placement of the new HQ/VCS, and its size would adequately accommodate the program elements.

The development of this site would necessitate the new construction of a 5,100-gsf building, access road, parking area, and landscaped interpretive area (see figure 2.11). On-site stormwater management would be implemented using biofiltration.

A state law requires a 50-foot buffer to the mainstem of the Catawba and the lakeshores from Lake James downstream. The buffer would only be required under this law should construction of the HQ/VCS be determined to be a change in land use by local authorities (NCDENR 2004), although NPS would provide a buffer to mitigate impacts to wildlife habitat, and water quality, and as recommended by the USFWS in its consultation response.

Figure 2.10 – Rocky Ford Access Site Diagram



Figure 2.11 – Feasibility Study for Proposed HQ/VCS at the Rocky Ford Access Site



MITIGATION MEASURES FOR ALL ALTERNATIVES

The NPS places strong emphasis on avoiding, minimizing, and mitigating potentially adverse environmental impacts. To help ensure the protection of natural and cultural resources and the quality of the visitor experience, the following protective measures would be implemented as part of the selected action alternative. The NPS would implement an appropriate level of monitoring throughout the construction process to help ensure that protective measures are being properly implemented and are achieving their intended results.

Visitor Use, Experience, and Safety

- Public information would be made available on the Trail website and on signs in the nearby areas to inform visitors of temporary closures of resources within the project area.
- Construction workers and employees would follow an approved health and safety plan which incorporates all applicable regulations.
- Barriers and signs would be used around construction sites to divert the public from potentially dangerous situations.

Land Use

- The planning and design will conform to applicable state and local land regulations and ordinances related to land use.

Floodplains

- Placement of the HQ/VCS structure will occur outside the floodplain to protect against risk of harm to life and property. Should that not be possible, as with Alternative A, the Joseph McDowell House property, design will mitigate impacts to the floodplain and risk to life and property from flooding by constructing above the Base Flood Elevation and minimizing adverse changes to the floodplain. Parking and pedestrian walkways would also be located outside the floodplain to the extent possible, and finished with a pervious surface that would not affect floodplain function. Approval for unavoidable disturbance in the floodplain associated with Alternative A would be sought from the NPS director in keeping with NPS *Management Policies 2006*.
- Site grading and improvements will be designed to prevent reconfigurations that introduce adverse changes to floodplain function.

Soils

- During construction, exposed soils will be covered with plastic sheeting, jute matting, erosion netting, straw, or other suitable cover material to prevent soil erosion and movement during rain or wind events.
- Erosion-containment controls such as silt fencing and sediment traps (e.g., hay bales) will be used to contain sediment onsite.
- Best management practices for erosion and sediment control, such as silt fencing, use of hay bales and sediment ponds, and other measures appropriate to the site will be employed during and after construction, including stabilization and revegetation after construction is completed.
- Replacement soil, which would be brought in from elsewhere, should not come from pristine sites and should be salvaged, in accordance with NPS policy.

Water Resources

- Site design will include stormwater quality and quantity management to protect water quality.

- To mitigate against short-term adverse effects during construction, sediment and erosion control measures will be implemented to prevent sediment runoff into adjacent water bodies or nearby storm sewers.
- Riparian buffers will be planted to the extent possible to enhance shoreline stability, provide some filtration of runoff, and provide shade by the river, which helps prevent thermal problems for aquatic wildlife and enhances aquatic habitat. The preference by USFWS in their consultation correspondence is for 100-foot-wide buffers on perennial streams and rivers, and 50-foot-wide buffers on intermittent streams, which will be followed to the extent possible.

Vegetation

- Trees removed to accommodate the HQ/VCS at any of the sites would be replaced within the project area. Tree species for replacement trees would be native or historically appropriate.
- The NPS will protect the root zones of mature trees within the construction zone by placing fencing around the perimeter of the trees to prevent heavy equipment from compacting the roots or causing damage to the bark.
- Invasive non-native vegetation will be removed and replaced with native and historically appropriate plantings within the project area.

Wildlife Habitat

- Riparian buffers will be planted to the extent possible to protect and enhance wildlife passage corridors along the river, to provide shade for aquatic wildlife, and to serve as a source of coarse woody debris, which also enhances aquatic habitat.

Cultural Resources

- Consultation with the NC State Historic Preservation Officer (SHPO) will continue through the design process to ensure that sites are surveyed and adverse impacts are minimized and mitigated.

PREFERRED ALTERNATIVE

Section 5.4 (d) of the CEQ requires the park to identify a preferred alternative in the FS/EA if one has been identified. The preferred alternative is the alternative the NPS believes would best accomplish its goals, objectives, and purpose and need. In selecting a preferred alternative, the NPS must consider the associated impacts to natural, cultural, and other resources.

To select a preferred alternative, the NPS held a CBA/VA workshop in May 2010 to evaluate a variety of factors that contribute to the ability of each site to best fulfill the purpose, need, and objectives of the project. CBA/VA workshops and follow up cost analyses ensure that all viable project alternatives are considered, the evaluation criteria are sound, the selected solutions are cost-effective, an independent opinion is provided, and all proposed alternatives satisfy basic project objectives.

The Joseph McDowell House was not selected as the preferred alternative for several reasons. Given the extent of floodplain on the property and the potential for archeological resources, it presented the most site development constraints of all the properties. In addition, because the Joseph McDowell House would need to be restored in order to work well for the NPS as an HC/VCS, all while maintaining the integrity of the site and providing protection to life and property from flooding, it also presented the most design challenges of the alternatives. The site otherwise generally met the five criteria used in the CBA/VA workshop to identify advantages of each alternative:

- **Proximity to the Trail or important Trail resources:** The site is relatively distant from the historic Trail (approximately 15 miles), although the CMR is only several hundred yards away and the Joseph McDowell House is itself a certified site on the Trail.

- **Good access to major transportation routes or hubs:** The property is close to major transportation routes, including being several hundred yards from US 221, a divided highway bypass around Marion.
- **Opportunities for visitor enjoyment:** Opportunities for visitor enjoyment are mixed: a restored Joseph McDowell House would add an amenity and interpretive opportunity that would be very enjoyable for visitors, and the completion of the McDowell Greenway at the back of the property would provide additional opportunities for visitor enjoyment. The surrounding commercial development would detract from visitor enjoyment, as aromas and noises from the drive-throughs at these businesses could be intrusive.
- **Improved management and operations for the Trail:** The site, like all the action alternatives evaluated, is centrally located allowing for improved management and operations for the Trail by greatly reducing the superintendent's travel time.
- **Opportunities to strengthen partnerships and community relations:** There would be opportunities to strengthen partnerships and community relations, particularly with the City of Marion, McDowell County, McDowell County Tourism Office, and other communities on the central portion of the Trail. The central location of this and the other alternative sites would allow for easier contact with communities throughout the extent of the Trail, and could foster increased and improved relations along the length of the Trail.

The property adjacent to the Quaker Meadows House was not selected as the preferred alternative, primarily because it is available to the NPS for fair market value, and would not be available to the NPS at no cost, and the combination of purchase of the property and construction expenses are expected to be greater than construction costs at Rocky Ford Access, which offers similar benefits as the property next to Quaker Meadows, and access to more trail resources. The site otherwise has many of the same or greater benefits as the other alternatives in Morganton.

- **Proximity to the Trail or important Trail resources:** The site is approximately 2 miles from a certified trail segment and the CMR. The Quaker Meadows House on the adjacent property is a certified site on the Trail.
- **Good access to major transportation routes or hubs:** The property is close to major transportation routes, including being approximately 2 miles from US 64, and 8 miles from Interstate 40.
- **Opportunities for visitor enjoyment:** Opportunities for visitor enjoyment are good at this site: The site is adjacent to Quaker Meadows, a certified site and museum, and the area around the park is still suitable for park-like enjoyment, although the area is very commercial. The site is convenient to Morganton, and the proposed extensions to the Catawba River Greenway would come within a half mile of the site, along Bost Road.
- **Improved management and operations for the Trail:** The site, like all the action alternatives evaluated, is centrally located, allowing for improved management and operations for the Trail by greatly reducing the superintendent's travel time.
- **Opportunities to strengthen partnerships and community relations:** There would be opportunities to strengthen partnerships and community relations, particularly with the City of Morganton, Burke County, and other communities on the central portion of the Trail. The central location of this and the other alternative sites would allow for easier contact with communities throughout the extent of the Trail, and could foster increased and improved relations along the length of the Trail.

The Catawba Meadows Park site was not selected as the preferred site as it did not present as many advantages as the Rocky Ford Access site. The park has been designed as a recreational sports facility, which would provide a much less compatible park-like experience for a National Historic Trail than is available at Rocky Ford Access. Otherwise the sites are similar:

- **Proximity to the Trail or important Trail resources:** The site is approximately 2 miles from a certified trail segment and the CMR, and is adjacent to the Quaker Meadows House, which is a certified site on the Trail.
- **Good access to major transportation routes or hubs:** The property is close to major transportation routes, including being approximately 2 miles from US 64, and 8 miles from Interstate 40.
- **Opportunities for visitor enjoyment:** Opportunities for visitor enjoyment are good at this site: The site is adjacent to Quaker Meadows, a certified site and museum, and the area around the park is still suitable for park-like enjoyment. The site is convenient to Morganton, and the proposed expansions to the Catawba River Greenway would come within a half mile of the site.
- **Improved management and operations for the Trail:** The site, like all the action alternatives evaluated, is centrally located, allowing for improved management and operations for the Trail by greatly reducing the superintendent's travel time.
- **Opportunities to strengthen partnerships and community relations:** There would be opportunities to strengthen partnerships and community relations, particularly with the City of Morganton, Burke County, and other communities on the central portion of the Trail. The central location of this and the other alternative sites would allow for easier contact with communities throughout the extent of the Trail, and could foster increased and improved relations along the length of the Trail.

The Rocky Ford Access site was selected as the preferred alternative site because the site has the best opportunities for visitor enjoyment, it is closest to the most Trail resources, and it is available to the NPS at no cost. In addition, the site does not have significant constraints to development and it meets the five principal criteria for site selection developed at the CBA/VA workshop.

- **Proximity to the Trail or important Trail resources:** The site is located along the Trail's CMR and the Catawba Greenway, which currently terminates on the site and is a publicly accessible pedestrian segment of the Trail. The Overmountain Men likely crossed the Catawba River close to this site on their march to Kings Mountain. Rocky Ford Access is also close to the Quaker Meadows House, another certified site on the Trail.
- **Good access to major transportation routes or hubs:** The site is within the Morganton city limits and is located on US 64, Lenoir Road, which is a major arterial road through Morganton and leads north and west to Elkin, NC, one end of the Trail. Interstate 40 and US 70 also serve the area, passing through Morganton approximately 6.5 miles south of the Rocky Ford Access site.
- **Opportunities for visitor enjoyment:** The site affords numerous opportunities for visitor enjoyment, given the scenic view across the river from the site, the proximity of the Catawba River Greenway, and the convenient location to Morganton. The site also allows the potential for excellent interpretive opportunities.
- **Improved management and operations for the Trail:** The site, like all the action alternatives evaluated, is centrally located, and will allow for improved management and operations for the Trail by greatly reducing the travel time of park to other parts of the Trail.
- **Opportunities to strengthen partnerships and community relations:** The site, like all the action alternatives evaluated, will allow for improved management and operations for the Trail and for opportunities to strengthen partnerships and community relations, particularly with Morganton and other communities on the central portion of the Trail. The central location of this and the other alternative sites would allow for easier contact with communities throughout the extent of the Trail, and could foster increased and improved relations along the length of the Trail as a result.

THE ENVIRONMENTALLY PREFERABLE ALTERNATIVE

In accordance with DO-12 and NEPA, the NPS is required to identify the environmentally preferable alternative in its NEPA documents. CEQ defines the environmentally preferable alternative as the alternative that would promote the national environmental policy as expressed in the NEPA Section 101. This includes:

- Fulfilling the responsibilities of each generation as trustee of the environment for succeeding generations;
- Assuring for all generations safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
- Attaining the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
- Preserving important historic, cultural, and natural aspects of our national heritage and maintaining, wherever possible, an environment that supports diversity and variety of individual choice;
- Achieving a balance between population and resources use that would permit high standards of living and a wide sharing of life's amenities; and
- Enhancing the quality of renewable resources and approaching the maximum attainable recycling of depletable resources. (NEPA, Section 101)

This means that the environmentally preferable alternative is the alternative that causes the least damage to the biological and physical environment; it also means it is the alternative that best protects, preserves, and enhances historic, cultural, and natural resources.

Based on the analysis of environmental consequences of each alternative, the NPS determined that the Quaker Meadows site is the environmentally preferable alternative, as it would require the least amount of disturbance to the site (particularly in comparison to Rocky Ford Access), would result in more aesthetically and culturally pleasing surroundings than Catawba Meadows, and would best preserve important historic, cultural, and natural aspects of any of the sites by further protecting the landscape around Quaker Meadows from incompatible development. The site does not, however, meet other criteria or objectives as well as the Rocky Ford Access site; the Rocky Ford site has more direct access to trail resources, and is not available to the NPS at no cost.

HOW THE ALTERNATIVES MEET THE OBJECTIVES

The project objectives outlined in “Chapter 1: Purpose and Need,” must be achieved to a large degree for the action to be considered a success. The alternatives and options selected for detailed analysis must resolve the purpose of and need for action and meet all objectives either minimally, partially, or fully.

Table 2.1—How the Alternatives Meet the Project Objectives

Objective	No Action Alternative	Action Alternatives			
		Alternative A: Joseph McDowell House, Marion, NC	Alternative B: Site Adjacent to Quaker Meadows House, Morganton, NC	Alternative C: Catawba Meadows Park, Morganton, NC	Alternative D: Rocky Ford Access, Morganton, NC
Acquire space that will accommodate the growing Overmountain administrative functions and staff.	Does not meet this objective. There is currently room only for a single employee and inadequate meeting space in the current HQ. There is no opportunity to accommodate any interpretive functions or additional staff in the existing space.	Meets this objective. New space would accommodate growing functions and staff.	Meets this objective. New space would accommodate growing functions and staff.	Meets this objective. New space would accommodate growing functions and staff.	Meets this objective. New space would accommodate growing functions and staff.
Consolidate staff, storage, administrative functions, and maintenance operations in HQ/VCS on one site, ensuring efficient park management and operations, visitor use, and maintenance.	Does not meet this objective. There is insufficient space to consolidate all the functions necessary on one site.	Meets this objective. New space would allow for consolidation.	Meets this objective. New space would allow for consolidation.	Meets this objective. New space would allow for consolidation.	Meets this objective. New space would allow for consolidation.
Maximize efficiency for park operations and management by siting the new facility at a location that reduces travel distance for park staff from the HQ location to the other parts of the entire route.	Does not meet this objective. The existing space is at the southern terminus of the Trail and is not in a centralized location that would minimize travel time.	Meets this objective. Site is within a 25-mile radius of the geographic center of the Trail, which would maximize efficiency and access to and from all points of the Trail.	Meets this objective. Site is within a 25-mile radius of the geographic center of the Trail, which would maximize efficiency and access to and from all points of the Trail.	Meets this objective. Site is within a 25-mile radius of the geographic center of the Trail, which would maximize efficiency and access to and from all points of the Trail.	Meets this objective. Site is within a 25-mile radius of the geographic center of the Trail, which would maximize efficiency and access to and from all points of the Trail.
The selected location should have easy access to major transportation routes or hubs, and allow for better response to on-site needs than is currently available.	Partially meets this objective. The current facility is close to I-85, although this is not an efficient or direct route to reach many of the other points of the Trail.	Meets this objective. Immediate access to US 221 bypass in Marion and other points on the Trail.	Meets this objective. Access to US 64 and US 70 and other points on the Trail.	Meets this objective. Access to US 64 and US 70 and other points on the Trail.	Meets this objective. Access to US 64 and US 70 and other points on the Trail.
The site should provide a convenient venue for trail-wide consultations and meetings.	Does not meet this objective. The location at the southern terminus of the Trail makes it inconvenient for staff located closer to Abingdon, VA, or Elkin, NC. There is insufficient space in the current HQ to accommodate large meetings.	Meets this objective. Site is within a 25-mile radius of the geographic center of the Trail and would offer adequate meeting space.	Meets this objective. Site is within a 25-mile radius of the geographic center of the Trail and would offer adequate meeting space.	Meets this objective. Site is within a 25-mile radius of the geographic center of the Trail, and would offer adequate meeting space.	Meets this objective. Site is within a 25-mile radius of the geographic center of the Trail, and would offer adequate meeting space.
The site should facilitate the development of interpretive displays and the presentation of educational and interpretive programs and special events.	Does not meet this objective. There is no room to host interpretive displays or present educational or interpretive programs in the current HQ.	Meets this objective. Site would provide interior space for visitor contact and exterior interpretive areas. The Joseph McDowell House is a certified site on the Trail and therefore offers additional opportunities for interpretive programs.	Meets this objective. Site would provide interior space for visitor contact and exterior interpretive areas. The adjacent Quaker Meadows House is a certified site on the Trail and therefore offers additional opportunities for interpretive programs.	Meets this objective. Site would provide interior space for visitor contact and exterior interpretive areas.	Meets this objective. Site would provide interior space for visitor contact and exterior interpretive areas. The Catawba Greenway, which ends at this property, is a certified site on the Trail and therefore offers additional opportunities for interpretive programs.
Ensure that the selected site can accommodate the HQ/VCS in a manner that avoids or minimizes adverse impacts to environmental and cultural resources.	Meets this objective. The current HQ is in an existing space, and there would be no changes to the space.	Partially meets this objective. The structure that would be reused is within the 100-year floodplain, and there are potential archeological resources on the site. The house has historic significance, but is not eligible for listing on the NRHP.	Meets this objective. Adverse impacts to natural and cultural resources are not significant, and can be minimized.	Meets this objective. Adverse impacts to natural and cultural resources are not significant and can be minimized.	Meets this objective. Adverse impacts to natural and cultural resources are not significant and can be minimized.

[This page was intentionally left blank.]

SUMMARY OF IMPACTS

The following table provides a summary of environmental consequences for each resource area analyzed in “Chapter 4: Environmental Consequences.” Alternatives are determined to have beneficial or adverse impacts for each area of analysis, and adverse impacts are rated as negligible, minor, moderate, or major. Impacts are also assessed as to whether they are short-term (less than a year in duration) or long-term (greater than a year in duration). Threshold definitions for each topic are listed in chapter 4.

Table 2.2-Summary of Impacts (Environmental Consequences)

Resource Area	No Action Alternative	Action Alternatives			
		Alternative A: Joseph McDowell House, Marion, NC	Alternative B: Site Adjacent to Quaker Meadows House, Morganton, NC	Alternative C: Catawba Meadows Park, Morganton, NC	Alternative D: Rocky Ford Access, Morganton, NC
Park Management and Operations	<p>The no action alternative would result in long-term moderate adverse impacts to park management and operations because of the continued inefficiencies created by the distance of the current HQ to Trail resources, necessitating longer travel times and overnight trips. There would also be long-term moderate adverse impacts resulting from the lack of office space for NPS staff expansion. Long-term minor adverse impacts would result from the continued lack of space for interpretive and educational programs specifically for the Trail.</p> <p>Cumulative Impacts: There would be long-term moderate adverse cumulative impacts to park management and operations.</p>	<p>Alternative A would result in long-term beneficial impacts to park management and operations because of the increased efficiency of Trail staff to access portions of the Trail, direct the public to Trail resources, and provide educational and interpretive opportunities.</p> <p>Cumulative Impacts: There would be long-term beneficial cumulative impacts to park management and operations.</p>	<p>Alternative B would result in long-term beneficial impacts to park management and operations because of the increased efficiency of Trail staff to access portions of the Trail, direct the public to Trail resources, and provide educational and interpretive opportunities.</p> <p>Cumulative Impacts: There would be long-term beneficial cumulative impacts to park management and operations.</p>	<p>Alternative C would result in long-term beneficial impacts to park management and operations because of the increased efficiency of Trail staff to access portions of the Trail and direct the public to Trail resources.</p> <p>Cumulative Impacts: There would be long-term beneficial cumulative impacts to park management and operations.</p>	<p>Alternative D would result in long-term beneficial impacts to park management and operations because of the increased efficiency of Trail staff to access portions of the Trail, direct the public to Trail resources, and provide educational and interpretive opportunities.</p> <p>Cumulative Impacts: There would be long-term beneficial cumulative impacts to park management and operations.</p>
Visitor Use and Experience	<p>Under the no action alternative, there would be long-term minor to moderate adverse impacts to visitor use and experience as a result of the current HQ location and the lack of a centralized VCS.</p> <p>Cumulative Impacts: There would be in long-term negligible to minor adverse cumulative impacts to visitor use and experience.</p>	<p>Under alternative A, there would be long-term beneficial impacts to visitor use and experience as a result of the proposed site’s proximity to Trail resources and visitor amenities. There would also be long-term minor adverse impacts to visitor experience as a result of the visual character and noise created by the adjacent businesses.</p> <p>Cumulative Impacts: There would be long-term beneficial cumulative impacts to visitor use and experience.</p>	<p>Under alternative B, there would be long-term beneficial impacts to visitor use and experience as a result of the proposed site’s proximity to Trail resources and park-like visual character.</p> <p>Cumulative Impacts: There would be long-term beneficial cumulative impacts to visitor use and experience.</p>	<p>Under alternative C, there would be long-term beneficial impacts to visitor use and experience as a result of the proposed site’s proximity to Trail resources, segments of the Trail, and other visitor amenities. There would also be long-term minor adverse impacts to visitor experience resulting from the noise created from sporting events near the proposed site.</p> <p>Cumulative Impacts: There would be long-term beneficial cumulative impacts to visitor use and experience.</p>	<p>Under alternative D, there would be long-term beneficial impacts to visitor use and experience as a result of the proposed site’s proximity to Trail resources, segments of the Trail, and visual character.</p> <p>Cumulative Impacts: There would be long-term beneficial cumulative impacts to visitor use and experience.</p>

Resource Area	No Action Alternative	Action Alternatives			
		Alternative A: Joseph McDowell House, Marion, NC	Alternative B: Site Adjacent to Quaker Meadows House, Morganton, NC	Alternative C: Catawba Meadows Park, Morganton, NC	Alternative D: Rocky Ford Access, Morganton, NC
Socioeconomics	Under the no action alternative, there would be benefits in the form of the slight increase in economic spending in Blacksburg should visitor patronage to Kings Mountain National Military Park increase as anticipated. Cumulative Impacts: None	Alternative A would result in minor to moderate beneficial effects on local construction, retail, and business establishments. The operation of the HQ/VCS in Marion would induce jobs and spending in the local economy. Cumulative Impacts: Additional commercial activity generated by the McDowell Greenway could increase the area's economic vitality and result in long term benefits.	Alternative B would result in minor to moderate beneficial effects to local construction, retail, and business establishments. The operation of the HQ/VCS in Morganton would induce jobs and spending in the local economy. Cumulative Impacts: The benefits from the other cumulative projects would result in overall socioeconomic benefits.	Impacts from this alternative would be the same as under alternative B. Cumulative Impacts: Cumulative impacts from this alternative would be the same as under alternative B.	Impacts from this alternative would be the same as under alternative B. Cumulative Impacts: Cumulative impacts from this alternative would be the same as under alternative B.
Land Use	The no action alternative would have no impacts on land use. Cumulative Impacts: None.	Alternative A would change the land use of the Joseph McDowell House from commercial to institutional, although the new use would be compatible with adjoining properties. The result would therefore be a long-term negligible adverse impact. Cumulative Impacts: The cumulative impacts from the construction of the greenway would be long-term beneficial.	Alternative B would change the land use from undeveloped to park/institutional, and zoning from industrial to park/institutional or equivalent. There would be long-term beneficial impacts on the museum at the Quaker Meadows property, by preventing development as an industrial use. Conversion of industrial land to another use would create long-term minor adverse impacts relative to the city's planning policy. Cumulative Impacts: There would be long-term beneficial cumulative impacts from the extension of Catawba Greenway.	Alternative C would not substantially alter the land use of site in Catawba Meadows Park, so there would be no impact on land use from this alternative. Cumulative Impacts: The extension of the Catawba Greenway Trail which passes through the larger park would result in a long-term beneficial impact on land use.	Alternative D would not substantially alter the land use of site in Catawba Meadows Park, so there would be no impact on land use from this alternative. Cumulative Impacts: When considered with the extension of the Catawba Greenway Trail which passes through the larger park, there would be a long-term beneficial impact on land use.
Floodplains	The no action alternative would not affect floodplains. Cumulative Impacts: None	Restoration and adaptive reuse of the Joseph McDowell House and reconstruction of earlier additions with the application of mitigation measures such as elevation of the additional structure above the floodplain, and the use of pervious pavement, would result in long-term minor adverse impacts. Cumulative Impacts: There would be long-term minor to moderate and adverse cumulative impacts.	Construction of the HQ/VCS on the site next to the Quaker Meadows site would not affect floodplains. Cumulative Impacts: None	Construction of the HQ/VCS on the site in Catawba Meadows Park would not affect floodplains. Cumulative Impacts: None	Construction of the HQ/ VCS on the site next to the Rocky Ford Access site would not affect floodplains. Cumulative Impacts: As there are no impacts to floodplains from this alternative, there would be no cumulative impacts to the floodplain.
Soils	There would be no effects on soils resulting from implementation of the no action alternative. Cumulative Impacts: None	Soils would be disturbed for the construction of the HQ/VCS. The construction of the HQ/VCS and associated site improvements would result in short-term minor adverse effects and compaction beneath the construction footprint and site improvements would result in long-term minor impacts on soils. Cumulative Impacts: The impacts from the construction of the greenway would be the same as impacts from construction of the HQ/VCS.	Impacts to soils resources resulting from the construction of the HQ/VCS on the site adjacent to the Quaker Meadows House would be the same as for the Joseph McDowell House site, with both short- and long-term minor adverse effects from soil disturbance and compaction. Cumulative Impacts: None.	The impacts to soil resources from development of the HQ/VCS at Catawba Meadows Park would be the same as for the other alternatives. Cumulative Impacts: Impacts from the development of the remainder of the park would create short-term minor adverse impacts during construction and long-term minor to moderate impacts resulting from compaction of large areas in the park.	Rocky Ford Access would require more grading and site alterations than the other alternatives. Impacts to soil resources during construction would be long-term minor to moderate with the use of appropriate sediment and erosion control measures. Cumulative Impacts: There would be short-term minor adverse cumulative impacts related to soil disturbance and long-term minor adverse cumulative impacts related to compaction.

Resource Area	No Action Alternative	Action Alternatives			
		Alternative A: Joseph McDowell House, Marion, NC	Alternative B: Site Adjacent to Quaker Meadows House, Morganton, NC	Alternative C: Catawba Meadows Park, Morganton, NC	Alternative D: Rocky Ford Access, Morganton, NC
Water Resources	<p>There would be no impacts on water resources in Kings Mountain National Military Park from the implementation of the no action alternative.</p> <p>Cumulative Impacts: None</p>	<p>There would be impacts from erosion and sediment runoff during construction and from stormwater runoff once construction is complete. Although short-term and long-term impacts could range from minor to moderately adverse, the use of mitigation measures such as biofiltration, sediment and erosion control measures, pervious pavement, and maintenance and enhancement of riparian buffers, would limit the intensity of these impacts to minor and adverse.</p> <p>Cumulative Impacts: Together, the construction of the HQ/VCS at the Joseph McDowell House and the other projects would result in overall cumulative long-term minor adverse impacts from construction-related activities and long-term negligible to minor adverse impacts associated with additional development in the area.</p>	<p>There would be short-term minor adverse impacts on water quality mitigated to negligible during construction. The long-term effects on water quality would be minor and adverse, through the use of stormwater management measures that address both water quantity and quality, ensuring riparian buffers along the intermittent stream/drainage ditch and the use of additional measures such as pervious pavement.</p> <p>Cumulative Impacts: When considered together, there would be both short- and long-term minor impacts from increased impervious surfaces, periodic construction over time, and the potential range of stormwater management measures available to other properties.</p>	<p>The impacts on water quality would be similar to the first two alternatives, although slightly less attenuated given that there is no stream immediately on the site.</p> <p>Cumulative Impacts: Cumulative impacts would be the same as for the Quaker Meadows site. The overall cumulative impacts, when considering impacts from this analysis, would therefore be the similar to those at the site next to Quaker Meadows House.</p>	<p>Although the site would require more care in the design stages to ensure adequate mitigation than the other alternatives, due to the steeper topography of the site, the short-term and long-term impacts would be minor and adverse, similar to the Catawba Meadows site</p> <p>Cumulative Impacts: Cumulative impacts on water quality and water resources would also be minor and adverse over both the short- and the long-term.</p>
Vegetation	<p>The implementation of the no action alternative would result in no impacts to vegetation because no trees, shrubs, or grasses would be removed.</p> <p>Cumulative Impacts: None.</p>	<p>Implementation of alternative A would result in long-term minor adverse impacts to vegetation because a small amount of grass would be permanently removed. However, these adverse impacts would be mitigated by grass replanting after construction completion resulting in long-term minor adverse impacts to vegetation.</p> <p>Cumulative Impacts: There would be long-term minor adverse cumulative impacts to vegetation</p>	<p>Implementation of alternative B would result in long-term negligible adverse impacts to vegetation because several trees as well as some shrubs and grasses would be removed.</p> <p>Cumulative Impacts: There are no cumulative impact projects within the area; therefore, there would only be the long-term negligible adverse impacts resulting from the implementation of this alternative.</p>	<p>Implementation of alternative C would result in long-term minor adverse impacts to vegetation because of the removal of several pine trees and a small amount of grass. However, these long-term adverse impacts would be mitigated by landscaping and replanting for no net loss of trees after construction completion resulting in long-term negligible adverse impacts to vegetation.</p> <p>Cumulative Impacts: There would be long-term minor adverse cumulative impacts to vegetation</p>	<p>Implementation of alternative D would result in long-term minor adverse impacts to vegetation because of the removal of several trees within the proposed site. However, these impacts would be mitigated by planting trees for no net loss of trees in the area resulting in long-term negligible adverse impacts to vegetation.</p> <p>Cumulative Impacts: There would be long-term minor adverse cumulative impacts to vegetation</p>
Wildlife and Wildlife Habitat	<p>There would be no impacts on wildlife habitat at Kings Mountain associated with the no action alternative.</p> <p>Cumulative Impacts: None.</p>	<p>Implementation of alternative A would result in short-term minor adverse effects on habitat associated with construction noise, and long-term beneficial impacts on wildlife habitat through the management of exotic species and enhancement of the buffer.</p> <p>Cumulative Impacts: The cumulative impacts would drive overall impacts to wildlife habitat, resulting in overall long-term minor to moderate adverse effects on wildlife habitat with small localized long-term benefits at the site itself.</p>	<p>Development of the HQ/VCS at the site next to Quaker Meadows House would result in minor alterations to available wildlife habitat, resulting in long-term negligible adverse impacts. There would be short-term negligible to minor impacts to wildlife resulting from construction noise and site disturbance.</p> <p>Cumulative Impacts: There would be long-term negligible to moderate adverse impacts, mostly resulting from the cumulative projects.</p>	<p>Impacts on wildlife habitat from the construction of an HQ/VCS at Catawba Meadows Park would be the same as for the site at the Quaker Meadows House.</p> <p>Cumulative Impacts: There would be would be long-term minor and adverse, with some short-term negligible adverse impacts due to noise and site disturbance during construction.</p>	<p>The impacts to wildlife habitat from this project would be long-term minor adverse, with similar short-term, negligible, adverse impacts as the other Morganton sites. These long-term effects could be mitigated by removing the kudzu and replacing it with native species, establishing a riparian buffer, resulting in long-term, negligible adverse impacts to wildlife habitat at this site.</p> <p>Cumulative Impacts: There would be overall long-term minor adverse cumulative impacts to wildlife habitat associated with this alternative.</p>

Resource Area	No Action Alternative	Action Alternatives			
		Alternative A: Joseph McDowell House, Marion, NC	Alternative B: Site Adjacent to Quaker Meadows House, Morganton, NC	Alternative C: Catawba Meadows Park, Morganton, NC	Alternative D: Rocky Ford Access, Morganton, NC
Archeological Resources	Implementation of the no action alternative would result in no direct, indirect, beneficial or adverse impacts to archeological resources in the study area. Cumulative Impacts: Cumulative effects of the no action alternative on archeological resources would not occur.	Under alternative A, long-term impacts to the archeological resource would be moderate, resulting in an adverse effect to this resource. Once construction is completed, however, long-term beneficial impacts would result from efforts to protect, manage, and interpret the archeological resources located at the Joseph McDowell House. Cumulative Impacts: None.	Under alternative B, there is a moderate potential for the presence of archeological resources. Therefore, if development takes place at this alternative, there is the potential for moderate long-term impacts on any archeological resources present. If selected, an intensive archeological survey of this site is recommended. Cumulative Impacts: None	Under alternative C, there is a moderate potential for the presence of archeological resources. Therefore, if development takes place at this alternative, there is the potential for moderate long-term impacts on any archeological resources present. If selected, an intensive archeological survey of this site is recommended. Cumulative Impacts: None.	Under alternative D, there is a moderate potential for the presence of archeological resources. Therefore, there is the potential for moderate long-term impacts on any archeological resources present. If selected, an intensive archeological survey of this site is recommended. Cumulative Impacts: None.
Historic Structure and Sites	Under the no action alternative, there are no short-term impacts because no construction would occur. Long-term impacts to historic districts or structures would be negligible to minor. Cumulative Impacts: The cumulative impacts are negligible to minor adverse impacts from facility maintenance, resulting in no adverse effects.	There would be no impacts to historic districts or structures under alternative A or from any cumulative projects under consideration. Cumulative Impacts: None.	Under alternative B, the potential exists for moderate to major impacts to the Quaker Meadows House, a listed National Register property. Cumulative Impacts: There would be negligible to moderate adverse impacts to the Quaker Meadows house resulting from additional development in the area. Careful design could mitigate and reduce these impacts.	There would be no impacts to historic districts or structures under alternative C or from any cumulative projects under consideration. Cumulative Impacts: None.	There would be no impacts to historic districts or structures under alternative D or from any cumulative projects under consideration. Cumulative Impacts: None.

CHAPTER 3: AFFECTED ENVIRONMENT

SCOPE OF THE ENVIRONMENTAL ANALYSIS

The proposed HQ/VCS project for the Overmountain addresses only the site selection for the visitor center. The project assesses impacts resulting from the establishment and operation of the visitor center at each of the four proposed sites. The scope of the project does not include the actual design of the visitor center. The project assumes the design of a new visitor center will be identical regardless of the selected site with some variation in site layout dictated by unique site constraints that will affect parking and landscaping. The exception is adaptive reuse of the Joseph McDowell House and the construction of a smaller structure or addition to make up for the difference in square footage.

This chapter of the FS/EA describes existing conditions in and around the four sites that would potentially be affected by the proposed actions and the site of the existing HQ. Resource areas have been organized according to general resources and the manmade environment, natural resources, and cultural resources. Accordingly, the following resource areas are described: park management and operations; visitor use and experience, socioeconomic resources; land use; floodplains; soils; water resources; vegetation; wildlife habitat; archeological resources; and historic structures and sites. Potential impacts are discussed in the same order in “Chapter 4: Environmental Consequences.”

All of the properties selected for further analysis as action alternatives lie within a 25-mile radius of the geographic center of the historic trail. Three sites are in Morganton, in Burke County, NC, and one is in Marion, in McDowell County, NC. Leased facilities would also be located somewhere within that 25-mile radius of the geographic center of the historic trail.

For the purposes of this study, the areas of analysis are the site of the existing Trail HQ at Kings Mountain, the candidate properties in the four action alternatives, and any adjacent features of significance (water bodies, trails, historic properties, etc.) that contribute to the character or feasibility of the sites. The socioeconomic character of Blacksburg, SC (the town closest to the current HQ); Morganton, NC; and Marion, NC, are described, with particular attention being paid to the neighborhoods around the candidate sites.

PARK MANAGEMENT AND OPERATIONS

PARK MANAGEMENT

The Trail is an administrative unit of the national park system. Most segments of the Trail are owned and operated by state, local, and private owners. The NPS provides administrative oversight and coordinates between partner groups to ensure uniformity, consistency, and connectivity between Trail segments. Typically each landowner is responsible for their property's management and maintenance, but when resources, funding, or manpower are not available or are insufficient to accomplish these tasks, the NPS helps find solutions (NPS, Carson, pers. comm. 2010).

Currently, the superintendent is the only Trail staff member and is responsible for overall management decisions as well as on-site management. On-site management includes on-site inspections of Trail projects or activities, provision of interpretive materials to several partner sites along the Trail, consultation with partners and related government agencies, and participation in events relating to the commemoration of historic events along the Trail.

OPERATIONS

The current HQ for the park is at the southernmost terminus of the Trail, in Kings Mountain National Military Park. The Trail HQ shares space with Kings Mountain staff in a small house that formerly served as a residence and does not have room for multiple Trail employees. The building is not fully compliant with ABAAS and is not an energy-efficient structure.

The NPS Trail office and staff are located at the HQ. In the case of staff additions, all permanent employees would be based from the HQ (NPS Carson, pers. comm. 2010). Although many Trail activities and NPS staff duties take place at various locations along the Trail, the HQ serves as the primary location where all operational and administrative functions originate.

In order to perform on-site management, NPS staff must travel to various locations along the length of the Trail. Currently, the superintendent spends at least half his work time traveling to and working at these locations. Travel time can vary from less than an hour to as much as five hours one way depending on traffic and the distance of the location from the HQ. Often, due to the activity's distance from the HQ, an overnight trip is necessary. Travel and overnight trips are needed for a variety of reasons including, but not limited to, attendance at various planning meetings or conferences, consultation with various partners and government agencies on issues or projects that may impact the Trail, mandated reviews of projects such as cooperative agreements and compliance guidelines as required by law, and on-site inspection of Trail projects (NPS, Carson, pers. comm. 2010). In addition, special events such as the multi-week, annual Overmountain Victory Trail Association (OVTA) march, other interpretive and educational programs, government hearings, and NPS-sponsored studies often necessitate NPS travel along the Trail. At present, the superintendent spends an average of one and a half to two weeks per month on overnight travel. Since 2002, travel needs have been increasing due to the physical expansion of the Trail and its resources, as well as the resultant increase in more active partnerships (NPS, Carson, pers. comm. 2010).

VISITOR USE AND EXPERIENCE

The Overmountain Trail is a 330-mile-long, motorized and non-motorized route for public use running through VA, TN, NC, and SC. The Trail attracts a multitude of visitors for its historic significance in the Revolutionary War and for recreational purposes. The Trail consists of several motorized sections that approximate the path of the historic march as closely as possible, interspersed with several areas that can be enjoyed on foot. There are also several certified sites on or near the Trail that are associated with the OVTA march.

Visitor use describes the multiple ways in which a site is used. In this context, the Trail is used as a recreational destination, a venue for historic reenactments as well as other educational and interpretive activities, and a meeting place for the Trail's approximately 100 different partner groups and organizations.

Visitor experience is the overall perception of a place and is, in this context, informed by things such as adjacent attractions (i.e. affiliated historic sites, museums, and wayside exhibits) and public access. The aesthetics and soundscapes of a site also help inform visitor experience, influencing how a visitor perceives the site.

The key factors and considerations for aesthetics of the affected environment include the following categories:

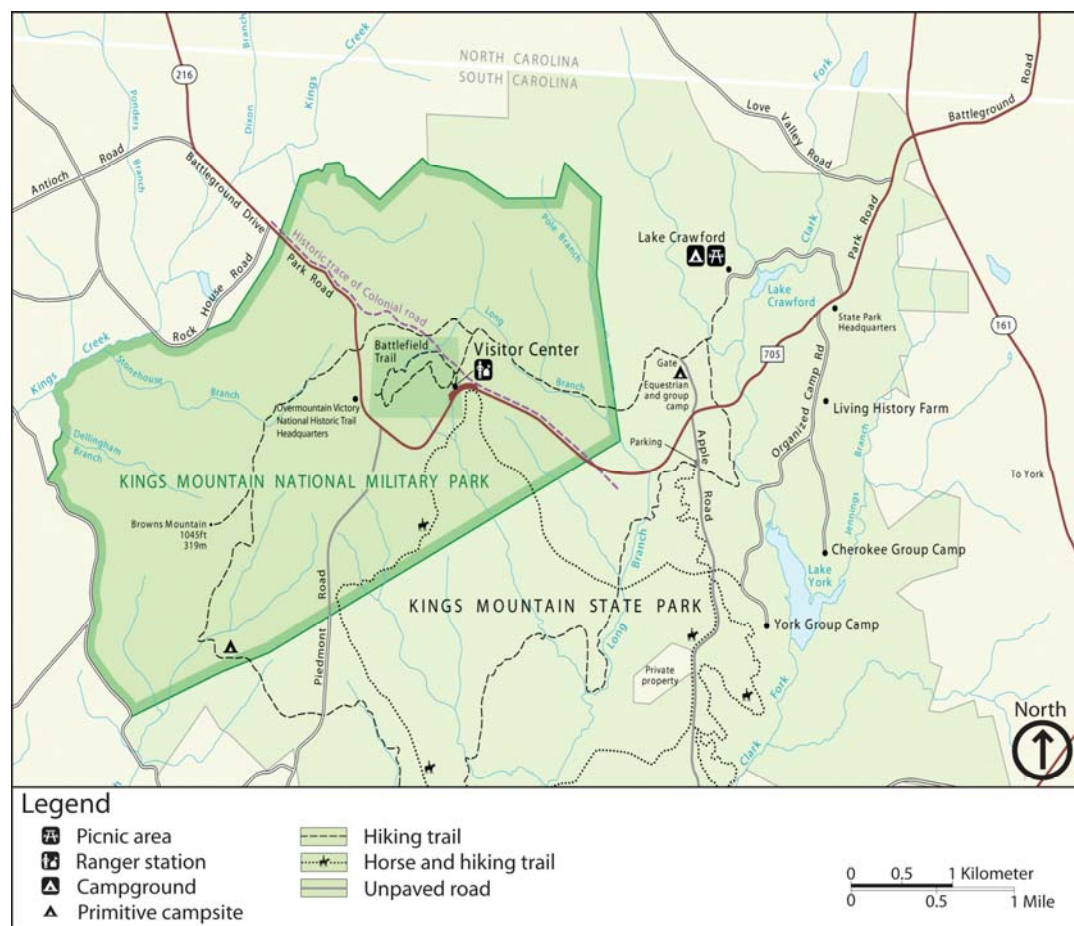
- **Visual Character** - The visual character of a site, in very general terms, is like a mental snapshot of the place. It embodies the defining and most memorable site features.
- **Views** - The term "view" describes those unplanned views that result from the construction of other features.
- **Soundscapes** - The collection of all the natural sounds that occur in the existing environment makes up the soundscape. Anthropogenic sound lies outside the natural soundscape. However, the level and frequency of human-caused sound considered acceptable varies widely among parks and depends greatly on the type of park considered.

SPECIAL EVENTS

The Trail has numerous partner groups and organizations that are involved in historic reenactments, educational and interpretive programs, and a commemorative march of the historic trail route. The OVTA hosts a two-week-long commemorative march along the walkable portions of the route to trace the Overmountain Men's 1780 campaign. Highlights of the march include special events and ceremonies. The march takes place annually for two weeks in September and October (OVTA 2010).

CURRENT TRAIL HQ AT KINGS MOUNTAIN NATIONAL MILITARY PARK, BLACKSBURG, SC

The current Trail HQ is located in loaned office space at Kings Mountain National Military Park, SC (see figure 3.1). The park commemorates the pivotal American victory in the Revolutionary War battle of Kings Mountain, fought October 7, 1780, and is the southern terminus of the Trail. The park includes a 1.5-mile trail mirroring the formation of the battle, several wayside exhibits and monuments including Patrick Ferguson's grave, and a museum. With the adjacent Kings Mountain State Park, there are 16 miles of hiking trails, horse trails, and campsites.

Figure 3.1 – Kings Mountain National Military Park Map

Currently, the Trail has no visitor's center or VCS. However, Kings Mountain National Military Park has a visitor center that offers a more in-depth look at the Battle of Kings Mountain through a museum and a 26-minute film overview of the Battle. The museum features state-of-the-art exhibits and historical artifacts, including an original Ferguson rifle (NPS 2010b).

Kings Mountain National Military Park received a total of 277,576 visitors to the Park in 2009 with visitation being the highest between June and September (NPS 2010c). Visitors come to learn about the park's history and to enjoy the recreational opportunities the park's trails, campsites, picnic areas, and fishing spots afford.

Kings Mountain National Military Park is open daily between 9:00 a.m. and 5:00 p.m., with extended weekend hours (9:00 a.m. – 6:00 p.m.) from Memorial Day through Labor Day. The park is closed Thanksgiving Day, Christmas Day, and New Years Day.

JOSEPH McDOWELL HOUSE, MARION, NC

The Joseph McDowell House, historically known as "Pleasant Gardens," was built sometime in the late 1780s by Colonel Joseph McDowell, the founder and namesake of McDowell County and a prominent figure in the Battle of Kings Mountain (NPS 1982). The house is currently owned and operated by McDowell County through an inter-local agreement between McDowell County Tourism Authority, the City of Marion, NC, and McDowell County, NC. At present, the house is under short-term lease to a local business and a local nonprofit organization that uses the addition at the rear of the building. The property

is open to the public as a commercial venue with no interpretive or educational components that highlight its historic attributes except for a small sign and Trail emblem in front of the property, seen in figure 3.2.

Fast-food establishments occupy commercial properties to the east and west of the site (see figure 3.3). The proximity to these establishments detracts from the historic visual quality of the area and creates a general visual character typical of a commercial highway interchange in a suburban to rural setting. Views from the site towards the Catawba River are obstructed by a stand of mixed hardwoods and shrubs to the north and a commercial hotel property to the northwest. The Black Mountains are visible from the site looking to the northwest beyond the commercial hotel property. The views to the east and west of the site are of the aforementioned fast-food establishments. These establishments also detract from the natural soundscape with noise from customer orders, cars, and general patronage.

SITE ADJACENT TO QUAKER MEADOWS HOUSE, MORGANTON, NC

The site adjacent to the Quaker Meadows House includes an abandoned building pad and remnants of a parking area from a previous dairy distribution operation. Public access and use is currently nonexistent. However, the Quaker Meadows House, located to the north of the site, is a certified location on the Trail, and is currently owned and operated by the Historic Burke Foundation, Inc. The house, which contains images, artifacts, and interpretive displays from the Overmountain Victory March, is open to the public on Sunday afternoons from 2:00 p.m. to 4:00 p.m. from April to November (HBF Inc. 2010). The Quaker Meadows House property also contains a VCS with a small office and restroom facilities (see figure 3.4).

Figure 3.2 – Joseph McDowell House sign (on right) and Trail emblem (on left).



Figure 3.3 – Commercial properties adjacent to the Joseph McDowell House.



Figure 3.4 – Quaker Meadows House office and restroom facilities.



The visual character of the area is that of a rural agricultural community with fields interspersed with residential and commercial structures, and small stands of trees. Views from the proposed site towards the historic Quaker Meadows House are obstructed by a line of trees on the northern border between the two properties. The views to the east and south are of a commercial property and a stand of mixed hardwoods, respectively. Several sheds, barns, and other utilitarian structures are visible to the west through a scattered stand of mixed hardwoods.

CATAWBA MEADOWS PARK, MORGANTON, NC

Catawba Meadows Park is an approximately 200-acre municipal park adjacent to the banks of the Catawba River. The park offers visitors abundant recreational and historic heritage opportunities including an extensive bike and pedestrian path network with nearly four miles of paved, accessible trails, a 2.5-mile segment of which on the Catawba Greenway is a certified segment of the non-motorized Overmountain Trail (City of Morganton 2010a). US 64/Sanford Drive, which is adjacent to the park, is part of the Overmountain CMR. Park amenities include boating access for the Catawba River, numerous sports fields and courts, picnic areas, playgrounds, and several other park amenities still in the construction phase. The park is also frequently used for youth sporting events such as baseball tournaments (Catawba Meadows Park 2009).

The candidate site for the Overmountain HQ/VCS at Catawba Meadows Park is a field currently used as a ball field surrounded by pines and mixed hardwoods, creating a visual character that is a designed recreational park interspersed with residential buildings, planted rows of trees, and stands of trees. Views from the site to the north and east are of mixed pine and hardwood stands; to the south, US 64 Bypass and a residential property; and to the west, two rows of planted pines and the park access road. The adjacent sports fields and other park amenities also add to the natural soundscape with noise from visitors and sporting events.

ROCKY FORD ACCESS, MORGANTON, NC

The proposed Rocky Ford Access site is a 6-acre parcel on a bluff above the banks of the Catawba River in Morganton, NC, along US 64 / NC 18, part of the CMR. The site is also adjacent to the trailhead of the Catawba River Greenway, an established non-motorized Trail segment. A roughly graded gravel parking area serves the trailhead with Catawba River Greenway information signs and a wayside display (see figure 3.5 and figure 3.6).

The visual character of the area is that of an informal parking lot surrounded by mixed hardwoods. There is a view of the Catawba River from the site to the west. The view east towards U.S. 64/ NC-18 is limited by the steep slope up the entranceway. The views north and south are of stands of mixed hardwoods.

Figure 3.5 – Rocky Ford Access Wayside Display.



Figure 3.6 – Rocky Ford Access Trailhead Parking Lot and Signage.



SOCIOECONOMICS

The current Overmountain HQ are located at the southernmost terminus of the Trail, in Kings Mountain National Military Park just outside of Blacksburg, SC. The four proposed locations for the new Trail HQ are located in Marion and Morganton, NC. Both NC municipalities are located closer to the historic and geographic center of the Trail.

The following section describes the current social and economic conditions of Blacksburg, SC, as well as the cities of Marion and Morganton, NC. Information presented below has been retrieved from the U.S. Census Bureau, among other sources. The municipalities in which the existing and proposed headquarters are located do not have populations large enough to be included in current American Community Survey, a division of the U.S. Census Bureau, social and economic estimates. As a result, certain social and economic indicators for these municipalities are presented using 2000 Census data. Where available, more current information is presented for the counties in which these municipalities are located.

COMMUNITY BACKGROUND AND OVERVIEW

Blacksburg, SC

The current Trail HQ are located just outside of Blacksburg, SC. Blacksburg is a small town in the rolling foothills of Cherokee County and was originally called Stark's Folly after its first settler. John Black, one of the town's residents in the late 1800s, encouraged one of the railroad companies to lay track through the town in the hope of creating more economic opportunities for the town's residents. As a result, the town later took the name of Black's Station, and when incorporated in 1888, was renamed Blacksburg.

Large amounts of iron ore were discovered in the area in the 1890s. The population grew as people moved to the area in the hope of mining the iron ore. Nicknamed the "Iron City," the town became wealthy and was the first municipality in the upstate of SC to have electric street lights. There is an Iron City festival each year to commemorate the town's founding.

The Iron City festival and local attractions such as the Kings Mountain National Military Park, Overmountain Victory National Historic Trail, and the Clingman Memorial Gardens bring a certain amount of tourism to the area. However, Blacksburg is a small town, and has only one hotel for visitors. (SCDPRT 2010)

Marion, NC

In 1843, a committee of founding fathers was charged with selecting a site for a new town. Individuals on the committee were selected to plot the new town and sell the parcels to the highest bidder. The location of McDowell County's county seat was an issue of contention among area residents. Some residents wanted it located near the Carson House at Buck Creek, several miles from its current location. After a 50-acre land donation by the Carson family and the purchase of an additional thirteen acres by the county commission, Marion was established as the county crossroads in March 1844. However, it was not officially sanctioned as the county seat until 1845 by the NC state legislature. The city was named in honor of Brigadier General Francis Marion, the Revolutionary War Hero, well known for both his service with the Continental Army and the SC militia. Marion was the furthest point west the new railroad was built and from there, buggies, horses, wagons, carriages, and stagecoaches could make their way to Buck Creek, the Carson House, and points further west.

In 1894, a large fire destroyed most of the buildings in town. Many of the structures rebuilt after the fire are listed on the NRHP and are part of the Main Street Historic District. In the late 1800s Marion became a thriving textile mill town and the Southern Railway constructed a line westward through Marion to Asheville. In 1908, the Clinchfield Railroad completed its railroad through the Blue Ridge Mountains to Marion, and Marion became the junction of the two railroads linking north to south and east to west. Three large mills were opened in Marion in the early 20th century. In addition to providing jobs, the mills

were responsible for installing water and sewer infrastructure, streets, sidewalks, parks, and homes for employees and their families. The mills are no longer operational, but the areas where these neighborhoods were located are a source of great civic pride for the community.

Marion and the surrounding area also offer a wide variety of recreational and historic opportunities. Given its proximity to many natural and manmade resources, including the Pisgah National Forest, Marion also has numerous hotels. These hotels range from small bed and breakfast establishments to larger chain establishments to accommodate periods of high demand (City of Marion 2010).

Morganton, NC

Morganton was founded in 1784 and incorporated in 1885. The county seat of Burke County, Morganton is also one of its largest cities and one of the principal cities in the Hickory-Lenoir-Morganton Metropolitan Statistical Area. Early economic drivers in the county were textile and furniture manufacturing and government services. Downtown Morganton developed as, and remains, the government, financial, entertainment and service center for the community. The city is currently undergoing a transformation as new industry sectors increase their share of the local job pool. Such sectors include healthcare, education, light industry, and tourism. Tourism attractions to the area include the Pisgah National Forest, the Brown Mountain Lights of Burke County, Catawba Meadows Park, and other natural and manmade resources. A variety of hotels can be found in the city to accommodate demand generated by both business and leisure activities in the town (City of Morganton 2009).

DEMOGRAPHIC COMPOSITION

This section describes the demographic characteristics for each of the three municipalities in the socioeconomics study area. Where data are not available on the municipal level, information for the county in which each municipality is located is presented. Included below is information on population growth since 1969, age composition, and racial and ethnic characteristics. Data has been retrieved from the U.S. Census Bureau and the U.S. Department of Commerce.

Population Trends

The largest of the study area municipalities is Morganton, located in Burke County. The municipality experienced a slight population decrease of approximately 1.6% between 2000 and 2009 (see table 3.1). Despite this decrease, Morganton remains more than twice as populated as Marion in McDowell County. Between 2000 and 2009, however, Marion experienced considerable growth, increasing by 2,055 new residents, or approximately 41.6%. Blacksburg in Cherokee County – the home of the existing Trail HQ – experienced modest growth (approximately 1.5%) during this period.

Table 3.1- Population of Study Area Municipalities

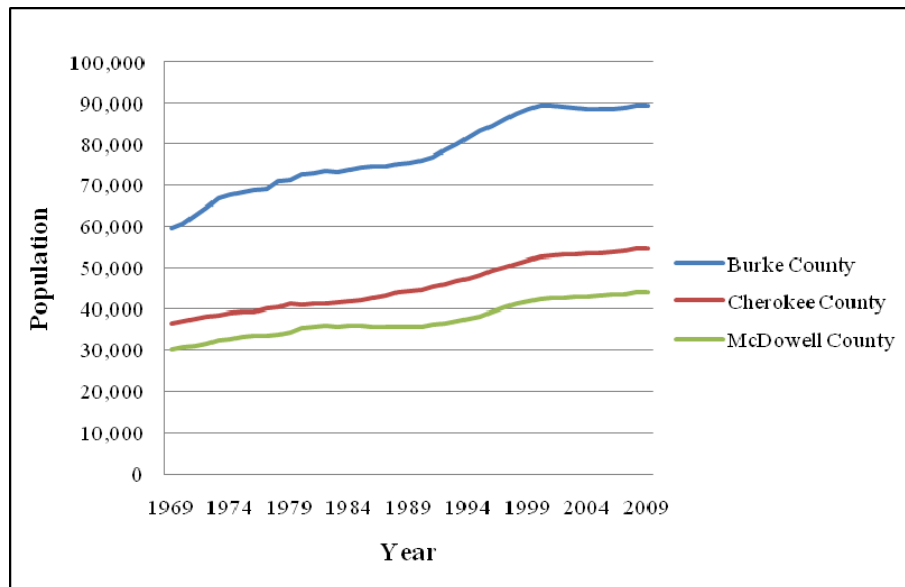
Municipality	County	2000 Census	2009 Census Estimate	% Change (2000 to July 2009)
Morganton	Burke	17,310	17,029	-1.6%
Blacksburg	Cherokee	1,880	1,909	1.5%
Marion	McDowell	4,943	6,998	41.6%

Source: U.S. Census Bureau 2010a

Historical population growth for each of the study area counties is presented below since such information is not available on the municipal level. Such growth is shown for the years 1969 through 2009 and was retrieved from the U.S. Department of Commerce and the U.S. Census Bureau.¹ As demonstrated in figure 3.7, Burke County experienced the largest population change between 1989 and 1999. During this time, the county population increased by approximately 17.1% or 12,910 residents. The population flattened out at that time, fluctuating only slightly in the first decade of the 21st century.

Annual population growth in Cherokee County between 1969 and 2009 was equivalent to approximately 1.0%. Between 2000 and 2009, the population increased by 2,049 residents, an increase of approximately 3.9%. Similarly, population growth in McDowell County was approximately 4.1% (1,740 people) during the same period. Population remained relatively unchanged or decreased slightly between 1980 and 1990.

Figure 3.7- Historical Population and Current Estimates for Study Area Counties, 1969-2009



Source: U.S. Department of Commerce, Bureau of Economic Analysis 2010a; U.S. Census Bureau 2010b

Racial and Ethnic Composition

The following presents an overview of the racial and ethnic characteristics of each of the study area municipalities as compared to the county and state in which they are located. Included is information on the presence of minority populations and those individuals who identify themselves as being of Hispanic origin. The data presented below, which is from the 2000 Census, is the most current available.

Of study area municipalities, Marion has the highest percentage of those who identify themselves as White Alone. Approximately 96.5% of Marion residents who identify themselves as White Alone do not identify themselves as being of Hispanic origin (see table 3.2). At approximately 10.5%, the presence of those who identify themselves as Black or African American Alone is considerably higher in Marion than in McDowell County (4.2%). Both are significantly lower than North Carolina as a whole. Approximately 7.0% of Marion residents identify themselves as being of Hispanic origin, while approximately 19.6%

¹ 1969 to 2008 population numbers presented in figure 3.7 were retrieved from the U.S. Department of Commerce, Bureau of Economic Analysis. 2009 county population numbers are not currently available from the Bureau of Economic Analysis. County population information is available from the U.S. Census from 2000 to 2009. A review of both data sources reveals the same population numbers for each county. As a result, 2009 U.S. Census county population estimates have been included in the figure with Bureau of Economic Analysis data.

identify themselves as being a race other than Non-Hispanic White Alone. Both percentages are notably higher than for McDowell County.

The population of Morganton is more diverse than that of Marion. Approximately 75.7 % of Morganton residents identify themselves as White Alone, of which approximately 4.0 % identify themselves as being of Hispanic origin. The presence of those who identify themselves as Hispanic White in Morganton is slightly higher than in Marion and notably higher than in Burke County. At approximately 12.8 %, the percent of the population in Morganton identifying themselves as Black or African American is almost double that of Burke County residents identifying themselves the same. Of study area municipalities and counties as a whole, Morganton has the highest percentage of those identifying themselves as Other. The presence of those identifying themselves as being of a minority and/or of Hispanic origin is considerably higher than for Burke County. The percentage of those identifying themselves as being of a minority is similar to that of North Carolina.

Table 3.2- Racial and Ethnic Composition of Study Area Municipalities, Counties, and States, 2000

Race and Ethnicity	City of Marion	City of Morganton	Burke County	McDowell County	North Carolina	Town of Blacksburg	Cherokee County	South Carolina
White Alone	83.2%	75.7%	86.0%	92.2%	72.1%	74.5%	76.9%	67.2%
Non-Hispanic White	96.5%	96.0%	98.8%	98.8%	97.3%	99.4%	99.0%	98.4%
Hispanic White	3.5%	4.0%	1.2%	1.2%	2.7%	0.6%	1.0%	1.6%
Black or African American Alone	10.5%	12.8%	6.7%	4.2%	21.6%	23.6%	20.6%	29.5%
American Indian and Alaska Native Alone	0.3%	0.6%	0.3%	0.3%	1.2%	0.2%	0.2%	0.3%
Asian Alone	1.1%	2.0%	3.5%	0.9%	1.4%	0.1%	0.3%	0.9%
Other*	4.9%	9.0%	3.5%	2.5%	3.7%	1.6%	2.0%	2.0%
TOTAL	4,943	17,310	89,148	42,151	8,049,313	1,880	52,537	4,012,012
Minority**	19.6%	27.4%	15.1%	9.0%	29.8%	26.0%	23.8%	33.9%
Hispanic Origin	7.0%	11.2%	3.6%	2.9%	4.7%	0.5%	2.1%	2.4%

Source: U.S. Census Bureau, SF1 data tables, 2010c.

Note: *The Other category includes those individuals who identify themselves as being of some other race alone, two or more races, or Native Hawaiian and Other Pacific Islander alone.

**The total minority population includes all those individuals who have classified themselves as a race other than Non-Hispanic White Alone.

The racial and ethnic composition of Blacksburg closely mirrors that of Cherokee County. In both Blacksburg and Cherokee County, approximately three-quarters of the population identifies themselves as White Alone, almost all of which do not identify themselves as being of Hispanic origin. In Blacksburg, approximately 23.6% of residents identify themselves as being Black or African American Alone as compared to approximately 20.6% of Cherokee County residents who identify themselves the same. All other races account for less than 2.0% of the total population. The presence of those identifying

themselves as being of Hispanic origin, regardless of race, is less than 1.0% as compared to approximately 2.1% and 2.4% in Cherokee County and SC, respectively.

Age Characteristics

Similar to the discussion of racial and ethnic characteristics, data from the 2000 Census is the most current information available for this indicator of community life. As demonstrated in table 3.3, the percentage of Marion and Morganton residents 65 years of age and over is notably higher than either of the counties in which the municipalities are located and NC as a whole. Both municipalities also have a comparable percentage of residents less than 18 years of age. These percentages – ranging from approximately 20.5% to 20.8% – are lower than the counties and state in which they are located.

The age characteristics of Cherokee County are similar to those of SC. Such characteristics in Blacksburg indicate a slightly different age composition than either Cherokee County or SC. Differing from Marion and Morganton, Blacksburg has a higher percentage of residents less than 18 years of age than either county or state in which it is located. Blacksburg also has a higher percentage of residents 65 years of age and over.

Table 3.3- Age Characteristics of Study Area Municipalities, Counties, and States, 2000

Geography	Under 18 Years of Age	18-64 Years of Age	65 Years of Age and Over	Total
Marion	20.5%	58.8%	20.7%	4,927
Morganton	20.8%	60.7%	18.5%	17,091
Burke County	24.0%	62.6%	13.4%	89,148
McDowell County	22.9%	62.9%	14.2%	42,151
North Carolina	24.4%	63.6%	12.0%	8,049,313
Blacksburg	28.6%	56.8%	14.7%	1,922
Cherokee County	25.9%	61.7%	12.4%	52,537
South Carolina	25.2%	62.7%	12.1%	4,012,012

Source: U.S. Census Bureau 2010c

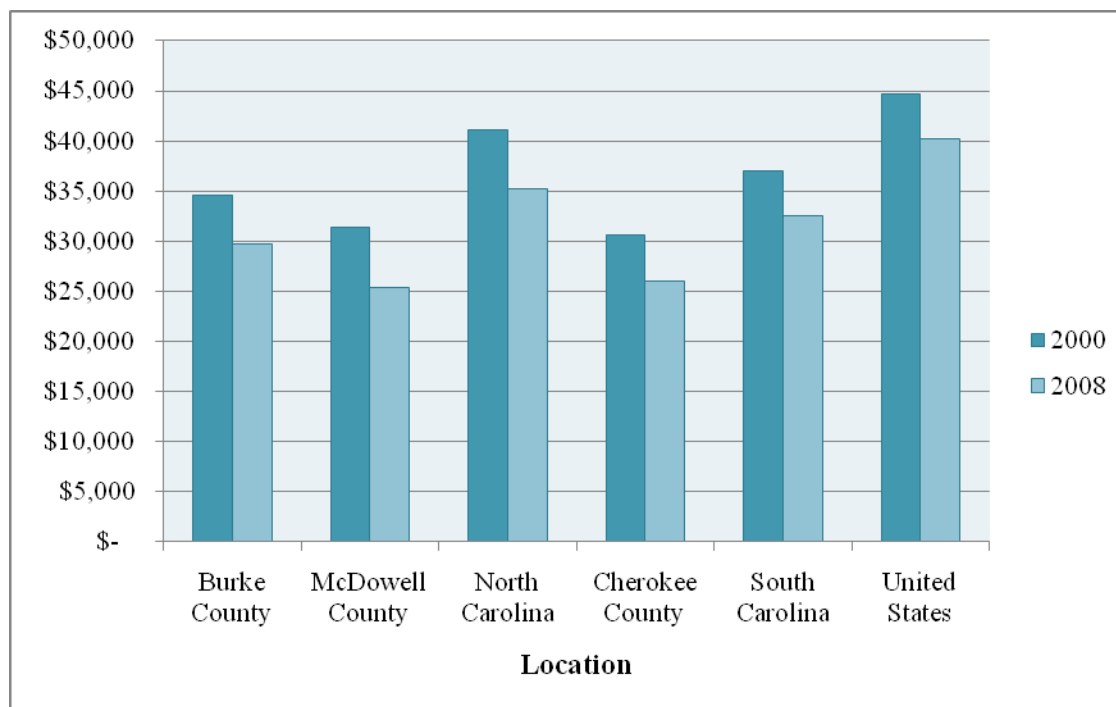
ECONOMIC CHARACTERISTICS

The following provides an overview of economic conditions in each of the counties in which the affected municipalities are located. The discussion focuses on the counties as opposed to the municipalities since current information is available on the county level but not the municipal level. Information compares the counties to the state in which they are located and in some instances, the United States. This information has been retrieved from the U.S. Census Bureau and the U.S. Department of Commerce.

Per Capita Income

In both 2000 and 2008, study area counties had a notably lower per capita income than in either the state in which they are located or the nation (see figure 3.8). Burke County experienced an approximately 14.2% or \$5,000 decrease in per capita income between 2000 and 2008. This percentage change was approximately the same as for the state of NC. McDowell County, however, experienced an approximately 19.1%, or \$6,001 decrease during the same period.

In 2000, Cherokee County had the lowest per capita income of study area counties. Between 2000 and 2008, the per capita income in Cherokee County decreased by approximately 15.2%, or \$4,659. The percentage change in per capita income in SC and the United States decreased at a slower rate than in Cherokee County. All three geographies decreased their annual per capita income by about \$4,500.

Figure 3.8 - 2000 and 2008 Per Capita Income for Study Area Counties, States, and the United States (in 2008\$)

Source: U.S. Department of Commerce, Bureau of Economic Analysis, 2010b

Employment by Industry

Data was obtained from the Bureau of Economic Analysis on total employment for study area counties from 2001 and 2008. This information can be used to understand employment trends as well as current industry employment figures.²

The following section describes employment trends in terms of the number and percentage of jobs gained or lost in each industry sector over the seven years. The percentage change in employment by industry sector is also included in the discussion. Employment by industry is not yet available for 2009. However, it is anticipated that employment numbers have been affected by the recent nationwide recession. Tables showing employment by industry and by study area county can be found in Appendix D.

Burke County, NC. The manufacturing industry was the largest employment sector in both 2001 and 2008. However, employment in this sector decreased by approximately 29.6% between those years. In 2001, it represented approximately 25.8% of total county employment and decreased to represent approximately 17.6% of total county employment in 2008. Representing approximately 17 % of total county employment in 2008, government services was also the second highest employer in 2001. The

² U.S. Department of Commerce, Bureau of Economic Analysis estimates annual employment for counties nationwide. Data can be incomplete in some counties due to disclosure issues associated in areas where few firms are operating. Estimates of total employment, however, do include those numbers that are unreported or omitted at the specific industry level.

Total annual employment includes both part-time and full-time jobs. Therefore, individuals having more than one job are counted twice in the totals. The employment estimates include those individuals who are employed by business and public entities, as well as those who are self-employed. Since 2001, the Bureau of Economic Analysis has employed the North American Industry Classification System to better capture new industries that did not exist under the previous Standard Industrial Classification System.

number of those employed in health care and social assistance increased by 1,087 people, or approximately 22.2%. In 2008, employment in arts, entertainment, recreation, and accommodation and food services increased by 237 people or approximately 8.0% over 2001. Other industry sectors that experienced notable growth during this period include finance, insurance, and real estate, administrative and waste services, and transportation and warehousing.

McDowell County, NC. Similar to Burke County, manufacturing and government services were the two highest employment sectors in both 2001 and 2008. Also similar to Burke County, the number of jobs and percentage of total employment in the manufacturing sector decreased while employment in government services increased slightly. The arts, entertainment, and recreation sector increased by 134 employees, or approximately 87.0%. Accommodation and food services also experienced an increase in the form of 249 people, approximately 22.2% higher than in 2001. Other industry sectors that experienced notable growth between 2001 and 2008 include finance, insurance, and real estate and administrative and waste services.

Cherokee County, SC. The manufacturing sector accounts for the most jobs in the county. In 2001, approximately 32.2% of all county jobs were in the manufacturing sector. By 2008, this had decreased to 24.8% of all county jobs. Between 2001 and 2008, employment in the administrative and waste services and arts, entertainment, and recreation industries increased considerably. Employment in administrative and waste services almost doubled between the two periods to reach 1,269 workers in 2008. The arts, entertainment, and recreation industry grew by 103 jobs, an increase of 101.1%. This sector represents less than 1.0% of total county employment. The number of employees working in the farming, construction, and information sectors also declined during this period.

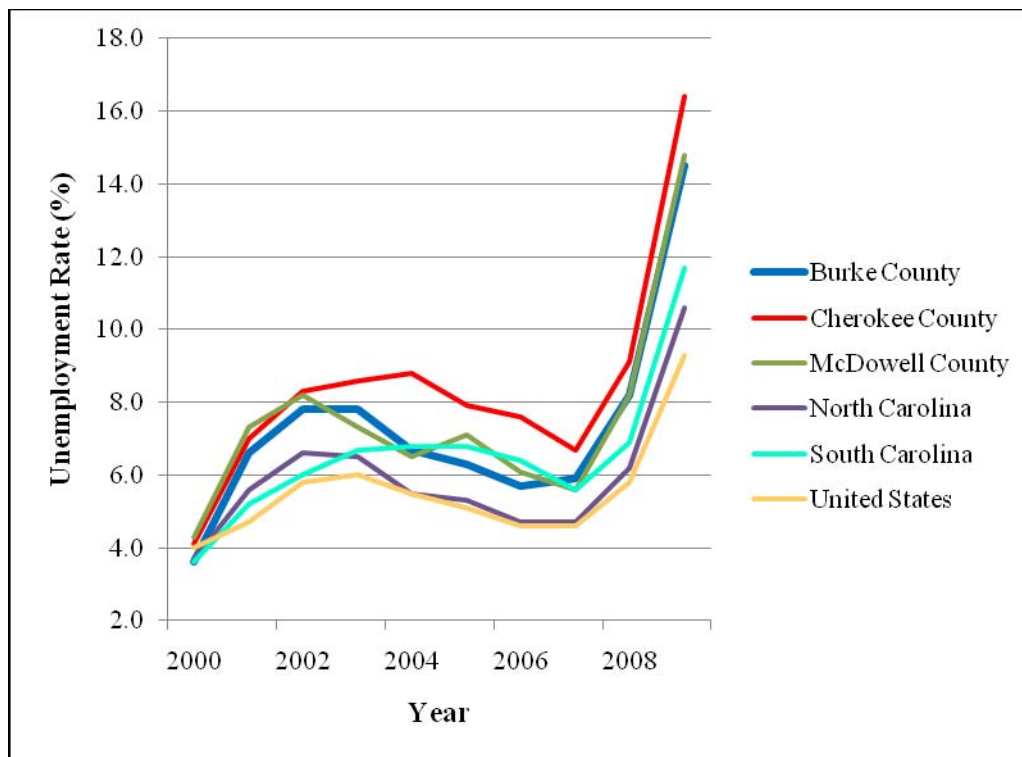
Unemployment

Annual unemployment rates from 2000 to 2009 for each of the study area counties, NC and SC, and the United States have been retrieved from the Bureau of Labor Statistics. As shown in Figure 3-9, unemployment in each geographic area was lowest in 2000 and highest in 2009, with some variation in how these rates changed between the two periods.

In 2000, Burke County had the lowest unemployment rate of study area counties at 3.6%. This was also slightly lower than the NC average. Also in 2000, both McDowell and Cherokee Counties experienced unemployment rates higher than the state in which they are located and the nation overall.

Similar to other parts of the nation, in response to the economic uncertainty following the events of September 11, 2001, unemployment in all three study area counties as well as the Carolinas and the United States experienced an increase in 2001 and 2002. In Burke and McDowell Counties, the 2002 unemployment rates of 7.8% and 8.2%, respectively, leveled off and decreased until 2008. Unemployment rates in Cherokee County fluctuated in the 8.0% range from 2002 until 2004 when levels began to decrease.

In 2008, unemployment in all geographies increased and continued to do so at a faster rate than in previous years. Unemployment in the three study counties as well as the Carolinas topped 10.0% in 2009. In both 2008 and 2009, Cherokee County had the highest unemployment rate of all geographies shown in figure 3.9. Unemployment in Cherokee County also increased at a rate faster than other study area counties. Both Burke and McDowell Counties increased from having an unemployment rate of 8.2% in 2008 to one of 14.5% and 14.8% in 2009, respectively.

Figure 3.9 - Study Area Counties, States, and United States Unemployment Rates, 2000-2009

Source: U.S. Department of Labor, Bureau of Labor Statistics, 2010

Poverty

The numbers presented in table 3.4 were retrieved from the Small Area Income and Poverty Estimates prepared by the U.S. Census Bureau. As shown in table 3.4, approximately 11.0% of Burke County residents reported incomes below the poverty line in 2000. This was slightly lower than the NC and national average. This increased approximately 4.5% between 2000 and 2008, a figure higher than the NC level. The median household income in Burke County decreased the most significantly which, in part, supports the change in the poverty level.

In 2000, McDowell County reported a poverty rate of approximately 12.0%, slightly higher than the NC level. In 2008, unemployment in both the county and state were the same indicating a smaller percentage change in McDowell County than NC. Despite having the same or comparable unemployment rate, McDowell County reported a median household income significantly less than NC in both 2000 and 2008. The median household income in Burke and McDowell Counties were relatively similar in 2008.

Table 3.4 - Poverty and Median Household Income, 2000 and 2008

Geographic Area	Persons Living Below the Poverty Line					Median Household Income (in 2008\$)		
	2000		2008		% Change (2000 to 2008)	2000	2008	% Change (2000 to 2008)
	Number	Percent	Number	Percent				
Burke County	9,534	11.0%	13,320	15.5%	4.5%	\$52,610	\$37,225	-29.2%
McDowell County	4,989	12.0%	6,188	14.6%	2.6%	\$48,502	\$37,394	-22.9%
North Carolina	934,374	11.7%	1,301,882	14.6%	2.9%	\$57,319	\$46,574	-18.7%
Cherokee County	6,777	12.9%	9,406	17.6%	4.7%	\$50,973	\$37,436	-26.6%
South Carolina	504,961	12.8%	680,134	15.7%	2.9%	\$54,952	\$44,695	-18.7%
United States	31,581,086	11.3%	39,108,422	13.2%	1.9%	\$61,890	\$52,029	-15.9%

Source: U.S. Census Bureau. Small Area Income and Poverty Estimates, 2010d

The percentage of Cherokee County residents reporting incomes below the poverty line in 2000 and 2008 was higher than in SC or the nation. Approximately 17.6% of Cherokee County residents reported living below the poverty line in 2008, an increase of 4.7% from 2000. Those SC residents reporting living below the poverty line increased approximately 2.9% between 2000 and 2009 from approximately 12.8% to approximately 15.7%. The median household income in Cherokee County closely resembles that of Burke County. Similarly, the median household income decreased by approximately 26.6% between 2000 and 2008. In both 2000 and 2008, the median household income in the county was notably lower than in state or nation overall.

EMERGENCY SERVICES

An increase or change in the physical location of visitors in the area has the potential to place additional demand on the delivery of existing police protection and emergency services in the affected municipalities. This section provides an overview of existing services in the study area.

Police Protection

There are seven police departments and sheriff's offices providing police protection and law enforcement services within the study area (see table 3.5). Burke and McDowell Counties, both located in NC, each have two law enforcement units. Cherokee County, where the existing HQ is located, has three such units.

Table 3.5 - Police Protection in Study Area Counties

County	Unit
Burke	Burke County Sheriff's Office
	Valdese Police Department
Cherokee	Cherokee County Sheriff's Office
	Blacksburg Police Department
	Gaffney Police Department
McDowell	McDowell County Sheriff's Office
	Marion Police Department

Source: USACOPS 2010

In addition to county police protection, residents, employees, and visitors are protected by the North Carolina Department of Crime Control and Public Safety in Burke and McDowell Counties and the South Carolina Department of Public Safety in Cherokee County. These law enforcement agencies have

statewide jurisdiction. The North and South Carolina Highway Patrols, which are divisions of the previously mentioned departments, also help ensure safety.

Fire Protection

There are 44 professional and volunteer-run fire stations located in the study area. There are a total of 1,242 paid and volunteer firefighters at these locations (see table 3.6). As the most populated of the study area counties, Burke County has the greatest number of fire stations and personnel. Fire stations operated in McDowell County are run by volunteer firefighters and other personnel.

The population per emergency service personnel is calculated by dividing 2009 county population estimates by the number of firefighting personnel in each county. Since the U.S. Fire Administration continuously updates the National Fire Department Census, it was appropriate to use 2009 population estimates provided by the U.S. Census rather than 2000 Census information for this calculation. As demonstrated in Table 3.6, each of the three study area counties has less than 200 residents for every one emergency service personnel. Of study area counties, McDowell County has the highest number of residents for every one emergency service personnel (190 residents for every one emergency service personnel). Cherokee County has the fewest number of residents per emergency service personnel.

Table 3.6 - Firefighting Services Located in Study Area Counties

County	Number of Fire Stations	Personnel	2009 Population Estimates	Population per Emergency Service Personnel	Type
Burke	21	594	89,548	151	Volunteer, Mostly Volunteer, and Mostly Career
Cherokee	16	417	54,714	131	Volunteer, Mostly Volunteer, and Career
McDowell	7	231	43,988	190	Volunteer and Mostly Volunteer

Source: U.S. Fire Administration, 2010; U.S. Department of Commerce, Bureau of Economic Analysis 2010a

Hospitals

There are six hospitals and emergency medical centers located in study area counties (see table 3.7). Burke County has four such facilities while McDowell and Cherokee Counties each have one.

Since the U.S. Department of Health and Human Services continuously updates its Health Resources and Service Administration Geospatial Data Warehouse – Report Tool, it was appropriate to use 2009 population estimates provided by the American Community Survey rather than the 2000 Census information to determine the number of residents per available bed. As demonstrated in Table 3.7, based on 2009 population estimates, Burke County has the fewest number of residents per available bed (48 residents per available bed). The demand per available bed in both Cherokee and McDowell Counties is considerably higher than in Burke County.

Table 3.7 - Hospitals and Medical Centers Located in Study Area Counties

County	Number of Hospitals/Medical Centers	Number of Patient Beds	2009 Population Estimates	Population per Available Bed	Facility Type
Burke	4	1,850	89,548	48	Psychiatric and Short Term
Cherokee	1	125	54,714	438	Short Term
McDowell	1	65	43,988	677	Short Term

Source: U.S. Department of Health and Human Services 2010

The Office of Rural Health Policy coordinates activities related to rural health care within the U.S. Department of Health and Human Services. The Office of Rural Health Policy is responsible for analyzing policy effects on 62 million rural residents and their ability to access health care. Of the three study area counties, only McDowell County qualifies for the grant programs designed to build health care capacity at both the local and state level. There is one rural health clinic in McDowell County; however, this clinic does not receive federal funds.

In addition to Rural Health Clinics, the Health Resources and Service Administration Shortage Designation Branch develops shortage designation criteria and uses them to decide whether or not a geographic area, population group, or facility is a Health Professional Shortage Area or a Medically Underserved Area or Population.

A Medically Underserved Areas is defined as a whole county or a group of contiguous counties, a group of county or civil divisions or a group of urban census tracts in which residents have a shortage of personal health services. Medically Underserved Populations are defined as those groups of persons who face economic, cultural or linguistic barriers to health care. McDowell County is designated as a Medically Underserved Area, and five census tracts in Cherokee County are designed as Medically Underserved Populations.

LAND USE

This FS/EA examines potential sites for the construction of a new facility for the park and therefore potential change in land uses on the alternative sites. Land use and plans for the properties around these sites may also affect the overall character of the HQ/VCS once completed, or how these properties might be developed if this were not a federal project.

CURRENT TRAIL HQ AT KINGS MOUNTAIN NATIONAL MILITARY PARK, BLACKSBURG, SC

The current Trail HQ are located in the middle of the Kings Mountain National Military Park located just outside Blacksburg, SC, in Cherokee County. Kings Mountain is a nearly 4,000-acre park, which is hilly and mostly wooded, with the exception of the areas around park facilities and the monument to the battle the park commemorates. Surrounding properties include Kings Mountain State Park, which provides camping and recreational opportunities, and a living history farm. Private properties around Kings Mountain are mostly residential and agricultural. The park is within several miles of the interstate highway.

JOSEPH McDOWELL HOUSE, MARION, NC

The Joseph McDowell House property is at the northern edge of Marion, NC. The existing structure is currently being used by a small local retail establishment and restaurant, and the rear of the space is also being used as the work room for a local nonprofit organization. The property is situated along a strip of commercial properties, and is between two fast food restaurants, a hotel, and a car lot, and it backs up to the North Fork of the Catawba River. The property across the street is undeveloped. A larger big-box retail establishment is further down the street to the west. To the east, US 70 intersects in a “T” with Marion’s Main Street, which is also heavily commercial heading south to the center of Marion. All of the properties in this area are zoned for commercial use (C-2), and are subject to state and local rules for development in the floodplain.

The Pisgah National Forest is across the river to the north (and in fact all of the properties along this commercial strip on US 70 show up on internet maps as being part of the National Forest as well).

The US 221 bypass is several hundred yards to the west. It was recently widened.

SITE ADJACENT TO QUAKER MEADOWS HOUSE, MORGANTON, NC

The candidate parcel is currently unused, but used to have a dairy distribution center on it (Crescent, Lindsey, pers. comm. 2010). This parcel and the adjacent parcel to the east property are both owned by the Reliant Power Company. Reliant appears to be using the sheds and barns on the adjacent property mostly for storage of maintenance equipment. Quaker Meadows National Historic Site, which is a certified site on the Trail and is operated as a museum, is located on the parcel to the north of the candidate site. Other properties in the area include a commercial/light industrial building across St. Mary’s Church Road, fronting to NC 181, and a golf course between Bost Road and the river on the north of NC 181, and visible from the Quaker Meadows House. Properties across NC 181 from the candidate property are a mix of low-density commercial and residential.

The candidate parcel is zoned HI, which is a heavy industrial zone. The property that contains the Quaker Meadows property is partially HI, and partially RM, or medium-density residential. The HI zone is intended for manufacturing, fabrication, distribution, warehousing, and processing of parts and products. The Morganton Zoning Ordinance states that in order to conserve land for industrial purposes, further growth of non-industrial development in HI zones is prohibited. The properties across NC 181 are zoned for general business. The general business zone allows for a variety of commercial, service, and warehousing uses, with some residential and office uses also permitted (City of Morganton 2010a).

The parcel is also part of the Revolutionary War Heritage Corridor and in the Catawba River district, both of which are designed to spur tourism (particularly related to the Overmountain Victory march) and economic growth (City of Morganton 2009).

CATAWBA MEADOWS PARK, MORGANTON, NC

The front field at Catawba Meadows Park, at the intersection of Sanford Drive and Alexander Avenue, in Morganton, NC, has been offered by the city as a possible site for the new HQ.

Catawba Meadows is a large, regional recreational park that is currently being intensely developed with softball and baseball fields, overnight cabins, and space for other recreational activities such as zip lines and disc golf. A portion of the park to the south of the entrance road, across from the candidate site, is the Cascade Branch stream restoration project. The majority of the park, including the candidate HQ/VCS site, is protected by a North Carolina Clean Water Trust Fund (NCCWMTF) easement. This easement stipulates that in the park there shall be 250-foot buffers along the river, and that the overall impervious surface area in the park cannot exceed 10% (NCCWMTF, Smith, pers. comm. 2010; City of Morganton, Anderson, pers. comm. 2010). The golf course visible from Quaker Meadows is also located across from Catawba Meadows and the Rocky Ford Access site, discussed below.

Properties across from the park are single family residential subdivisions, with mostly large lots.

The overall park property and the golf course across the river from the park is zoned RL-MF, or low-density residential/multifamily. Morganton does not have a land use zone for parks. The properties immediately across NC 64 from the offered site are RLL (large-lot residential). There are also RM (medium-density residential) and RL (low-density residential) zones across from the park, further from the site.

ROCKY FORD ACCESS, MORGANTON, NC

The Rocky Ford Access site is between Lenoir Road and the Catawba River at a large bend in the river, where Lenoir Road crosses the river. The site currently serves as a parking area and access point for the Catawba Greenway trail that runs south along the river for several miles, through Catawba Meadows Park. The greenway is a certified non-motorized segment of the Trail. The site is part of Catawba Meadows Park property, but is not in a part of the park slated for intense development. It is also not in the NCCWTF easement. The Catawba Meadows Park facilities plan indicates it is planned only as an access point for the greenway, which will eventually be extended to the north of its current terminus at Rocky Ford Access.

Lenoir Road is divided just north of the entrance to the Rocky Ford Access site, in order to accommodate the two bridge spans that cross the river. There is a continuing care retirement community across the Lenoir Road from the site, which includes a mix of dwelling types and health care facilities. Across the river in the other direction, is the same golf course discussed in the description of the site adjacent to Quaker Meadows House.

Like Catawba Meadows Park site, the property is zoned RL-MF, or low-density residential/multifamily. The residential properties across Lenoir Road are zoned RL (low-density residential) or OI, office institutional, as is suitable for the retirement community.

FLOODPLAINS

Federal projects are guided by Executive Order 11988, Floodplain Management, which states that “each agency shall provide leadership and shall take action to reduce the risk of flood loss; to minimize the impact of floods on human safety, health, and welfare; and to restore and preserve the natural and beneficial values served by floodplains.” Under Executive Order 11988, the NPS is responsible for evaluating the potential effects of any actions proposed within a floodplain and proposing mitigation to avoid adverse effects resulting from development within a floodplain. Three categories of floodplain are discussed in this section:

- *Floodway*: The channel and area adjacent to the channel likely to accommodate flooding.
- *100-Year Floodplain*: The area likely to be inundated during floods that have a 1% or greater annual probability of occurring.
- *500-Year Floodplain*: The area likely to be inundated during floods that have a 0.2% or greater annual probability of occurring.

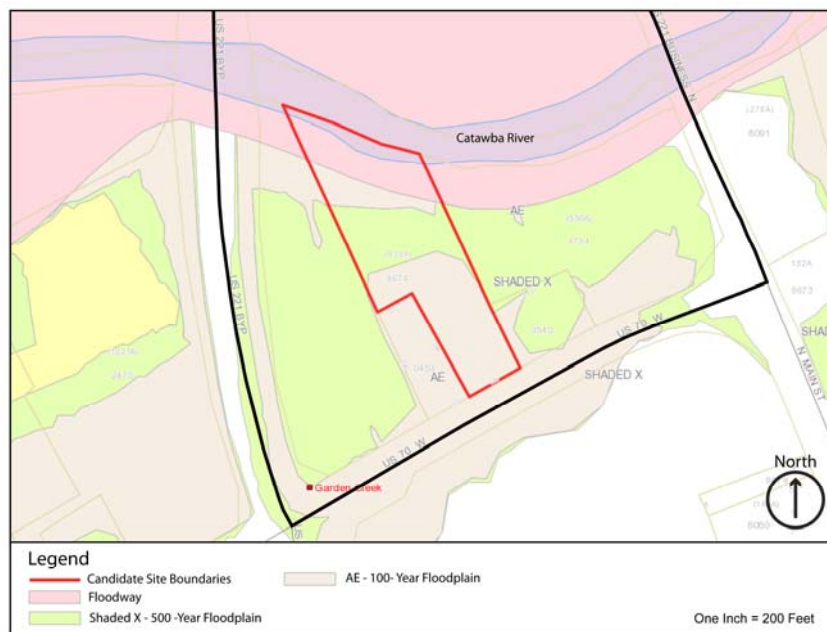
Three of the candidate sites for the Trail HQ—the current HQ at Kings Mountain National Military Park, the site at Catawba Meadows Park, and the site adjacent to the Quaker Meadows House in Morganton, NC—are located outside both the 100-year and 500-year floodplains, and are not discussed in this section. The two remaining sites, the Joseph McDowell House and Rocky Ford Access, contain a combination of floodplains, and are described in greater detail below.

JOSEPH MCDOWELL HOUSE, MARION, NC

The Joseph McDowell House property is completely within either the 100-year floodplain (shown as AE on figure 3.10) or the 500-year floodplain (Shaded X on figure 3.10). The property is adjacent to the Catawba River, and the rear of the property slopes down to the river. At some point in the past, fill dirt has been used to create an embankment toward the rear of the property between the existing structure and the natural slope to the river. The configuration of the floodplain is therefore not intuitive. The front of the property along US 70 has been designated as Zone AE, or 100-year floodplain, and the AE zone extends across the road, while the elevated area on top of the embankment closer to the river is designated Shaded X, or the 500-year floodplain.

As the slope falls away to the river at the rear of the property, the 500-year floodplain transitions back to the 100-year floodplain, then to floodway immediately adjacent to the river.

Figure 3.10 – Floodplain Designations for the Joseph McDowell House Property



Source: McDowell County GIS 2010

When the two restaurants and the hotel on either side of the Joseph McDowell parcel were developed, the structures were built on embankments that elevated them out of the 100-year floodplain. The overall effect is that the candidate property is enclosed on three sides by artificially constructed embankments. The stormwater swale on the eastern edge of the property conveys stormwater from the road, the adjacent restaurant, and the Joseph McDowell property to the river, and could provide a pathway for floodwaters to affect the land around the existing building.

ROCKY FORD ACCESS, MORGANTON, NC

The site is located at a bend in the Catawba River, between the river and the road. On the northern end, the property slopes more gently from the road down to the river, while there is a steep bluff between the existing greenway trail and the river. The northernmost section of the site contains floodway, 100-year floodplain (AE Zone) and a small amount of 500-year (Shaded X) floodplain (see figure 3.11). The southern edge of the property where development would be more likely to occur, is above the bluffs, and outside both the 100-year and 500-year floodplains.

Figure 3.11-Floodplain Designations for the Rocky Ford Access Site



Source: City of Morganton 2010b

SOILS

Under NPS *Management Policies 2006* the NPS actively seeks to understand and preserve soil resources of its parks and properties, and prevent unnatural erosion, physical removal, or contamination of the soil to the extent possible (NPS 2006).

All of the sites under consideration contain soils that are relatively well-drained and typical to the region. There are no mapped hydric or poorly drained hydric soils in any of the upland areas on these sites.

CURRENT TRAIL HQ AT KINGS MOUNTAIN NATIONAL MILITARY PARK, BLACKSBURG, SC

There are three soils in the vicinity of the current Trail HQ at Kings Mountain National Military Park. The soils immediately in the area of the existing office are Tatum silt loam, 6-10% slopes. There are also Manteo Channery silt loams on nearby steeper slopes (15-35% slopes), and Nason silt loam. Nason silt loam is an eroded soil on 2-6% slopes. The Tatum soils are well-drained silt loam typically underlain by silty clay loam and silty clay. There are no described development restrictions or concerns related to the Tatum soils.

JOSEPH MCDOWELL HOUSE, MARION, NC

According to the McDowell County soil survey, the soils on the Joseph McDowell House property are of two principal types: Biltmore loamy fine sand, 0-3% slopes, which is occasionally flooded (BmA); and urban land, which is characterized by soils that have been disturbed by human activity and development (see figure 3.12) (USDA 2010).

In addition, there is an embankment at the rear of the property constructed from nonnative fill dirt. These soils have not been catalogued in the soil survey. The soils that have been placed over the Biltmore soils can be considered urban land as well (USDA 2010).

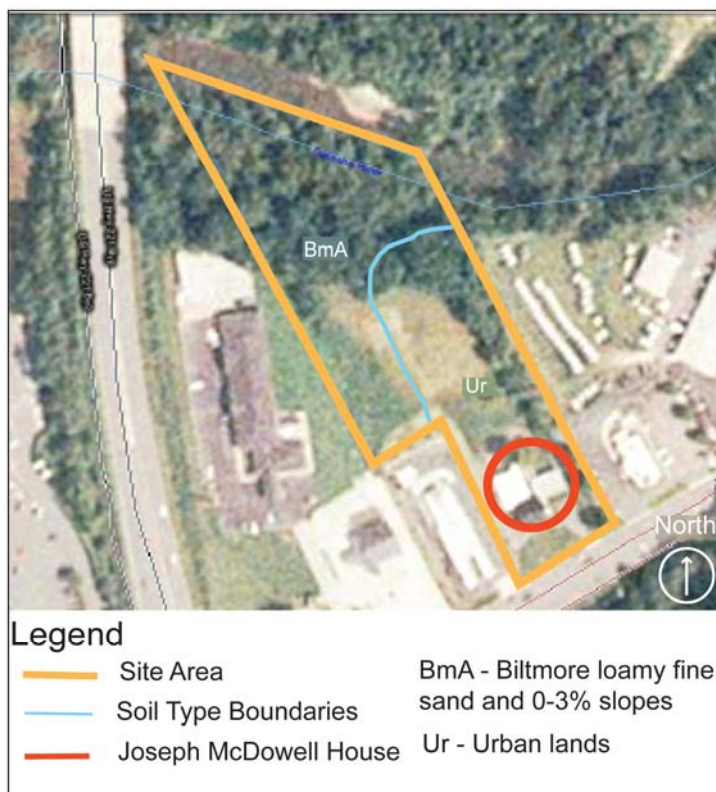
SITE ADJACENT TO QUAKER MEADOWS HOUSE, MORGANTON, NC, AND CATAWBA MEADOWS PARK, MORGANTON, NC

Two sites, the property adjacent to the Quaker Meadows House, and the candidate site at Catawba Meadows Park, entirely contain Unison fine sandy loam, on 2-8% slopes (UnB). These soils are usually underlain with clay or very gravelly clay loam, and are generally well drained. They are not eroded, and are suitable for construction (USDA 2010).

ROCKY FORD ACCESS, MORGANTON, NC

The Rocky Ford Access site is more steeply sloped, which is reflected in the soils. There are several soil types evident at Rocky Ford Access, including Biltmore loamy sand

Figure 3.12—Soils at Joseph McDowell House Property



Source: USDA 2010

along the northern river bank, Unison soils, Rhodhiss sandy loam, and Fairview sandy clay loam (see figure 3.13). The parent material for Biltmore loamy sand is alluvium, and the top layer of loamy sand is underlain by sand. Rhodhiss sandy loam is a well-drained soil found on steeper slopes, usually on ridges. It is typically underlain with sandy clay loam at depth. Fairview sandy clay loam is a well-drained, moderately eroded soil also found on ridges and steep slopes. This soil type is typically underlain with clay, clay loam, and loam at depth (USDA 2010).

Figure 3.13—Soils at Rocky Ford Access Site



Source: USDA 2010

WATER RESOURCES

Protecting the quality of water resources in and around NPS facilities and lands is a priority for the NPS. Pollution of surface waters by both point and nonpoint sources can adversely affect the natural functioning of aquatic and terrestrial ecosystems and diminish the utility of park waters for visitor use and enjoyment. In its management policies, the NPS has committed to maintain and restore the quality of surface waters in a manner consistent with the Clean Water Act, and to work with other state, local, and federal agencies to ensure that water resources are maintained (NPS 2006).

Two of the candidate sites, the Joseph McDowell House property and the Rocky Ford Access, are located adjacent to the Catawba River, and there is an intermittent stream that flows around the edge of the property at the site adjacent to Quaker Meadows. The Catawba Meadows site is across from a stream that flows into the Catawba, and has been restored and protected by an easement. There is a headwater stream in the forest approximately 600 feet behind the site of the current HQ. Construction of new facilities would require stormwater management measures to treat water quality and regulate the quantity of water being discharged off the property.

The segment of the Catawba River in Marion is upstream from Lake James, one of many recreational and hydropower reservoirs along the length of the river. Water quality along this segment of the river is relatively good. The state's water quality assessment report notes only some occasional problems with high levels of fecal coliform bacteria, which is often the result of runoff from urban and agricultural uses, leaky sewer and septic systems, and is usually worse after rainstorms (NC DENR 2010). Under the Clean Water Act, the state will need to prepare a Total Maximum Daily Load plan that will identify the sources of the pollution and the relative contributions of these sources. In addition, the state will need to develop an implementation plan to address the problem.

The Catawba River in Morganton serves as the city's source for drinking water and does not show any current water quality problems at all in the state's last several 303(d) water quality assessment reports, or in the city's water quality report from 2008. The City of Morganton places priority on maintaining the river's water quality, mandates riparian buffers, and speaks to watershed protection in its watershed management ordinance. This ordinance stipulates requirements for stormwater management, riparian buffers, and impervious cover in different zones. The river and its lakes are protected by state legislation that mandates buffers along the lakes and river mainstem from Lake James downstream. Buffers must be planted if land uses change.

CURRENT TRAIL HQ AT KINGS MOUNTAIN NATIONAL MILITARY PARK, BLACKSBURG, SC

The existing headquarters are located in an existing structure at Kings Mountain National Military Park, near Blacksburg, SC, on a slope that leads approximately 600 feet down from the rear lawn and through the forest to a headwater stream that ultimately flows into the Broad River. Although there are no existing stormwater management facilities for the Trail HQ, the stream at this point is well protected by the riparian forest buffer that filters pollutants and attenuates velocity and flow of runoff. There are currently no listed water quality problems on this stream (SC DEHC 2010). The National Parks Conservation Association rated the water quality and condition of streams on the park as very good, with a score of 90 out of 100 possible points (NPCA 2010). NPCA also noted that surveys of macroinvertebrates, which are insects and other organisms living in the water column, and whose species composition can be used to characterize biotic integrity, indicated that the streams in the park were very healthy (NPCA 2010).

JOSEPH McDOWELL HOUSE, MARION, NC

The Joseph McDowell House property is adjacent to the North Fork of the Catawba River, and there is a drainage swale that runs along the eastern edge of the property. An existing drainage swale at the property boundary between the Joseph McDowell House property conveys stormwater runoff from US 70 and

from both properties, and ultimately discharges into the Catawba River. This appears to be only a conveyance channel; there is no stormwater quality or quantity treatment between the Joseph McDowell property and the river.

SITE ADJACENT TO QUAKER MEADOWS HOUSE, MORGANTON, NC

The site adjacent to the Quaker Meadows House is located well away from the Catawba River on a rise out of the floodplain valley. An unnamed drainage swale/intermittent stream flows east along NC 181 from the adjacent parcel to the west, and turns north along the property line and along the driveway and under St Mary's Church Road, ultimately discharging into the Catawba River. There is currently no stormwater management for either water quality or water quantity on this site. This channel is protected by some extent by a narrow riparian buffer before it disappears underground.

CATAWBA MEADOWS PARK, MORGANTON, NC

The Catawba Meadows Park is located in a bend of the Catawba River just downstream of the Rocky Ford Access site. As discussed in the land use description, an NCCWTF easement protects the river and stream in the park by stipulating buffers to the river and limiting the impervious surface allowed in the park, which provides some water quality protection for the river. The city has protected the floodplain by implementing riparian buffers along the river and by using the area closest to the river for ball fields and other uses that are compatible in the floodplain. A stream—which has undergone restoration and is protected by easements—runs through the park approximately 250 feet from the edge of the offered site.

ROCKY FORD ACCESS, MORGANTON, NC

The Rocky Ford Access site is bounded on two sides by the Catawba River. Much of the site is situated atop a bluff, although the northeast side of the property slopes more gently down to the river. As discussed above, water quality on this section of the river is generally good, and maintenance of high water quality is a priority for both the City of Morganton, and the NPS. Drainage swales at regular intervals convey stormwater from the US 64/Lenoir Road, through the parkland to the river.

VEGETATION

The analysis of vegetation within this FS/EA is separated into descriptions of the specific characteristics of each proposed alternative site.

CURRENT TRAIL HQ AT KINGS MOUNTAIN NATIONAL MILITARY PARK, BLACKSBURG, SC

The current Trail HQ is located at Kings Mountain National Military Park in a grassy clearing within a mature hardwood forest.

JOSEPH McDOWELL HOUSE, MARION, NC

The Joseph McDowell House is located in a grassy meadow bordered by fast food establishments to the east and west and a roadway to the south. Several young planted hardwoods border the property between the house and the fast food establishments. A large mature black walnut tree (*Juglans nigra*) sits directly north of the house (see figure 3.14). There is a stand of mixed hardwoods to the north along the Catawba River.

Figure 3.14 – Black Walnut Tree (*Juglans nigra*) at the Joseph McDowell House.



SITE ADJACENT TO QUAKER MEADOWS HOUSE, MORGANTON, NC

The site adjacent to the Quaker Meadows House has a large concrete pad occupying most of the site, but there are also smaller areas of grass and hardwood stands with undergrowth below. There is a large mixed hardwood and conifer stand on the southern end of the site with young and mature trees and dense undergrowth of shrubs. There is a small stand of mixed hardwoods along the western boundary of the site and a row of pine trees mixed with several hardwoods lines the northern boundary of the property.

CATAWBA MEADOWS PARK, MORGANTON, NC

The majority of the site at Catawba Meadows Park is composed of turfgrass that makes up a ball field. The field is surrounded predominantly by pine with several other conifers and younger hardwoods mixed in. There are large stands to the north and east of the site and two rows of planted pines along the southern and western boundaries of the site (see figure 3.15).

Figure 3.15 – Rows of Planted Pine Trees at Catawba Meadows Park.

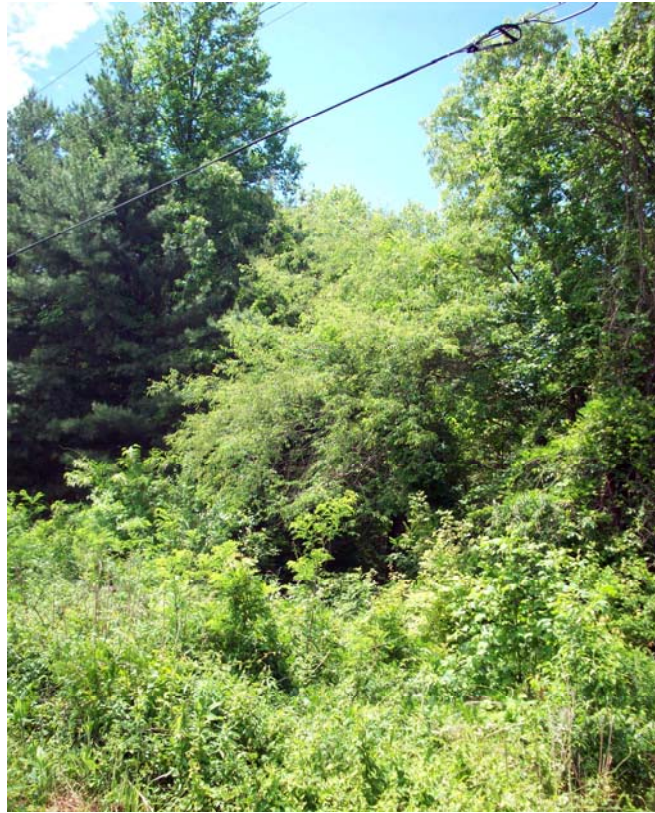


ROCKY FORD ACCESS, MORGANTON, NC

The majority of the Rocky Ford Access site is occupied by a large informal gravel parking lot. However, there is a large stand of mixed hardwoods and some conifers on the southern portion of the site with extensive undergrowth of bushes and vines, most notably kudzu (*Pueraria lobata*), an invasive, non-native species (see figure

3.16). The northern and eastern portions of the site have a smaller stand of mixed hardwoods and several conifers with less extensive undergrowth than the southern stand. The western boundary of the site borders the Catawba River including its riparian area, which includes a mixture of hardwoods and an undergrowth of shrubs and vines (see figure 3.16).

Figure 3.16 – Mixed Hardwoods, Conifers, and Kudzu (*Pueraria lobata*) at Rocky Ford Access.



WILDLIFE AND WILDLIFE HABITAT

The location of these sites in urbanized and suburbanized areas and on previously disturbed land limits the quality of any potential wildlife habitat. Consultation with both the USFWS and the North Carolina Natural Heritage Program has confirmed that there are no federally listed species or related habitat, and no plant or animal species of concern listed on the state Natural Heritage Program lists on or near any of the sites (See Appendix B)). Kings Mountain National Military Park, the location of the current Trail HQ, is home to several sensitive species on SC's Natural Heritage Program lists, including creeping spike rush (*Eleocharis fallax*), joe-pye weed (*Eutrochium* sp.), Georgia aster (*Symphyotrichum georgianum*), smooth sunflower (*Helianthus laevigatus*), and eastern turkeybeard (*Xerophyllum asphodeloides*). Many of these species are found in the disturbed areas beneath the power line right-of-way that crosses through the park.

Forested riparian buffers are the most prominent wildlife habitat at any of the candidate action alternative sites. There are existing riparian buffers at both the Joseph McDowell House property and the Rocky Ford Access site. Forested riparian buffers allow for wildlife shelter, protection of aquatic stream habitat by providing shade and fallen woody debris, and also provide travel corridors and havens for migratory birds and other wildlife. Quaker Meadows and the surrounding properties offer a patchwork of meadow and woodland that many species enjoy.

CURRENT TRAIL HQ AT KINGS MOUNTAIN NATIONAL MILITARY PARK, BLACKSBURG, SC

The current Trail HQ is located in the middle of the park, which has many acres of forest typical of the Piedmont in the western Carolinas. The forest is in very good condition and provides habitat for many woodland species and for several state-listed species of concern. The HQ building is clustered with several other NPS structures, including the Kings Mountain Park HQ and a maintenance facility, which has minimized clearing and disturbance in the area. The existing Overmountain HQ building is surrounded by a maintained lawn and landscape area.

Park inventories have shown that 42 amphibian and reptile, 19 fish, 26 mammal (including bat), and more than 119 bird species can be found at Kings Mountain. There are also several hundred vascular plants, including a number of invasive and nonnative species. The park's forests have become more dense over time and open spaces have closed in. The park is currently using a prescribed burn program as a tool to help restore the habitat at Kings Mountain to something similar to the 18th century habitat, which has also improved habitat for several species of birds. Increased forest density and loss of open areas has compromised the habitats for many species historically found in the area that prefer more open and fringe habitat. There is an ongoing problem with management of invasive species in the park, which threaten to overwhelm the native ecosystems and other ecosystems such as the more open areas found in the power line rights-of-way through the park, and which support species of concern such as Georgia aster (*Aster georgianus*). There is a growing problem with invasive species in the riparian areas, where there are growing concentrations of Chinese privet (*Ligustrum sinense*) and Nepalese brown-top (*Microstegium vimineum*), two invasive species that affect the park. (NPCA 2010)

JOSEPH MCDOWELL HOUSE, MARION, NC

The rear of the Joseph McDowell House property is wooded where it slopes down to the river. A narrow forested buffer extends along the river for several miles. The buffer is approximately 200 feet wide at the back of the Joseph McDowell House property and behind the hotel to the west, but it narrows to 50-70 feet behind the properties to the east, providing a travel corridor for wildlife and birds and habitat of limited value on the south side of the river. Pisgah National Forest, which takes up more than 500,000 acres and is home to several hundred animal species including white tail deer (*Odocoileus virginianus*) and eastern wild turkey (*Meleagris gallopavo silvestris*), is across the river, providing a large area of

mostly forested wildlife habitat, although there has been some fragmentation of the forest directly to the north of the property along the roads that run through the forest.

SITE ADJACENT TO QUAKER MEADOWS HOUSE, MORGANTON, NC

The site adjacent to the Quaker Meadows House and the properties around the house, create a patchwork of habitat types, including meadow, scattered forest stands, and some narrow riparian buffers that provide refuge for some species. Further away, large commercial structures and busy roads limit the habitat value on or around the site. The candidate property itself has a small stand of trees near the intersection at the corner of the property, but is otherwise mostly grass, or parking lot or building remnants, which provide little or no habitat. The patchwork in the area, however, provides fringe and transitional habitat areas that many species can browse in the open fields and take shelter in the trees.

CATAWBA MEADOWS PARK, MORGANTON, NC

The candidate HQ/VCS site at Catawba Meadows Park is a ball field tucked into the corner where the entrance road comes in from Sanford Road. A line of trees runs along these two sides, and a somewhat thicker stand of trees (mostly evergreens) runs around the other two edges of the site. During the site visit, construction workers were constructing a zip line/ropes course area in these trees. Beyond the candidate site, much of the park is being built out with clusters of ball fields and the parking lots and facilities needed to service them. Much of the park, including the candidate site, has limited value as wildlife habitat. There is, however a wide riparian buffer along the Catawba River, and a restored stream area southwest of the entrance road across from the candidate site that will provide a wildlife corridor and some habitat for species found in the park. The existing buffer around the restored stream is not wide; a professional disc golf course (planned for the land around the stream, but not yet constructed) will limit the habitat value of the stream corridor.

ROCKY FORD ACCESS, MORGANTON, NC

Rocky Ford Access is at the northern end of a wooded area between the road and the river that this part of the Catawba Meadows Park property. The large wooded area to the south is shown on park planning documents as supposed to remain as a wooded area. The Rocky Ford Access site itself shows numerous signs of disturbance and contains a large area of kudzu, a rapidly growing invasive vine widespread in the southeastern United States. The kudzu covers a previously cleared area as well as several of the trees in the area. Habitat value around the area with the kudzu will be limited, as it thickly covers and out-competes most other vegetation.

The forest to the south of the kudzu is a few dozen acres, and is a mix of deciduous and evergreen trees. The land across the river from this site is a mix of forest and agricultural fields, with a variable riparian buffer, ranging from approximately 60 to 100 feet wide. This forest area provides habitat for woodland species and birds.

CULTURAL RESOURCES

The term “historic resources” refers to historic properties that are buildings, structures, objects, and districts listed in or eligible for inclusion in the NRHP. In order for an historic resource to be listed in the National Register, a particular resource must meet one or more of the National Register criteria (36 CFR 63). The resource must be associated with an important historic context. In other words, it must possess significance — the meaning or value ascribed to the historic resource — and retain the integrity of those character-defining features necessary to convey its significance (i.e., location, design, setting, workmanship, materials, feeling, and association; see National Register Bulletin #15, How to Apply the National Register Criteria for Evaluation; NPS 1995c). Impact analyses under NEPA and Section 106 examine the manner and degree to which the proposed alternatives may impact or affect the qualities and integrity of an individual historic resource’s character-defining features, significance, and National Register eligibility.

Analysis of possible impacts to archeological resources was based on a review of information provided by the NPS and developed from the files of the NC SHPO, Environmental Review and Survey and National Register Branches, located in Raleigh, NC. In addition, the western office of the SHPO, located in Asheville, NC, was contacted with information requests concerning the Joseph McDowell House alternative visitor’s center location.

The NPS has a unique stewardship role in the management of its cultural properties, reflected in its own regulations and policies. In these policies, the NPS categorizes cultural resources this way: archeological resources, historic districts and structures, cultural landscapes, museum objects, and ethnographic resources.

As indicated in “Chapter 1: Purpose and Need,” the siting of a new HQ/VCS has been evaluated as having no potential impact upon cultural landscapes, museum objects, or ethnographic resources at any of the four candidate sites. Therefore, these impact topics have been dismissed, leaving only archeological resources and historic sites and structures to be evaluated.

Consultation with the NC SHPO has determined that all four of the candidate sites have the potential for the presence of historic or prehistoric archeological sites (NC SHPO Letter of August 24, 2010 available in Appendix B). NC SHPO recommended that these sites be subjected to an archeological survey to identify and evaluate any archeological remains that may be present. In the event that an NRHP-eligible archeological site is identified at the location selected for the HQ/VCS, then the NPS will enter into consultation with the NC SHPO concerning potential effects. In addition, the NC SHPO noted that Quaker Meadows, a listed National Register architectural property, is located adjacent to the potential HQ/VCS site at 119 St. Mary’s Church Road, Morganton, Burke County. Should this site be selected, the NPS will enter into consultation with the NC SHPO concerning potential effects.

ARCHEOLOGICAL RESOURCES

Archeological resources consist of buried and above-ground prehistoric and historic remains and artifacts significant to the study of prehistory and history. As these resources exist primarily in subsurface contexts, potential impacts to archeological resources are assessed according to the extent to which the proposed alternatives would involve ground-disturbing activities such as excavation or grading. Analysis of possible impacts to archeological resources was based on a review of previous archeological studies, consideration of the proposed alternatives, and other information provided by the NPS and developed from the files of the North Carolina Office of State Archaeology (OSA) in Raleigh, North Carolina. The analysis of potential impacts to archeological resources begins with the identification and evaluation of archeological sites in the study area. Information concerning site location, type, age, and National Register eligibility provides an essential understanding of not only known sites, but also, based on certain environmental factors such as proximity to water and slope of ground, where potential undocumented

archeological resources sites may be found. NRHP-listed and NRHP-eligible archeological sites are then assessed for potential impacts from the proposed alternatives. Construction and use of the visitor center could possibly impact the physical character of any of the identified archeological resources.

CURRENT TRAIL HQ AT KINGS MOUNTAIN NATIONAL MILITARY PARK, BLACKSBURG, SC

The Kings Mountain National Military Park includes significant archeological sites (NPCA 2010). The largest and best known of these is the battlefield which was the scene of archeological investigations in 1999 and 2000. In addition, at least 20 other archeological sites have been identified within the park boundaries. It appears that only about 20% of the park has been surveyed for archeological sites (NPCA 2010). Additional archeological investigation of the park and documentation of identified sites is regarded as highly desirable by the park staff (NPCA 2010).

JOSEPH McDOWELL HOUSE, MARION, NC

The McDowell family of western NC arrived in the Catawba River Valley during the middle decades of the 18th century in the first wave of Scots-Irish immigrants to the region (Ashe et al. 1908; Powell 1989; Saunders 1887). It is well established that in 1768 Joseph McDowell's father, Hunting John McDowell, acquired a large tract of land bordering the Catawba River near present day Marion (Robinson 2009). The parcel became known as Pleasant Garden and became the seat of Joseph McDowell and his descendants. Joseph McDowell served in the Revolutionary War as a captain of militia participating in several actions including the Battle of Kings Mountain (Ashe et al. 1908). In these military endeavors, he was joined by his cousins Major Joseph McDowell and Colonel Charles McDowell, both of Quaker Meadows located near Morganton (Ashe et al. 1908).

The McDowells were among the leaders of the Overmountain Men, a group of partisans from the Watauga settlements of far western NC (Powell 1989). The Overmountain Men destroyed one detachment of General Cornwallis's divided army at the Battle of Kings Mountain. Later some of these men, under the command of Captain Joseph McDowell of Pleasant Garden and Colonel Joseph McDowell of Quaker Meadows, joined forces with Daniel Morgan to defeat the British and Loyalist forces at the Battle of Cowpens (Ashe et al. 1908; Babits 1998). The strategic consequences of these two defeats eventually forced the British army to abandon the Carolina backcountry to the partisans (Babits 1998). Following his distinguished career as a soldier, Joseph McDowell of Pleasant Garden continued to serve his community and state as a delegate to the NC Constitutional Convention of 1788 and as a member of the NC House of Commons (Robinson 2009).

The Joseph McDowell House was constructed around 1790 near the log cabin once occupied by Hunting John McDowell (Robinson 1994 and 2009; Vance 1994). There have been three archeological studies of the grounds surrounding the house since 1994. The first study occurred in the winter of 1994 and was conducted by an archeologist from the NC Division of Archives and History (Vance 1994). Much of this effort was directed at identifying evidence that would indicate preserved archeological remnants assignable to the first log-constructed McDowell House. The yard area of the existing house was included in the surface ground inspection resulting in several observations concerning the archeological integrity of the property (Vance 1994). This area had been subjected to the construction of additions at the rear of the house and an asphalt parking lot, as well as the construction of US 70. The potential for intact archeological features under the parking lot was mentioned, but overall the archeologist concluded that there was little promise of intact archeological features in the yard areas of the house (Vance 1994).

Shortly thereafter, archeologists working for NC Department of Transportation (NCDOT) inspected the site as part of their study of the US 70 highway widening project (Robinson 1994). This study was mainly concerned with the archeological potential of the front yard of the existing house that abutted the highway project. The results of the inspection led the archeologist to conclude that Site 31MC200 was highly disturbed and not archeologically significant. No further archeological investigation of the site was

recommended (Robinson 1994). Although not explicitly stated, it is clear from the text that the NCDOT archeologist believed the site to be not eligible under National Register Criterion D. Criterion D relates to the information and research potential of archeological sites which must be high in order to qualify for listing in the National Register.

Recently, archeological interest in the Joseph McDowell House received new impetus from its proposed restoration by the City of Marion and the McDowell House Project Committee (Robinson 2009). The 2009 archeological investigation included the use of ground-penetrating radar, shovel testing, and excavation of a formal 1-meter by 2-meter test unit. These methods revealed several interesting anomalies, but none that could be recognized as distinct foundations or definitive cultural features like cellars, wells, or privies. Nevertheless, subsurface anomalies were present and a case is made in the report that they should be investigated (Robinson 2009). The program of shovel testing and the excavation of the test unit yielded positive results in the form of over 800 artifacts including specimens possibly dating to the late 18th century (Robinson 2009). Included in the artifact inventory from the site are several prehistoric artifacts believed by the author to date to the Late Prehistoric period (AD 1200-1600).

The report concludes with recommendations that archeological testing of the rear yard area be incorporated into the planned restoration program. The purpose of these excavations would be to provide information about the original kitchen and early configuration of the house (Robinson 2009). No National Register eligibility recommendations were made in the report.

Although not immediately adjacent to the Joseph McDowell House, two important archeological and historic resources are nearby. The first, which is known as Round Hill, is the burial place of the McDowell and Carson families, is located on the floodplain of the Catawba River (Vance 1994). In addition to Round Hill, the floodplain also contains a large Mississippian village and substructure mound site named after the McDowell family (31MC41). This site was initially recorded in the late 1960s by archeologists from the University of North Carolina (Moore 2002). Major excavations took place at the site in 1986, revealing multiple structures and part of the village palisade (Moore 2002). The National Register eligibility of the site is unknown.

SITE ADJACENT TO QUAKER MEADOWS HOUSE, MORGANTON, NC

This site is located immediately to the south of the Quaker Meadows plantation house complex built around 1812 by Charles McDowell, Jr., son of Colonel Charles McDowell, the Revolutionary War leader of the Overmountain Men. The house and its immediate grounds are all that is left of a much larger tract of land along the Catawba River claimed in the 1750s by Joseph McDowell, father of Colonel Charles McDowell. Joseph McDowell was a cousin of Hunting John McDowell of Pleasant Garden. The history of the Quaker Meadows name extends back to at least 1752 when this stretch of bottom lands along the Catawba River was visited by Moravian Bishop Gottlieb Spangenberg during his search for lands suitable for the settlement of Bethabara congregation (Saunders 1887). The Quaker Meadows house and grounds are listed in the NRHP.

Archeological investigation of the house and grounds occurred in 1989 and 1990 by archeologists from the NC Division of Archives and History (Robinson and Moore 1992). These activities occurred when the house and grounds were under consideration as a potential NC Historic Site (Warren Wilson College, Moore, pers. comm. 2010). Subsequent archeological investigations were undertaken in 1992 and 2004 (Robinson and Moore 1992; Robinson 2004). These investigations are pertinent to the analysis of the alternative because they suggest that subsurface archeological remnants of the Quaker Meadows plantation complex may exist within the boundaries of the parcel under consideration for the HQ/VCS.

No previously identified archeological sites or architectural resources are located on this candidate site (NC SHPO Letter of August 24, 2010, available in Appendix B). Analysis of the aerial photographs and soils data indicates significant ground disturbance has occurred at this site, which consists of an abandoned building pad, remnant parking area, and a one-track gravel road that allows access to several

industrial support barns and buildings. The gravel road is lined with trees which screen the adjacent Quaker Meadows house and grounds.

CATAWBA MEADOWS PARK, MORGANTON, NC

A review of OSA site files for this alternative visitor center location indicated that no previously recorded archeological sites are located on this property. Analysis of the data on this tract indicates significant ground disturbance has occurred consisting of agricultural plowing, activities associated with the use of the property as a tree nursery, and preparation of a ball field.

This alternative occupies an upland setting adjacent to the Catawba River floodplain. Remnants of a large Mississippian village site occupy the floodplain. This site was recorded by archeologists from the University of North Carolina in the late 1960s (Moore 2002). Archeological investigation of this site began in 2003 and was sponsored by the City of Morganton. This work is being undertaken by Dr. David Moore and students from Warren Wilson College. A management summary of the initial site testing has been prepared and is on file at the OSA. Subsequent work is currently under way at the site including the excavation of feature clusters representing at least one residential farmstead house (William Warren College, Moore, pers. comm. 2010). The National Register eligibility of this site has not been assessed according to the OSA site form.

An archeological research and interpretive center is scheduled to be constructed at the park (William Warren College, Moore, pers. comm. 2010). This facility will include exhibits from both the Catawba Meadows Mississippian site and the Berry site, another archeological site on the river near Catawba Meadows Park that represents the important contact period Town of Joara where the explorer Juan Pardo built and garrisoned the Fort San Juan in the sixteenth-century (Hudson 1990; Moore 2002). Fort San Juan was the first European settlement in the interior portions of what is now the United States.

No previously identified archeological sites or architectural resources are located on this candidate site (NC SHPO Letter of August 24, 2010, in Appendix B). Analysis of the aerial photograph, soil data, and archeological literature indicates that significant ground disturbance has occurred at this candidate site consisting of agricultural plowing, activities associated with the use of the property as a tree nursery, and preparation of a ball field.

ROCKY FORD ACCESS, MORGANTON, NC

This alternative occupies a bluff overlooking the main channel of the Catawba River to the north and the Catawba River floodplain to the west. The Catawba Meadows archeological site briefly described in the preceding section is located to the west of this alternative. The elevated nature of this terrain and its location on the main channel of the river makes it an attractive location for use as a hunting stand during the prehistoric period.

No previously identified archeological sites or architectural resources are located on this candidate site (NC SHPO Letter of August 24, 2010, in Appendix B). The review resulted in a finding that no previously recorded archeological sites are located on this property. Analysis of the data on this tract indicates that some ground disturbance has occurred consisting of the construction of the Catawba Greenway trailhead and associated parking lot.

HISTORIC SITES AND STRUCTURES

No historic resources either listed in or eligible for inclusion in the National Register are located at the four alternative visitor center locations (NC SHPO Letter of August 24, 2010, in Appendix B). However, the Joseph McDowell House is on the study list and may be eligible for the National Register. Because of its status as a study list property, the condition of the building is described below. Because the Quaker Meadows House is immediately adjacent to one of the candidate sites for the HQ/VCS, it is also briefly described.

CURRENT TRAIL HQ AT KINGS MOUNTAIN NATIONAL MILITARY PARK, BLACKSBURG, SC

The current Trail HQ is located in loaned office space at Kings Mountain National Military Park, SC. The park commemorates the pivotal American victory in the Revolutionary War battle of Kings Mountain, fought October 7, 1780, and is the southern terminus of the Trail.

The importance of this American victory can best be understood in the context of the military and political situation in 1780. By that year British forces were firmly in control of both Savannah, Georgia, and Charleston, SC. After the fall of Charleston, few organized American forces were available to contest British control of these two key southern states. Regaining control of NC was the next British objective. To regain the colony for the crown, Lord Cornwallis marched from his base at Camden, SC, on September 8, 1780 (Powell 1989).

Overconfident from easy victories at the siege of Charleston and battle of Camden, General Cornwallis led his army in the direction of Charlotte, NC. Bands of well-led partisans which grew in strength as the march progressed, hung on the flanks of the columns. Partisan activity led to a change in General Cornwallis's operational plans for the campaign. To reduce the effectiveness of the partisans, a flank guard of British soldiers was detached under the command of Colonel Patrick Ferguson. Ferguson was instructed to rally the Loyalists in western SC and protect the army's left flank (Powell 1989). This movement of British forces into the hinter land of western SC's backcountry met with armed resistance from the largely Scots-Irish settlers of the region.

Under these military conditions and led by Joseph and Charles McDowell, Isaac Shelby, and John Sevier, the Overmountain Men marched into the pages of history. The forces of Colonel Ferguson were defeated at Kings Mountain, compelling General Cornwallis to retreat from Charlotte to Winnsboro, SC (Powell 1989). This gift of time from the Overmountain Men allowed the Americans to reinforce militia and partisan units with Continentals under the command of Generals Nathaniel Greene and Daniel Morgan. Because of its role in buying time for the American cause, the victory at Kings Mountain is widely recognized as a pivotal moment in America's struggle for independence from the British crown.

Congress established the 40-acre Kings Mountain National Military Park in 1931 (NPCA 2010). The park includes a 1.5-mile trail mirroring the formation of the battle, several wayside exhibits and monuments including Patrick Ferguson's grave, and a museum. With the adjacent Kings Mountain State Park, there are 16 miles of hiking trails, horse trails, and campsites. An additional 4,000 acres was authorized for purchase between 1936 and 1940. Recently, the NPCA has assessed the current condition of the park, giving it a rating of "fair" for natural resources and "good" for cultural resources (NPCA 2010). Restoration of the cultural landscape as it would have appeared at the time of the battle is regarded as a top management priority. In addition to the cultural landscape, which is not near the existing Trail HQ, the park includes 29 historic structures, one of which is the former superintendent's house which currently houses the Trail HQ. The building was constructed in 1940-41 in the Colonial Revival architectural style favored by the NPS in the east, and relates to the Civilian Conservation Corps work in the park in the 1930s.

JOSEPH McDOWELL HOUSE, MARION, NC

The Joseph McDowell House was built at Pleasant Garden circa 1790 by Joseph McDowell, cousin of both Charles McDowell and Joseph McDowell of Quaker Meadows (Ashe et al. 1908). Joseph McDowell of Pleasant Garden participated in General Rutherford's campaign against the Cherokee Indians in 1776. He later served as a captain of Burke County militia at the Battles of Kings Mountain, Ramseur's Mill, and Cowpens during British General Cornwallis's southern campaign of 1780-81 (Ashe et al. 1908). Following the war, Joseph McDowell served as a member of the NC House of Commons for several years (National Register Nomination Form 1973). McDowell County is named for this scion of the McDowell family (Corbitt 1987; Powell 1968).

The architectural documentation indicates that the original fabric of this building has been significantly altered over the years (Vance 1994; Oppermann 2010). The house is a two-story rectangular frame building with a two-story engaged porch stretching the full width of its south principal elevation (Oppermann 2010). The core of the structure is four bays wide and two bays deep. It is believed that the two-story porch was added in the mid-19th century (Oppermann 2010; Vance 1994). Alterations to the exterior of the house include, but are not limited to, replacement of second-story doors by windows, removal of the second-story balcony, and replacement of original windows by modern projecting display windows. In addition to these changes, the exterior of the house's main block has been covered in vinyl siding including all of the trim and features with the exception of the columns (Oppermann 2010). The historical proportions of the building have been further altered by a minimum of three non-historic rear additions (Oppermann 2010).

The changes to the exterior of the house have been accompanied by numerous alterations to the interior consistent with its use as retail and commercial space. These alterations were characterized as "severe" by the architectural historian who visited the site in 1994 (Vance 1994:4). The 1994 description of the interior alterations indicates that all of the historic features and finishes have either been removed or covered by modern materials. It also appears that a large section of the second floor has been removed to create a two-story space (Oppermann 2010). It is possible that this alteration post-dates the 1994 report.

Research indicates that this house has never been formally evaluated for the NRHP. Documentation on this property, held in the files of the SHPO, indicates that a survey historian working for the Division of History, Office of Archeology and Historic Preservation, NPS, prepared a National Register nomination form in 1973. The form contains a hand-written notation in its upper right-hand corner referring to it as an "NHL nom".

Evidence that this matter was pursued to some extent through the National Historic Landmarks program is provided in correspondence from Andrew W. Loveless, Superintendent, Kings Mountain National Military Park, to Miss Eugenia Bibb dated September 19, 1980. In his letter, Superintendent Loveless states that the Joseph McDowell House has not been included in the National Register. The letter goes on to state that the house was never made a National Historic Landmark. Although there is substantial evidence that the SHPO regards the house as not eligible for the National Register (NC SHPO, Johnson pers. comm. 2010a), the property retains its study list status in the files of the Environmental Review Branch (NC SHPO, Shearin pers. comm. 2010).

Recently, plans by the McDowell House Project Committee to restore the house to its original configuration have renewed interest in the National Register eligibility status of the property (NC SHPO, Johnson pers. comm. 2010). A conceptual master plan has been developed to guide the proposed restoration (Oppermann 2010). Whether or not the house would be eligible for the National Register after restoration is an open question under consideration by the SHPO and the McDowell House Project Committee (NC SHPO, Johnson pers. comm. 2010).

THE QUAKER MEADOWS HOUSE, MORGANTON, NC

The Quaker Meadows House was built by Charles McDowell, Jr., a third-generation descendent of the prominent McDowell family whose father was Colonel Charles McDowell (Robinson and Moore 1992). The house was constructed sometime between 1812 and 1820 on land owned by the family since the 1750s. Colonel Charles McDowell inherited these lands from his father Joseph McDowell in 1775. Colonel Charles McDowell was considered one of the wealthiest men in western NC during the latter half of the 18th century and added considerably to the Quaker Meadows estate (Robinson and Moore 1992). The estate was passed on to Charles McDowell, Jr., upon his father's death in 1815. By 1850 Charles and his wife Anna had amassed 52 enslaved African-Americans and 1,400 acres of land at Quaker Meadows (Robinson and Moore 1992). This successful backcountry plantation was operated briefly by his youngest son James C. S. McDowell and his wife Julia Manly McDowell. Their tenure was relatively brief, being interrupted by the Civil War. During the war, James McDowell became Colonel of the 54th NC infantry and was killed while on active service in VA during the first phase the 1863 Chancellorsville campaign (Ashe et al. 1908). The plantation never recovered fully from the effects of the Civil War. The land comprising the house and 6.099 acres was sold to the Historic Burke Foundation, Inc. in 1986.

Quaker Meadows is described in the NRHP nomination form as a four-bay, two-story brick house with the brick laid in Flemish bond. The gable ends are framed by exterior chimneys. The east and west bays have nine-over-nine sash windows while the central bays contain two doors. The second-story lights are nine-over-six sash windows. A one-story shed porch extends the length of the north and south façades. The east bay of the south façade has been enclosed.

According to the nomination, the interior of the house follows a modified "Quaker" plan. This consists of three small rooms and one large room on each floor. The small rooms are separated from the parlor by an enclosed stair case. The small rooms on the first floor had corner fireplaces, but only one of these has its original mantel. The second story is similar in plan to the first with a central hall separating the small rooms from the large room. To the rear and north of the house is a one-story log outbuilding. In the archeological report by Robinson and Moore (1992), this building was described as a detached kitchen. Two filled-in wells flank the kitchen building to the west. The archeologists recommended investigation to identify the locations of any additional structures and/or landscape features associated with the main plantation house and kitchen (Robinson and Moore 1992).

Subsequent archeological research sponsored by the Historic Burke Foundation, Inc. and NPS focused on the six acres surrounding the main plantation house as well as other features and sites located outside the property boundaries (Robinson 2004). The archeological assessment identified several historic resources including archeological sites, landscape features, structures, and view sheds which could be used to interpret the historic site and its 19th century setting. Information on the location of the original 18th century McDowell house and Fort McDowell was also developed during the field investigation. This effort to inventory historic resources provides baseline data for the preservation and interpretation of Quaker Meadows.

CHAPTER 4: ENVIRONMENTAL CONSEQUENCES

INTRODUCTION

This “Environmental Consequences” chapter describes impacts that would result from implementing any of the alternatives described in this FS/EA. An impact can derive from any action that may foreseeably affect resources at the national parkland, the experiences and behavior of Trail visitors, and NPS operations within the Trail, either directly or indirectly.

GENERAL METHODOLOGY FOR ASSESSING IMPACTS

The intensity and duration of each impact was also considered in determining overall impacts to a resource by a proposed alternative. Additionally, cumulative effects of the proposed alternative upon NPS resources are considered. Some environmental consequences can be mitigated to offset potential adverse impacts. Mitigation measures are designed to offset or minimize the effect of an impact caused by a proposed action.

This chapter addresses the potential impacts to each of the impact topics discussed under the “Affected Environment” chapter for each of the alternatives. As feasibility of each alternative was analyzed in “Chapter 2: Alternatives and Feasibility,” this chapter will focus on assessing the environmental consequences of these alternatives. The four action alternatives are compared to the no action alternative, or the baseline condition for the project, to determine impacts to resources. In the absence of quantitative data, best professional judgment was used. In general, impacts were determined through consultation and collaboration with a multidisciplinary team of NPS and other professional staff. Regulatory agency consultation with the USFWS, the North Carolina Natural Heritage Program, the North Carolina Historical Trust, the Eastern Band of the Cherokee Nation, and other existing data sources such as park and local planning documents, the Trail website, and professional scientific research papers were also used to assess the potential impact of each alternative.

Potential impacts of all alternatives are described in terms of type (beneficial or adverse); duration (short- or long-term); and context. Adverse impacts are also described in intensity (negligible, minor, moderate, major), while no levels of intensity for beneficial impacts are defined. Definitions of these descriptors include:

Beneficial: A positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition.

Adverse: A change that declines, degrades, and/or moves the resource away from a desired condition or detracts from its appearance or condition.

Context: Context is the affected environment within which an impact would occur, such as local, park-wide, regional, global, affected interests, society as whole, or any combination of these. Context is variable and depends on the circumstances involved with each impact topic. As such, the impact analysis determines the context, not vice versa.

Duration: The duration of the impact is described as short-term or long term. Short term impacts will last for a year or less, or take place during the construction period. Long term impacts last longer than a year.

Intensity: Because definitions of impact intensity (negligible, minor, moderate, and major) vary by impact topic, intensity definitions are provided separately for each impact topic analyzed.

CUMULATIVE IMPACTS

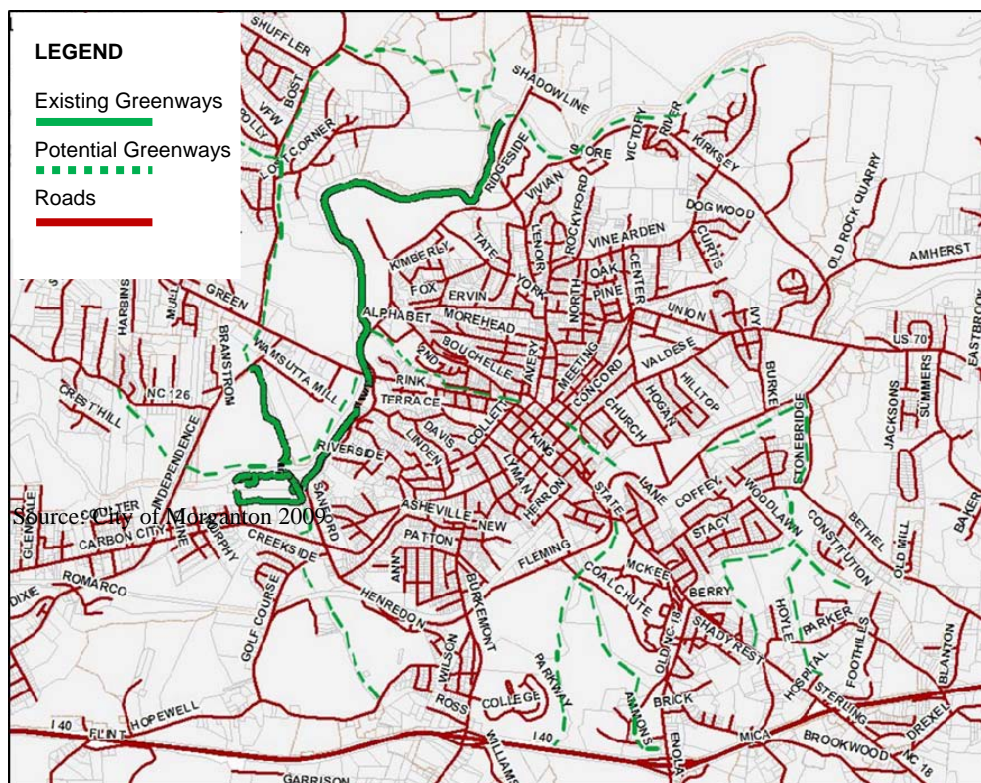
NEPA regulations require an assessment of cumulative effects in the decision-making process for federal projects. Cumulative effects are defined as “the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions” (40 CFR 1508.7). Cumulative effects can result from individually minor, but collectively moderate or major impacts that take place over a period of time.

Cumulative effects are considered for all alternatives, including the no action alternative. Because several sites are under consideration as alternatives for the HQ/VCS, not all projects listed below would affect every site. Cumulative effects were determined by combining the impacts of the alternative being considered with other past, present, and reasonably foreseeable future actions and identifying the contribution of the action to the overall cumulative effect. Preliminary analysis identified the following actions in the cities of Marion and Morganton, NC, as having the potential to contribute to the impact of the analysis evaluated in this FS/EA.

FURTHER DEVELOPMENT OF THE CATAWBA RIVER GREENWAY IN MORGANTON, NC

The Catawba River Greenway is a paved hiker/biker path that currently extends along the Catawba River several miles south from the Rocky Ford Access site, including a section that passes through Catawba Meadows Park. There are plans to extend it north and east along the river from Rocky Ford Access, and in a loop to the west from Rocky Ford Access, across the river and south along Bost Road, where it would link with the existing Freedom Trail at the high school, and back to the existing Greenway (see figure 4.1).

Figure 4.1 – Catawba River Greenway Plan



Source: City of Morganton

CONTINUED COMMERCIAL INDUSTRIAL DEVELOPMENT IN THE CORRIDOR AROUND THE QUAKER MEADOWS HOUSE

The zoning in the area around the Quaker Meadows House is a combination of commercial and industrial, and it is reasonable to assume that undeveloped or underdeveloped properties in the area will continue to develop with uses consistent with current zoning over time (see figure 4.2).

DEVELOPMENT AND COMPLETION OF CATAWBA MEADOWS PARK IN MORGANTON, NC

Catawba Meadows Park is a large regional recreational park constructed on former agricultural and forested land on a property adjacent to the Catawba River. There is a master plan for the park, and it is currently being built out. Construction of park facilities is approximately 80% complete as of summer 2010. The plan includes development of several ball fields, shelters, overnight cabins, and comfort stations. There is a stream that has been protected by easement in the southwestern portion of the park.

Figure 4.2 – Catawba Meadows Park Facilities Plan



Source: Catawba Meadows Park 2009

DEVELOPMENT OF THE McDOWELL GREENWAY IN MARION, NC

McDowell County is in the process of constructing a greenway trail along the north fork of the Catawba River through Marion. In addition to providing biking and recreational access along the river, this greenway will connect several sites of historic interest, including the Joseph McDowell House and Little Round Hill Cemetery. As of summer 2010, phase one is underway and almost complete. Phase two will extend the trail to its terminus at the Joseph McDowell House. There

are future conceptual plans to link this greenway with the greenway systems of both Burke and Buncombe Counties (McDowell County 2007; City of Marion, Cotton, pers. comm. 2010).

CONTINUED COMMERCIAL DEVELOPMENT NEAR THE JOSEPH MCDOWELL HOUSE IN MARION, NC

The properties around the Joseph McDowell House are zoned general commercial. The US 221 bypass has been completed in recent years, and US 70, which runs in front of the Joseph McDowell House, has been widened in anticipation of traffic generated from new future commercial development and to accommodate recent commercial development. It is reasonable to assume that commercial development will continue in this area.

PARK MANAGEMENT AND OPERATIONS

METHODOLOGY AND ASSUMPTIONS

Park management and operations, for the purpose of this analysis, refers to the quality and effectiveness of Trail staff to maintain and administer Trail resources and facilities and to provide for an effective visitor experience. Impacts to park management and operations were based on the proximity of the proposed sites to Trail resources as this relates to the overall efficiency of NPS staff to access all portions of the Trail, staff ability to direct the public to Trail resources, and staff ability to provide interpretive and educational opportunities to communicate the Trail's history to the public.

It is assumed that construction of a new structure would affect park management and operations in terms of life cycle costs and overall number of structures in the inventory for the Trail and for Kings Mountain National Military Park, where the Trail HQ are currently located.

STUDY AREA

The study area for park management and operations impact analysis includes the entirety of the Trail.

IMPACT THRESHOLDS

The impact intensities for park operations and management were defined as follows:

Negligible — Park management and operations would not be impacted or the impact would not have a noticeable or appreciable impact.

Minor — Impacts would be noticeable, but would be of a magnitude that would not result in an appreciable or measurable change to park management and operations. Mitigation, if needed to offset adverse effects, would be likely be simple and successful.

Moderate — Impacts would be readily apparent and would result in moderate inefficiencies and/ or substantial change in park management and operations that would be noticeable to staff and the public. Mitigation measures would be necessary to offset adverse effects and would likely be successful.

Major — Impacts would be readily apparent and would result in major inefficiencies and/ or substantial change in park management and operations that would be noticeable to staff and the public and would require the park to readdress its ability to sustain current park operations. Mitigation measures to offset adverse effects would be needed and extensive, and success could not be guaranteed.

Duration — Short-term impacts would be immediate, occurring during implementation of the alternative. Long-term impacts would persist after implementation of the alternative for more than a year.

IMPACTS OF THE NO ACTION ALTERNATIVE

Analysis

Under the no action alternative, the Trail HQ would continue to be located in loaned office space at Kings Mountain National Military Park, SC. NPS staff's overall response time to all Trail segments and resources would remain the same, varying from less than an hour for closer resources to as much as five hours one way for the northern terminus of the Trail. Overnight trips would continue to be necessary for NPS staff to fulfill their duties and obligations and would continue to occur at a frequency of one and a half to two weeks per month. There would continue

to be long-term moderate adverse impacts to park operations as a result of the inefficiencies created by the extensive travel time and overnight trips needed.

Office space for the Trail would not be expanded, prohibiting the addition of any needed Trail staff, resulting in long-term moderate adverse impacts to park management and operations.

The current HQ would remain within Kings Mountain National Military Park, which is the culmination of the Overmountain Victory March, providing NPS staff the opportunity to direct the public to Trail-related historical resources. However, there would continue to be no VCS or similar space available for interpretive and educational programs specifically for the Trail. This would result in long-term minor adverse impacts to park management and operations because NPS Trail staff would have no space to provide interpretive and educational programs specifically about the Trail.

Cumulative Impacts

Development and completion of the Catawba River Greenway and Catawba Meadows Park in Morganton, NC, and the development of the McDowell Greenway in Marion, NC, would require NPS staff on-site inspection and coordination because these projects may affect Trail resources due to their close proximity to Trail segments and resources. Increased travel and potentially overnight trips would be needed for on-site inspection and coordination resulting in long-term negligible adverse impacts to park management and operations because the increase in travel would not be more than what is needed for other projects. The long-term minor to moderate adverse impacts from this alternative, in combination with the long-term negligible adverse impacts from other cumulative impacts projects, would result in long-term moderate adverse cumulative impacts to park management and operations.

Conclusion

The no action alternative would result in long-term moderate adverse impacts to park management and operations because of the continued inefficiencies created by the distance of the current HQ to Trail resources, necessitating longer travel times and overnight trips. There would also be long-term moderate adverse impacts resulting from the lack of office space for NPS staff expansion. Long-term minor adverse impacts would result from the continued lack of space for interpretive and educational programs specifically for the Trail. The long-term minor to moderate adverse impacts from this alternative, in combination with the long-term negligible adverse impacts from other cumulative impacts projects would result in long-term moderate adverse cumulative impacts to park management and operations.

IMPACTS OF THE ACTION ALTERNATIVES

ALTERNATIVE A: JOSEPH MCDOWELL HOUSE, MARION, NC

Analysis

Alternative A proposes to site the new HQ/VCS at the Joseph McDowell House in Marion, NC. This new location would be approximately 20 miles from the center point of the Trail, reducing the average response time to all Trail segments and resources and the necessity for overnight trips. There would be long-term beneficial impacts to park operations as a result of the increased efficiency of Trail staff due to the reduction in travel time and overnight trips.

The Joseph McDowell House is a significant and contributing feature to the Trail, a certified Trail site, 300 yards from the CMR, and approximately 15 miles from the non-motorized Trail. Siting the HQ/VCS in this location would provide Trail staff the opportunity to direct the public to the CMR and provide educational and interpretive programs at a certified Trail site to communicate the Trail's history to the public. There would be long-term beneficial impacts to park

management and operations as a result of the staff's increased ability to communicate the Trail's history and direct the public to the Trail's resources.

Cumulative Impacts

Impacts to park management and operations from cumulative impacts projects would be similar to those under the no action alternative. However, because of this proposed alternative's proximity to these projects, travel time would be diminished and overnight trips would not be necessary; therefore, there would be long-term negligible adverse cumulative impacts to park management and operations. The long-term beneficial impacts from this alternative, in combination with the long-term negligible adverse impacts from other cumulative impacts projects, would result in long-term beneficial cumulative impacts to park management and operations.

Conclusion

Alternative A would result in long-term beneficial impacts to park management and operations because of the increased efficiency of Trail staff to access portions of the Trail, direct the public to Trail resources, and provide educational and interpretive opportunities. The long-term beneficial impacts from this alternative, in combination with the long-term negligible adverse impacts from other cumulative impacts projects, would result in long-term beneficial cumulative impacts to park management and operations.

ALTERNATIVE B: SITE ADJACENT TO QUAKER MEADOWS HOUSE, MORGANTON, NC

Analysis

Alternative B proposes to site the new HQ/VCS adjacent to the Quaker Meadows House in Morganton, NC. This new location would be approximately 1.5 miles from the center point of the Trail, reducing the average response time to all Trail segments and resources and the necessity for overnight trips. There would be long-term beneficial impacts to park operations as a result of the increased efficiency of Trail staff due to the reduction in travel time and overnight trips.

The adjacent Quaker Meadows House is a significant and contributing feature to the Trail, a certified Trail site, and is listed on the NRHP. The proposed site is approximately one mile from both the CMR and a non-motorized segment of the Trail. NPS staff would be able to easily direct the public to Trail resources from this site given its proximity to the aforementioned Trail resources. In addition, this site's proximity to the Quaker Meadows House would enable NPS staff to provide educational and interpretive programs at a certified Trail site to communicate the Trail's history to the public. There would be long-term beneficial impacts to park management and operations as a result of the staff's increased ability to direct the public to the Trail's resources and to communicate the Trail's history.

Cumulative Impacts

Impacts to park management and operations from cumulative impacts projects would be similar to those under alternative A, resulting in long-term negligible adverse cumulative impacts to park management and operations. The long-term beneficial impacts from this alternative, in combination with the long-term negligible adverse impacts from other cumulative impacts projects, would result in long-term beneficial cumulative impacts to park management and operations.

Conclusion

Alternative B would result in long-term beneficial impacts to park management and operations because of the increased efficiency of Trail staff to access portions of the Trail, direct the public

to Trail resources, and provide educational and interpretive opportunities. The long-term beneficial impacts from this alternative, in combination with the long-term negligible adverse impacts from other cumulative impacts projects, would result in long-term beneficial cumulative impacts to park management and operations.

ALTERNATIVE C: CATAWBA MEADOWS PARK, MORGANTON, NC

Analysis

Alternative C proposes to site the new HQ/VCS within Catawba Meadows Park in Morganton, NC. Sited here, the new HQ/VCS would be less than a mile from the center point of the Trail, reducing the average response time to all Trail segments and resources and the necessity for overnight trips. There would be long-term beneficial impacts to park operations as a result of the increased efficiency of Trail staff due to the reduction in travel time and overnight trips.

Although this site is not a certified Trail site, it is located approximately 300 yards from the CMR and approximately half a mile from a non-motorized segment of the Trail. As a result of this site's proximity to both the CMR and non-motorized portions of the Trail, NPS staff would be able to easily direct the public to the Trail. There would be long-term beneficial impacts to park management and operations as a result of the staff's increased ability to direct the public to the Trail's resources.

Cumulative Impacts

Impacts to park management and operations from cumulative impacts projects would be similar to those under alternatives A and B, resulting in long-term negligible adverse cumulative impacts to park management and operations. The long-term beneficial impacts from this alternative, in combination with the long-term negligible adverse impacts from other cumulative impacts projects, would result in long-term beneficial cumulative impacts to park management and operations.

Conclusion

Alternative C would result in long-term beneficial impacts to park management and operations because of the increased efficiency of Trail staff to access portions of the Trail and direct the public to Trail resources. The long-term beneficial impacts from this alternative, in combination with the long-term negligible adverse impacts from other cumulative impacts projects, would result in long-term beneficial cumulative impacts to park management and operations.

ALTERNATIVE D: ROCKY FORD ACCESS, MORGANTON, NC

Analysis

Alternative D proposes to site the new HQ/VCS at Rocky Ford Access in Morganton, NC. The proposed site is approximately 1.2 miles from the center of the Trail, reducing the average response time to all Trail segments and resources and the necessity for overnight trips. There would be long-term beneficial impacts to park operations as a result of the increased efficiency of Trail staff due to the reduction in travel time and overnight trips.

The site is directly adjacent to both the CMR and a non-motorized Trail segment. As a result, NPS staff would not only be able to very easily direct the public to the Trail, but they would also be able to provide educational and interpretive programs on the Trail site to communicate the Trail's history to the public. There would be long-term beneficial impacts to park management and operations as a result of the staff's increased ability to direct the public to the Trail's resources and to communicate the Trail's history to the public through educational and interpretive programs.

Cumulative Impacts

Impacts to park management and operations from cumulative impacts projects would be similar to those under alternatives A, B, and C, resulting in long-term negligible adverse cumulative impacts to park management and operations. The long-term beneficial impacts from this alternative, in combination with the long-term negligible adverse impacts from other cumulative impacts projects, would result in long-term beneficial cumulative impacts to park management and operations.

Conclusion

Alternative D would result in long-term beneficial impacts to park management and operations because of the increased efficiency of Trail staff to access portions of the Trail, direct the public to Trail resources, and provide educational and interpretive opportunities. The long-term beneficial impacts from this alternative, in combination with the long-term negligible adverse impacts from other cumulative impacts projects, would result in long-term beneficial cumulative impacts to park management and operations.

VISITOR USE AND EXPERIENCE

METHODOLOGY AND ASSUMPTIONS

The purpose of this impact analysis is to assess the effects of the proposed site alternatives on the visitor use and experience in the study area. The analysis for this resource area is focused on visitor use and experience along the Trail, including driving, walking, and visiting the HQ and Kings Mountain National Military Park. To determine impacts, the proximity of the proposed HQ/VCS site alternative to Trail resources and to adjacent visitor amenities were considered as well as the how the physical characteristics of the area would impact the visitor experience.

STUDY AREA

The study area for visitor use and experience is the Trail in its entirety, which includes current resources and facilities that inform visitor use and experience such as the current HQ at Kings Mountain National Military Park and the interpretative display at the U.S. Forest Service District Office between Marion and Morganton, NC.

IMPACT THRESHOLDS

The following thresholds were defined for visitor use and safety:

Negligible — The impact would not be noticeable or would be barely noticeable to most visitors and would not affect their experiences or opportunities in a perceptible manner.

Minor — The impact would be noticeable to some visitors and might result in some effect on their experiences or opportunities.

Moderate — The impact would be readily apparent to many visitors and would likely affect the experiences or opportunities of many visitors.

Major — The impact would be obvious to most visitors and would affect the experiences or opportunities of most or all visitors.

Duration – Short-term impacts would occur throughout the course of a year. Long-term impacts would last more than one year.

IMPACTS OF THE NO ACTION ALTERNATIVE

Analysis

Under the no action alternative, the Trail HQ would continue to be located in loaned office space at Kings Mountain National Military Park, SC, the southernmost terminus of the Trail. In this location, the HQ would remain between less than an hour's drive for closer resources to as much as five hours' drive (one way) from the northernmost terminus of the Trail. As a result of its location, there would be long-term minor adverse impacts to visitor use because it would be noticeably difficult for visitors to experience numerous Trail resources in one day.

There would continue to be no VCS or similar visitor resource, resulting in a continued need for a centralized location where visitors can learn information about the Trail, have access to restroom facilities, and have a place for educational and interpretive programs specifically related to the Trail. There would be long-term moderate adverse impacts to visitor use and experience as a result of the lack of a VCS or similar resource and due to a lack of visitor resources specifically related to the Trail.

Cumulative Impacts

Cumulative impact projects such as the further development of the Catawba River Greenway in Morganton, NC, the development and completion of Catawba Meadows Park also in Morganton, and the development of the McDowell Greenway in Marion, NC, would have long-term beneficial impacts to visitor use and experience. Each of the aforementioned projects would provide visitors with increased recreational opportunities as well as educational and interpretive opportunities to make connections to the surrounding historic resources. These projects would also create greater accessibility and connectivity between the historic resources and recreational opportunities in the area including the Trail. Therefore, there would be long-term beneficial impacts to visitor use and experience. These long-term beneficial impacts, in combination with the long-term minor to moderate adverse impacts from the no action alternative would result in long-term negligible to minor adverse cumulative impacts to visitor use and experience.

Conclusion

Under the no action alternative, there would be long-term minor to moderate adverse impacts to visitor use and experience as a result of the current HQ location and the lack of a centralized VCS. These long-term minor to moderate adverse impacts resulting from the no action alternative, in combination with the beneficial impacts from other projects in the project area, would result in long-term negligible to minor adverse cumulative impacts to visitor use and experience.

IMPACTS OF THE ACTION ALTERNATIVES

ALTERNATIVE A: JOSEPH MCDOWELL HOUSE, MARION, NC

Analysis

Under alternative A, the new HQ/VCS would be sited at the Joseph McDowell House in Marion, NC. In this location, the new facilities would be approximately 20 miles from the center point of the Trail and in closer to many Trail resources, potentially resulting in an increase in visitors to the Trail. As a result of the new location, there would be long-term beneficial impacts to visitor use and experience.

As a significant and contributing feature of the Trail and certified Trail site, the Joseph McDowell House would provide educational and interpretive opportunities to visitors, and the opportunity to experience historic Trail resources directly while at the HQ/VCS. In addition, the Joseph McDowell House is approximately 300 yards from the CMR, giving visitors easy access from the HQ/VCS to a portion of the Trail. There would be long-term beneficial impacts to visitor use and experience as a result of the proposed site's proximity to the Trail and Trail resources.

The proposed site sits between two fast food establishments to the east and west and a hotel to the northeast. These establishments would provide visitors amenities such as food and lodging, resulting in long-term benefits to visitor use. However, the visual presence and noise generated as a result of the operation of these businesses, especially from the two adjacent fast food establishments, would create an environment that is inconsistent with a park environment and the historic character portrayed by the Trail. In addition, the noise created by the fast food establishments would interrupt any outdoor educational or interpretive programs, resulting in long-term minor adverse impacts to visitor experience.

Cumulative Impacts

Cumulative impacts would be similar to those under the no action alternative. There would be long-term beneficial cumulative impacts resulting from increased recreational, educational, and interpretive opportunities. These beneficial impacts, in combination with the long-term beneficial

and long-term minor adverse impacts resulting from this alternative, would result in long-term beneficial cumulative impacts to visitor use and experience.

Conclusion

Under alternative A, there would be long-term beneficial impacts to visitor use and experience as a result of the proposed site's proximity to Trail resources and visitor amenities. There would also be long-term minor adverse impacts to visitor experience as a result of the visual character and noise created by the adjacent businesses. These long-term beneficial and long-term minor adverse impacts resulting from alternative A, in combination with the beneficial impacts from other projects in the project area, would result in long-term beneficial cumulative impacts to visitor use and experience.

ALTERNATIVE B: SITE ADJACENT TO QUAKER MEADOWS HOUSE, MORGANTON, NC

Analysis

Alternative B proposes to site the new HQ/VCS on property adjacent to the Quaker Meadows House in Morganton, NC. This location is approximately 1.5 miles from the center point of the Trail and closer to many Trail resources, potentially resulting in an increase in visitors. As a result of the new location, there would be long-term beneficial impacts to visitor use and experience.

From the proposed HQ/VCS site, visitors would have easy access to the adjacent Quaker Meadows House, which is a certified site, listed on the NRHP, and a significant and contributing feature of the Trail. Being adjacent to this historic resource would enhance any interpretive and educational programs at the HQ/VCS and provide visitors the opportunity to directly experience a historical Trail resource. There would be long-term beneficial impacts to visitor use and experience as a result of the proposed site's proximity to historic Trail resources.

The visual character and lack of noise in the area of the proposed alternative is consistent with what is expected of a park setting and historic character portrayed by the Trail, resulting in long-term beneficial impacts to visitor experience.

Cumulative Impacts

Cumulative impacts would be similar to those under the no action alternative. There would be long-term beneficial cumulative impacts resulting from increased recreational, educational, and interpretive opportunities. The long-term beneficial impacts resulting from alternative B, in combination with the beneficial impacts from other projects in the project area, would result in long-term beneficial cumulative impacts to visitor use and experience.

Conclusion

Under alternative B, there would be long-term beneficial impacts to visitor use and experience as a result of the proposed site's proximity to Trail resources and park-like visual character. The long-term beneficial impacts resulting from alternative B, in combination with the beneficial impacts from other projects in the project area, would result in long-term beneficial cumulative impacts to visitor use and experience.

ALTERNATIVE C: CATAWBA MEADOWS PARK, MORGANTON, NC

Analysis

Under alternative C, the new HQ/VCS would be located within Catawba Meadows Park in Morganton, NC. This site is within less than a mile of the geographic center of the Trail. This site is close to many Trail resources and is easily accessible to visitors, potentially resulting in an increase in visitors. There would be long-term beneficial impacts to visitor use and experience as

a result of this alternative's nearness to the geographic center of the Trail and numerous Trail resources.

The proposed site is within 300 yards from the CMR and within approximately half a mile from an established non-motorized segment of the Trail. There would be long-term beneficial impacts to visitor use and experience as a result of the proposed site's proximity to the Trail as visitors would have easy access from the HQ/VCS to both the CMR and the non-motorized Trail.

The proposed site is within a community park and is adjacent to other recreational opportunities and visitor amenities, resulting in long-term beneficial impacts to visitor use. Although the visual character of the area would be consistent with a park-like setting, the noise created from recreational and sporting events within the park could interfere with outdoor interpretive and educational programs and would be inconsistent with the historical setting portrayed by the Trail. As a result of this noise, there would be long-term minor adverse impacts to visitor experience.

Cumulative Impacts

Cumulative impacts would be similar to those under the no action alternative. There would be long-term beneficial cumulative impacts resulting from increased recreational, educational, and interpretive opportunities. The long-term beneficial impacts from these projects, in combination with the long-term beneficial and long-term minor adverse impacts from alternative C would result in long-term beneficial cumulative impacts to visitor use and experience.

Conclusion

Under alternative C, there would be long-term beneficial impacts to visitor use and experience as a result of the proposed site's proximity to Trail resources, segments of the Trail, and other visitor amenities. There would also be long-term minor adverse impacts to visitor experience resulting from the noise created from sporting events near the proposed site. The long-term beneficial and minor adverse impacts resulting from alternative C, in combination with the beneficial impacts from other projects in the project area, would result in long-term beneficial cumulative impacts to visitor use and experience.

ALTERNATIVE D: ROCKY FORD ACCESS, MORGANTON, NC

Analysis

Alternative D proposes to locate the new HQ/VCS at Rocky Ford Access in Morganton, NC. This site is within approximately one mile of the geographic center of the Trail. Similar to alternative C, this site is close to many Trail resources and is easily accessible to visitors, potentially resulting in an increase in visitors. As a result of this alternative's proximity to the geographic center of the Trail and numerous Trail resources, there would be long-term beneficial impacts to visitor use and experience.

The proposed site is adjacent to the CMR and is immediately accessible to a non-motorized segment of the Trail. As a result, visitors would be able to drive to the HQ/VCS while on the CMR and would be able to walk on the non-motorized route from the HQ/VCS parking lot. There would be long-term beneficial impacts to visitor use and experience as a result of the proposed site's proximity to the Trail. The proposed site's proximity to the CMR and non-motorized segment of the Trail would provide educational and interpretive programs directly tied to the Trail.

As the site is located directly adjacent to a non-motorized segment of the Trail, the visual character of the area would be consistent with a park-like setting and with the historical setting portrayed by the Trail. In addition, the site is located at the edge of a community park and away from commercial establishments; therefore, there would be minimal noise disturbance to the

visitor experience and outdoor educational and/or interpretive programs. As a result of the proposed site's visual setting and serene setting, there would be long-term beneficial impacts to visitor experience.

Cumulative Impacts

Cumulative impacts would be similar to those under the no action alternative. There would be long-term beneficial cumulative impacts resulting from increased recreational, educational, and interpretive opportunities. The long-term beneficial impacts resulting from these projects in combination with the long-term beneficial from alternative D would result in long-term beneficial cumulative impacts to visitor use and experience.

Conclusion

Under alternative D, there would be long-term beneficial impacts to visitor use and experience as a result of the proposed site's proximity to Trail resources, segments of the Trail, and visual character. The long-term beneficial impacts resulting from alternative D, in combination with the beneficial impacts from other projects in the project area, would result in long-term beneficial cumulative impacts to visitor use and experience.

SOCIOECONOMICS

METHODOLOGY AND ASSUMPTIONS

Development proposed by the action alternatives could have a direct effect on some parts of the social and economic environment in the affected municipalities and larger region. Planning team members applied logic, experience, and professional expertise and judgment to analyzing the impacts of each alternative on the social and economic setting. Socioeconomic data, projected visitor spending, the number of needed NPS staff anticipated, and future developments within the vicinity of each of the proposed HQ/VCS sites were considered in identifying and discussing the potential socioeconomic effects. The study area for each alternative, including the no action alternative, is limited to the municipality in which the HQ/VCS would be located. A qualitative analysis of the effects of each alternative was completed.

STUDY AREA

The existing HQ for the Trail is located just outside of the town of Blacksburg, SC, which is located in Cherokee County, SC. Since Blacksburg is the closest municipality to the existing HQ, it will serve as the study area for this portion of the analysis. All other locations for the proposed HQ/VCS are located in NC. As a result, the study area for the no action alternative is limited to Blacksburg since municipalities under the action alternatives would not experience the social and economic effects of the no action alternative.

The study area for action alternative A is Marion, NC. Marion is home to the Joseph McDowell House, one of the locations proposed for the siting of new HQ/VCS, and is located in McDowell County.

The study area for the other action alternatives is Morganton, NC, and Burke County, where Morganton is located. Morganton is the location of the site adjacent to Quaker Meadows House, Catawba Meadows Park, and the Rocky Ford Access site, the remaining three action alternatives.

IMPACT THRESHOLDS

Intensity thresholds were developed to assess the magnitude of socioeconomic effects resulting from the alternatives under consideration. In the development of these thresholds, it was assumed that beneficial impacts are those that individuals or groups would accept or recognize through increased economic activity, either in general or for a specific group of people, businesses, organizations, or institutions. The siting of the proposed HQ/VCS would result in visitor patronage to new locations over existing conditions. As a result, it is anticipated that such patronage would result in some change in the level of economic activity in the affected municipalities. Adverse impacts are those that most individuals or groups would generally recognize as diminishing economic welfare, either in general or for a specific group of people, businesses, organizations, or institutions. Examples of adverse effects include fewer job opportunities and increases in cost of living without matching increases in income.

The intensity and duration of effects on the *local and regional economy* are described as follows:

Negligible – Very few individuals, businesses, or government entities are impacted. Impacts are nonexistent, barely detectable, or detectable only through indirect means and with no discernable impact on regional economic conditions.

Minor – A few individuals, businesses, or government entities are impacted. Impacts are small but detectable, limited to a small geographic area, comparable in scale to typical year-to-year or seasonal variations, and not expected to substantively alter economic conditions over the long term.

Moderate – Many individuals, businesses, or government entities are impacted. Impacts are readily apparent and detectable across a wider geographic area and may have a noticeable effect on economic conditions over the long term.

Major – A large number of individuals, businesses, or government entities are impacted. Impacts are readily detectable and observed, extend across much of the study area, and have a substantial influence on economic conditions over the long term.

Duration – Short-term impacts would be immediate, occurring during implementation of the alternative. Long-term impacts would persist after implementation of the alternative.

IMPACTS OF THE NO ACTION ALTERNATIVE

Analysis

In the no action alternative, the park HQ would continue to be located on the grounds of Kings Mountain National Military Park. The existing HQ building would not be expanded.

For planning purposes, Visitor patronage to Kings Mountain National Military Park is expected to increase slightly from 254,997 in 2008 to 290,535 the year the HQ/VCS would open (NPS 2009d). It is anticipated that at least some of these visitors would frequent the existing visitor center and subsequently the town of Blacksburg, SC.

The National Park Visitor Spending and Payroll Impacts report from 2008 presents a summary of employment generated by non-local visitor spending and NPS employee spending by national park (NPS 2009c). The value analysis study prepared for NPS as part of this FS/EA assumes that approximately 25% of visitors to Kings Mountain National Military Park will visit the HQ/VCS once it opens (NPS 2009). To arrive at potential current effects of the existing visitor center on the town of Blacksburg, this percentage has been applied to 2008 figures presented in the Visitor Spending and Payroll Impacts report.

Approximately 254,997 people visited Kings Mountain National Military Park in 2008 (NPS 2009c). When applying the 25% mentioned above, approximately 38 jobs in Blacksburg and surrounding communities are attributed to the induced effects of non-local visitor spending. Currently, there is only one NPS employee at the HQ. Assuming that 25% of non-local visitors visit Blacksburg, approximately \$1,995,500 was introduced into the local economy as a result of non-local spending.

The increase in visitors to Blacksburg would likely result in some increase in spending in local retail and business establishments, creating local jobs and income, although the change in social and economic benefits would be negligible to minor over existing conditions. Additional non-local visitors would induce an additional five jobs and approximately \$278,105 into the local economy. In Blacksburg, the social and economic effects of continued visitor spending and any increase as a result of additional park patronage would remain similar to existing conditions.

Cumulative Impacts

Past, present, and future projects in and around Blacksburg that would stimulate additional economic activity or future development are not anticipated. Therefore, there would be no cumulative social and economic impacts.

Conclusion

In the future under the no action alternative, there would be benefits in the form of the slight increase in economic spending in Blacksburg should visitor patronage to the existing HQ/VCS and Kings Mountain National Military Park increase as anticipated. Such benefits would be

experienced by retail and business establishments in Blacksburg. There would be no cumulative effects resulting from the no action alternative.

IMPACTS OF THE ACTION ALTERNATIVES

Each of the action alternatives involves developing or redeveloping candidate sites to house the HQ/VCS. The social and economic effects that would result from the siting of the proposed HQ/VCS in different municipalities within close proximity to the Kings Mountain National Military Park is based on the socioeconomic effects associated with the number of NPS staff that would be located at the site and visitor spending and jobs attributable to non-local spending associated with projected visitor numbers.

The National Park Visitor Spending and Payroll Impacts report from 2008 presents a summary of employment generated by non-local visitors and NPS park activity as well as non-local visitor and NPS employee spending by national park. Using information contained in this report, a ratio of 1,600 non-local visitors for every one job created was determined, as was non-visitor spending in the local economy. It has been estimated that each visitor to the area spends approximately \$31.30 (in \$2008). These numbers have been applied to anticipated future conditions to estimate the economic impact of the action alternatives.

The HQ/VCS FS/EA prepared for NPS assumes that approximately 290,535 people would visit Kings Mountain National Military Park in the year the Overmountain HQ/VCS would open. This would result in approximately 72,634 people per year or 199 people per day visiting the HQ/VCS, assuming that 25% of Kings Mountain National Military Park visitors went there. However, it is anticipated that visitor numbers would be higher in the warmer months from approximately April through November and lower other times of year. Kings Mountain visitation supports approximately 170 jobs in the local economy attributable to non-local visitor spending. Assuming 25% of jobs would be attributable to visitor spending and patronage to the new HQ/VCS, approximately 43 new jobs would likely be created in the municipalities and towns within the site vicinity.

Currently, the NPS anticipates that approximately five people would be employed at the new HQ/VCS. These numbers are used to estimate the economic impacts of the proposed HQ/VCS under each of the action alternatives.

Construction and operation of the HQ/VCS would also result in some economic benefits to the local and regional economies. As stated in the Headquarters/Visitor Contact Station Feasibility Study, the construction capital costs identified below assume a 12-month construction period beginning in September 2012 (NPS 2010a). It has been assumed that 10 construction jobs will be generated by every \$1 million spent on construction for each of the action alternatives.¹ Additionally, a 50-year life-cycle for each of the facilities is assumed. Calculations in the report apply a 4% discount rate or interest rate to life-cycle costs to determine the present value of future cash flows.

Generally, the social and economic effects resulting from the construction and operation of the action alternatives are relatively similar across each alternative. Overall, the introduction of construction workers, NPS employees, and park visitors would introduce additional economic activity. The benefits would result beneficial effects in each of the affected municipalities.

The one person working in the existing HQ would be relocated to the site of the proposed HQ/VCS once in operation. However, the existing visitor center for Kings Mountain National Military Park in Blacksburg, SC, would continue to operate under existing conditions. As a result,

¹ A general multiplier for construction spending in more rural counties has been applied. It assumes that 10 jobs are supported (direct, indirect, and induced) for every \$1 million in construction spending.

no adverse economic impacts are anticipated in Blacksburg, SC, from the relocation of NPS or the siting of the new HQ/VCS in either Marion or Morganton, NC.

In addition, for all alternatives, the property would be removed from the local tax rolls with its conversion to a federal land use. The change in land use would therefore result in a long-term negligible adverse impact resulting from the implementation of the alternative.

ALTERNATIVE A: JOSEPH McDOWELL HOUSE, MARION, NC

Analysis

Under alternative A, the Joseph McDowell House would change from serving a commercial-retail function to federal park administrative functions with visitor opportunities. The siting of the new HQ/VCS at this location would require the construction of a 2,500-square foot (SF) structure to house the functions of the HQ/VCS and the renovation of the Joseph McDowell House (approximately 2,500 SF). Over the 12-month construction period, renovation and construction of these facilities are estimated to cost approximately \$4,182,450 (NPS 2010a).

Approximately 42 jobs would be generated by the construction and renovation of alternative A over the 12-month construction period. During construction activities, it is anticipated that these workers would purchase goods and services in the local market. The short-term effect of construction jobs and associated spending would result in negligible to minor benefits in the economic environment in Marion and surrounding communities.

In the short-term, construction activities have the potential to adversely affect adjacent retail and business establishments. The use of heavy equipment would result in an increase in noise and has the potential to deter customers from frequenting establishments close to staging areas. Such effects, which would be minor, would be limited to the time of day such construction activities take place. At the onset of construction activities, an ingress/egress lane would be installed to Lenoir Road for Rocky Ford Access. This would result in a minor effect to traffic flow but would not result in any lane closures. The short duration of such activities are not anticipated to adversely affect retail and business establishments in the vicinity of the Joseph McDowell House.

General maintenance costs over the 50-year life cycle of the HQ/VCS are estimated at approximately \$4,528,900 at a discount rate of 4% (NPS 2010a). NPS staff and personnel would be located at the new HQ/VCS. The combination of workers performing periodic maintenance to the HQ/VCS and NPS staff and personnel needed to operate the facility would introduce a small amount of additional economic activity in Marion. However, these employees are not anticipated to place additional demand on existing services.

As mentioned above, it is assumed that approximately 290,535 people are projected to visit Kings Mountain National Military Park the year the new HQ/VCS opens. When applying the 25% visitor capture rate mentioned above, an additional \$2,273,600 in non-local visitor spending would be introduced into the local and regional economies and would generate an additional 43 jobs.

In the long term, retail and business establishments in Marion and nearby areas would experience an increase in economic activity due to increased tourism in the area generated by the siting of the HQ/VCS. Such activity would result in beneficial impacts for some local and regional retail and business establishments.

Cumulative Impacts

The completion of the McDowell Greenway is anticipated to generate new construction activity from projected commercial development. The combination of the proposed trail with the siting of the HQ/VCS at the Joseph McDowell House has the potential to attract more people to Marion

for recreational opportunities. Increased tourism as a result of the proposed HQ/VCS combined with the introduction of new commercial activity in Marion has the potential to result in long-term beneficial effects to local retail establishments. In addition to generating additional tourism, the right combination of new commercial activity could increase Marion's economic vitality, increasing its attractiveness to businesses and residents considering a move there. When these benefits from the completion of the McDowell Greenway are considered with the beneficial socioeconomic impacts from the siting of the HQ/VCS at the Joseph McDowell House, there would be overall beneficial long term socioeconomic impacts.

Conclusion

The siting of the HQ/VCS in Marion would result in minor to moderate beneficial effects to local construction, retail, and business establishments. It is not anticipated that the increase in economic activity would change so that land values and home prices would become too costly for existing residents to continue living there.

The operation of the HQ/VCS in Marion would induce jobs and spending in the local economy. Since the operation of this facility would not require the closure of the existing visitor center, the social and economic environment in Blacksburg would remain as under existing conditions.

The cumulative effect of the siting of the HQ/VCS in Marion, along with additional commercial activity generated by the McDowell Greenway could increase the area's economic vitality and result in long term benefits.

ALTERNATIVE B: SITE ADJACENT TO QUAKER MEADOWS HOUSE, MORGANTON, NC

Analysis

Under alternative B, the site adjacent to the Quaker Meadows House, which would be located on a currently undeveloped parcel, would be located next to the Quaker Meadows House Museum. The siting of the new HQ/VCS at this location would require the construction of a new 5,100-SF structure to house the functions of the HQ/VCS. Construction of the HQ/VCS is estimated to cost approximately \$4,469,700.

Approximately 45 jobs would be generated by the construction of alternative B over the 12-month construction period. It is anticipated that these workers would come from across the Hickory-Lenoir-Morganton Metropolitan Statistical Area in which Morganton is located. While beneficial, the number of workers generated by construction activities is not anticipated to result in any discernable change to the existing social and economic conditions in Morganton. However, regardless of where these workers come from, they will likely purchase goods and services at local retail establishments, which would benefit the local economy.

Construction activities would be isolated to the affected parcel and are not anticipated to adversely affect patronage to nearby retail and business establishments. However, noise generated by heavy equipment used during certain construction activities has the potential to affect the adjacent Quaker Meadows House Museum. It is anticipated that such activities would be limited to hours when patronage is low or during weekdays when the museum is closed to minimize this effect.

General maintenance costs over the 50-year life cycle of the HQ/VCS are estimated to cost approximately \$4,703,500 at a discount rate of 4% (NPS 2010a). The combination of workers performing periodic maintenance to the HQ/VCS and NPS staff and personnel needed to operate the facility would introduce a small amount of additional economic activity in Morganton. However, such activity is not anticipated to place significant demand on existing services to induce additional retail and business establishments.

In the long term, retail and business establishments in Morganton and nearby areas would experience an increase in economic activity due to increased tourism in the area generated by the siting of the HQ/VCS in Morganton. As mentioned above, approximately 290,535 people are projected to visit Kings Mountain National Military Park in the next year. When applying the 25% visitor capture rate mentioned above, an additional \$2,273,600 in non-local visitor spending would be introduced into the local economy and would support an additional 43 new jobs within Morganton and other communities close to Morgantown. Such activity would result in minor to moderate beneficial effects for employment and for some retail and business establishments in Morganton.

Cumulative Impacts

The expansion of the Catawba River Greenway is anticipated to generate new commercial activity in the area. The planned expansion of the Greenway – which would connect to an existing trail at Freedom Park and the local high school – would bring the trail within a quarter mile of the proposed site. This would create additional opportunities for recreational enjoyment and increase the attractiveness of the land for future development. The combination of the proposed trail with the siting of the HQ/VCS at the Quaker Meadows House has the potential to attract more people to Morganton for recreational opportunities. The increase in tourism to the area would result in a long-term beneficial effect to local retail and other business establishments.

In addition to generating additional tourism, the right combination of new commercial activity could increase Morganton's economic vitality, increasing its attractiveness to businesses and residents considering a move there.

The beneficial effects resulting from siting the HQ/VCS at the property adjacent to the Quaker Meadows House, and the benefits from the other cumulative projects would result in overall socioeconomic benefits.

Conclusion

The siting of the HQ/VCS at the Quaker Meadows House would result in minor to moderate beneficial effects to local construction, retail, and business establishments. It is not anticipated that the increase in economic activity would change so that land values and home prices would become too costly for existing residents to continue living there.

The operation of the HQ/VCS in Morganton would induce jobs and spending in the local economy. Since the operation of this facility would not require the closure of the existing visitor center at Kings Mountain National Military Park, the social and economic environment in Blacksburg would remain as is under existing conditions.

The beneficial effects resulting from siting the HQ/VCS at the property adjacent to the Quaker Meadows House, and the benefits from the other cumulative projects would result in overall socioeconomic benefits.

ALTERNATIVE C: CATAWBA MEADOWS PARK, MORGANTON, NC

Analysis

Under alternative C, the proposed HQ/VCS would be located in Catawba Meadows Park. Similar to alternative B, the siting of the new HQ/VCS at this location would require the construction of a new 5,100-SF structure to house the functions of the HQ/VCS. Construction costs of this structure are estimated to be approximately \$3,911,700.

Approximately 39 jobs would be generated by the construction of alternative C over the 12-month construction period. It is anticipated that these workers would come from across the

Hickory-Lenoir-Morganton Metropolitan Statistical Area, in which Morganton is located. While beneficial, the number of workers generated by construction activities is not anticipated to result in any discernable change to the existing social and economic conditions in Morganton. However, regardless of where these workers come from, they will likely purchase goods and services at local retail establishments, which would benefit the local economy.

Construction activities would be isolated to the affected parcel and are not anticipated to adversely affect patronage to nearby retail and business establishments. Therefore, no adverse short-term effects to local retail establishments would be borne by the construction of the proposed project.

General maintenance costs over the 50-year life cycle of the HQ/VCS are estimated to cost approximately \$4,703,500 at a 4% discount rate (NPS 2010a). The combination of workers performing periodic maintenance to the HQ/VCS and NPS staff and personnel needed to operate the facility would introduce a small amount of additional economic activity in Morganton. However, such activity is not anticipated to place significant demand on existing services to induce additional retail and business establishments.

In the long term, retail and business establishments in Morganton and nearby areas would experience an increase in economic activity due to increased tourism in area generated by the siting of the HQ/VCS in Morganton. As mentioned above, approximately 290,535 people are projected to visit Kings Mountain National Military Park in the next year. When applying the 25% mentioned above, an additional \$2,273,600 in non-local visitor spending would be introduced into the local economy and would support an additional 43 new jobs in Morganton and surrounding communities. Such activity would result in beneficial effects for employment and for some retail and business establishments in Morganton.

Cumulative Impacts

Cumulative effects under this alternative would be the same as under alternative B.

Conclusion

Conclusions from this alternative would be the same as under alternative B.

ALTERNATIVE D: ROCKY FORD ACCESS, MORGANTON, NC

Analysis

Under alternative D, the proposed HQ/VCS would be located at the Rocky Ford Access site, adjacent to the Catawba River. The siting of the new HQ/VCS at this location would require the construction of an approximately 5,000-gsf structure to house the functions of the HQ/VCS. Construction costs of this structure are estimated to be approximately \$3,972,300 (NPS 2010a).

Approximately 40 jobs would be generated by the construction of alternative D over the 12-month construction period. It is anticipated that these workers would come from across the Hickory-Lenoir-Morganton Metropolitan Statistical Area, in which Morganton is located. While beneficial, the number of workers generated by construction activities is not anticipated to result in any discernable change to the existing social and economic conditions in Morganton. However, regardless of where these workers come from, they will likely purchase goods and services at local retail establishments, which would benefit the local economy.

Construction activities would be isolated to the affected parcel and are not anticipated to adversely affect patronage to nearby retail and business establishments. Therefore, no adverse short-term effects to local retail establishments would be borne by the construction of the proposed project.

General maintenance costs over the 50-year life cycle of the HQ/VCS are estimated to cost approximately \$4,339,400 at a 4% discount rate (NPS 2010a). The combination of workers performing periodic maintenance to the HQ/VCS and NPS staff and personnel needed to operate the facility would introduce a small amount of additional economic activity in Morganton. However, such activity is not anticipated to place significant demand on existing services to induce additional retail and business establishments.

In the long term, retail and business establishments in Morganton and nearby areas would experience an increase in economic activity due to increased tourism in area generated by the siting of the HQ/VCS in Morganton. As mentioned above, approximately 290,535 people are projected to visit Kings Mountain National Military Park in the next year. When applying the 25% rate mentioned above, an additional \$2,273,600 in non-local visitor spending would be introduced into the local economy and would support an additional 43 new jobs in Morganton and surrounding communities. Such activity would result in beneficial effects for employment and for some retail and business establishments in Morganton.

Cumulative Impacts

Cumulative effects under this alternative would be the same as under alternative B.

Conclusion

Conclusions from this alternative would be the same as under alternative B.

LAND USE

METHODOLOGY AND ASSUMPTIONS

The assessment of potential impacts on adjacent land uses and resources is based on best professional judgment and has been developed through discussions with staff from the NPS and local planning agencies and through review of local plans, zoning, and relevant literature.

STUDY AREA

The study area for direct, indirect, and cumulative impacts resulting from the no action alternative includes the entire area of the NPS Kings Mountain National Military Park.

The study area for direct, indirect, and cumulative impacts of action alternatives includes the properties in a quarter-mile radius of each of the candidate sites.

IMPACT THRESHOLDS

Thresholds of change of the intensity of an impact are defined as follows:

Negligible — Impacts would not result in a change in current land use conditions.

Minor — Impacts would result in a change in current land use conditions but would not affect the context or intensity of use in a manner that would be measurable or perceptible; the land use would be consistent with adjacent uses.

Moderate — Impacts would result in a change in current land use conditions and would affect the context or intensity of use in a manner that would be measurable or perceptible; the land use would be inconsistent with adjacent uses.

Major — Impacts would result in a change in current land use conditions and would substantially affect the context and intensity of use; the land use would be inconsistent with adjacent uses.

Duration— Short term impacts will last for a year or less, or take place during the construction period. Long term impacts last longer than a year. In case of land use, impacts are long term unless otherwise specified.

IMPACTS OF THE NO ACTION ALTERNATIVE

Analysis

In the no action alternative, the park HQ would continue to be housed on the grounds on Kings Mountain National Military Park, adjacent to the Kings Mountain HQ building, and would not be expanded. There would be no changes in land use, and no effects.

Cumulative Impacts

Because there would be no effects on land use associated with the no action alternative, there would be no cumulative effects associated with the no action alternative.

Conclusion

The no action alternative would have no direct or indirect impacts on land use, and there would be no cumulative impacts on land use associated with this alternative.

IMPACTS OF THE ACTION ALTERNATIVES

All the action alternatives involve developing or redeveloping candidate sites to house the Trail HQ/VCS, which are administrative park uses. Developed sites would include parking for staff

and visitors, including school buses and recreational vehicles; office space and visitor space; as well as restrooms for visitor comfort. There would likely be exterior interpretive areas.

ALTERNATIVE A: JOSEPH McDOWELL HOUSE, MARION, NC

Analysis

Development of the Joseph McDowell House site would involve a change in land use designation from commercial use to park/institutional use. The use of the site would change from a commercial-retail function to federal park administrative functions with visitor contact opportunities. The commercial zoning would change to federal or park/recreational.

The change in land use function would be compatible with the adjacent land uses because the new HQ/VCS would be similar in size and scale to adjacent development and would attract a comparable number of visitors as a commercial establishment. Any future construction would comply with all local codes and regulations.

Cumulative Impacts

The projects that need to be considered for cumulative impacts for the Joseph McDowell House include the completion of Phases I and II of the McDowell Greenway, which is planned to terminate at the Joseph McDowell property. It is expected that the greenway would be extended further along the river in both directions in the future, linking up with other trails and greenways in both Buncombe and Burke Counties, although that extension is not yet funded. Reasonable anticipation exists for additional commercial development in the vicinity of the site. The planned terminus for the McDowell Greenway at the Joseph McDowell site will necessitate development of an access drive or pathway to the greenway and river, and coordination with the NPS to ensure adequate parking for visitors to the greenway and the HQ/VCS. The development of the trailhead for the greenway would result in a more intensely used site, but it would still be compatible with surrounding uses and would provide an overall long-term benefit to land uses. The development of the McDowell Greenway, combined with development of the Trail HQ/VCS at the Joseph McDowell site, would noticeably change the land use on the property and affect the area; however, the effects would be long-term and beneficial, given that it would be a compatible use with the surrounding properties as well as the proposed VCS.

Conclusion

Alternative A would change the land use of the Joseph McDowell House from commercial to institutional, although the new use would be a compatible use with adjoining properties. The result would therefore be a long-term negligible adverse impact. The cumulative impacts from the construction of the greenway would be long-term beneficial. The combination of impacts to land use from reuse of the Joseph McDowell House, and the development of the greenway and trail access on the property, will result in long-term beneficial effects due to the likelihood that the greenway and new HQ/VCS would introduce positive amenities to the surrounding land use, visitor use would increase, and these visitors would be likely to spend money in the commercial properties nearby.

ALTERNATIVE B: SITE ADJACENT TO QUAKER MEADOWS HOUSE, MORGANTON, NC

Analysis

Development of the site adjacent to the Quaker Meadows House in Morganton would change the current formal land use designation from industrial to an office-institutional designation (there are no federal or park zones in the Morganton Zoning Ordinance), and would alter the functional land use from undeveloped to park administrative. This change in land use would therefore complement the existing land use on the adjoining property, the Quaker Meadows House

Museum, as the museum and the proposed HQ/VCS both relate to the history of Overmountain march, resulting in a long-term beneficial impact related to the land use of the adjacent properties. The property also lies along the city's designated "Revolutionary War Heritage Corridor," which highlights Quaker Meadows and Catawba Meadows (City of Morganton 2009). The addition of the Trail HQ/VCS to the property adjacent to the Quaker Meadows House would complement this element of the city's comprehensive plan, and would result in long-term beneficial effects. Although the zoning is industrial, most of the properties zoned industrial in the immediate vicinity remain undeveloped or underdeveloped, and the properties surrounding the industrially zoned properties are zoned for either residential or general business. Under current county policy, however, the museum and the Trail HQ/VCS both conflict with the designated industrial uses listed in the Zoning Ordinance. City policy also states that land that is zoned industrial should be reserved exclusively for industrial use. City representatives have indicated, however, that there is support for the proposed use at that site and are working on changing policies and ordinances so a flexible range of uses would be supported in the vicinity. There would therefore be support for a zoning change on the property. (City of Morganton 2010; City of Morganton, Anderson, pers. comm. 2010). The overall effects on land use resulting from the benefits to adjacent uses and compatibility with the Revolutionary War Heritage Corridor, would be long term and beneficial, although the existing, but changeable conflicts with the underlying zone would therefore be long-term, negligible and adverse.

Cumulative Impacts

The project that needs to be considered for cumulative impacts for the site adjacent to the Quaker Meadows House is the expansion of the Catawba River Greenway. There is also a reasonable anticipation that there will be additional commercial/industrial development in the vicinity of the site. The planned expansion of the Catawba River Greenway brings a loop west from Rocky Ford Access and south along Bost Road, one road to the east of St Mary's Church Road, linking it up with the existing trail spur at Freedom Park and the high school (Figure 4-1). This loop would bring the trail within a quarter mile of the proposed site, creating additional opportunities for recreational enjoyment and enhancing land use in the area by increasing amenities to properties adjacent to and near the greenway extensions. The effects of the trail expansion would therefore be long-term and beneficial. When combined with the impacts of alternative B, the resulting impacts would be long-term and beneficial, particularly considering how change in land use affects the nearby properties (City of Morganton 2010).

Conclusion

Alternative B would change the land use from undeveloped to park/institutional, and zoning from heavy industrial to park/institutional (or maintain the original underlying zoning, since there is not a designated zone for parks/recreation in the Morganton Zoning Ordinance). There would be long-term beneficial impacts on the Quaker Meadows property and its current use as a museum, and prevention of development as an industrial use, which is incompatible with the museum. However, there would be long-term minor adverse impacts relative to the city's planning policy, removing potential industrial land from available inventory.

The impacts of the changes in land use of the alternative, combined with beneficial impacts from the greenway expansion, would result in long-term beneficial cumulative impacts.

ALTERNATIVE C: CATAWBA MEADOWS PARK, MORGANTON, NC

Analysis

Constructing the HQ/VCS at Catawba Meadows Park where the front ball field is currently located would not significantly change the land use, as both the ball field and NPS facility would

be parkland. Although the current use is recreational and the proposed use would be more of an administrative park use, the underlying zoning would not change. The conservation easement on this portion of the park property that limits impervious surface on the property would need to be considered; the HQ/VCS design would need to be developed in such a way that overall impervious surface is kept under 10% of the entire park (NCCWMTF, Smith, pers. comm. 2010; City of Morganton, Anderson, pers. comm. 2010). Because land use would essentially remain similar, however, and there are several other ball fields available at the park, there would be only negligible adverse impacts on land use with alternative C.

Cumulative Impacts

The project that needs to be considered for cumulative impacts for the site at the front of Catawba Meadows Park is the planned expansion of the Catawba River Greenway. The planned expansion of the Catawba River Greenway brings a loop west from Rocky Ford Access and south along Bost Road, linking it up with the existing trail spur at Freedom Park and the high school. The extension of the greenway would provide enhancement of amenities for the park, and by extension, the visitor center, and provide long-term beneficial impacts to land use.

The overall result would be long-term negligible impacts to land use, when considered with negligible adverse effects from the alternative change and no effects on land use from alternative C.

Conclusion

Alternative C would not substantially alter the land use of site in Catawba Meadows Park, so there would be no impact on land use from this alternative. When considered with the beneficial long-term effects of the extension of the Catawba Greenway Trail which passes through the larger park, there would be a long-term beneficial impact on land use.

ALTERNATIVE D: ROCKY FORD ACCESS, MORGANTON, NC

Analysis

Constructing the HQ/VCS at the Rocky Ford Access to the Catawba Greenway would not appreciably change the land use at the site. The site is currently part of the Catawba Meadows Park property, and is being used for recreational and park purposes. The use of the site for the HQ/VCS would add administrative park uses to the current recreational park uses, as well as add interpretive opportunities that would enhance the greenway and its association with Overmountain. The site is not part of the conservation easement and would not be subject to the 250-foot riparian buffer requirements (City of Morganton, Anderson, pers. comm. 2010). As with the site next to Quaker Meadows, the Rocky Ford Access site is along the city's designated "Revolutionary War Heritage Corridor," and construction of the NPS facility along this corridor would create a complementary land use. There would therefore long-term beneficial effects on land use associated with the implementation of alternative D.

Cumulative Impacts

As with alternative C, which is also on Catawba Meadows Park property, the project that needs to be considered for cumulative impacts for the site at the front of Catawba Meadows Park is the expansion of the Catawba River Greenway. The planned expansion of the Catawba River Greenway brings a loop west from Rocky Ford Access and south along Bost Road, linking it up with the existing trail spur at Freedom Park and the high school. The extension of the greenway would provide enhancement of amenities for the proposed visitor center, and would provide long-term beneficial impacts to land use.

The overall result would be long-term beneficial impacts to land use, when considered with no change and no effects on land use from alternative D.

Conclusion

Alternative D would not substantially alter the land use of site in Catawba Meadows Park, so there would be no impact on land use from this alternative. When considered with the extension of the Catawba Greenway Trail which passes through the larger park, there would be a long-term beneficial impact on land use.

FLOODPLAINS

METHODOLOGY AND ASSUMPTIONS

Floodplains are defined by the NPS Floodplain Management Guideline as “the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, and including, at a minimum, that area subject to temporary inundation by a regulatory flood.” Executive Order 11988: Floodplain Management requires an examination of impacts on floodplains and of the potential risk involved in placing facilities within floodplains as well as the protection of floodplain values, and that federal agencies “avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.” It is NPS policy to preserve floodplain values and minimize potentially hazardous conditions associated with flooding. (NPS 2003)

The proposed actions would be implemented within an existing regulatory floodplain at one of the sites, and near the regulatory floodplain for another site. The remaining two sites and the no action alternative site do not contain floodplain. Impacts on floodplain functions and values were therefore assessed for all the alternatives/sites. These assessments were based on the known and potential 100-year and 500-year floodplains within the study area, review of existing literature and studies, information provided by experts in the NPS and other agencies, and professional judgment.

A Statement of Findings for Floodplains was completed for this project and can be found in appendix D of this FS/EA.

STUDY AREA

The geographic study area for floodplain resources are the boundaries of the proposed sites and the current location for Trail HQ at Kings Mountain National Military Park, although that site is outside either the 100-year or 500-year floodplain. Cumulative impacts projects are those projects or development trends in immediate proximity to the sites.

IMPACT THRESHOLDS

The thresholds of change for the intensity of an impact on floodplains are as follows:

Negligible — Impacts would result in a change to floodplain functions and values, but the change would be so slight that it would be of no measurable or perceptible consequence.

Minor — Impacts would result in a detectable change to floodplain functions and values, but the expected change would be small, of little consequence, and localized. Mitigation measures, if needed to offset adverse effects, would be simple and successful.

Moderate — Impacts would result in a change to floodplain functions and values that would be readily detectable, measurable, and consequential, but relatively localized. Mitigation measures, if needed to offset adverse effects, could be extensive, but would likely be successful.

Major — Impacts would result in a change to floodplain functions and values that would have substantial consequences on a regional scale. Extensive mitigation measures would be needed to offset any adverse effects, and their success would not be guaranteed.

Duration — Short-term impacts would last no longer than a year, or during the construction period. Long-term impacts would last more than one year or continue once the construction period is complete.

IMPACTS OF THE NO ACTION ALTERNATIVE

Analysis

The Trail HQ would continue to be located in loaned space in Kings Mountain National Military Park. The current space is not in any regulatory floodplain and no changes would be made to the structure. The no action alternative would have no impacts on the floodplain.

Cumulative Impacts

No cumulative impacts projects would affect the no action alternative due to their lack of proximity to the alternative's study area.

Conclusion

The no action alternative would not affect floodplains, and there would be no effects on the floodplain from cumulative projects.

IMPACTS OF THE ACTION ALTERNATIVES

ALTERNATIVE A: JOSEPH McDOWELL HOUSE, MARION, NC

Analysis

Restoring, adaptively reusing, and constructing additional space to provide the approximately 5,000 gsf needed for the HQ/VCS would require location of the HQ/VCS in the 100-year floodplain, since the Joseph McDowell House (the structure that would be renovated) is currently located in the 100-year floodplain. Construction in the 100-year floodplain is typically against NPS policy, unless no practicable alternative exists. However, in order for the facility to function properly and easily, the space for the HQ/VCS would need to in a single space, so newly constructed square footage in addition to the house would be attached to the existing house, and would occupy approximately the same footprint as the older easternmost additions to the existing structure. The westernmost additions would be removed. Long-term adverse impacts to the floodplain from the existing older structure would therefore continue, and there would be similar impacts to the floodplain from the new construction as from the existing additions, although impact on the floodplain would be minimized and possibly reduced by building within the existing footprints of the old buildings and decreasing the size of the overall footprint. Use of pervious pavement for parking and sidewalks would also minimize alterations to floodplain function. As a result there would be no net increase to construction in the floodplain. Adverse effects would be mitigated by elevating the new construction above the base elevation of the floodplain.

Floodplain functions resulting from construction of the HQ/VCS would be localized and similar to existing conditions, if not slightly improved, although those impacts and risk to life and property would remain long-term minor to moderate adverse. The impacts to the floodplain and risk to property and life would be long-term moderate adverse, although these impacts could be partially mitigated in the design process and through the development of an evacuation plan. Use of pervious pavement would help maintain floodplain function by not adding significant amounts of impervious surfaces that can alter floodplain function. The site would be developed in accordance with local ordinances. The NPS would also need to purchase flood insurance or indemnify itself, and would not be able to store any artifacts or historic objects related in this building, in accordance with NPS policy. Placement of the HQ/VCS in the Joseph McDowell House, and generating the necessary site improvements would require a waiver from the NPS director or other authorized officials per NPS *Management Policies 2006* (NPS 2006).

Cumulative Impacts

The McDowell Greenway is planned to end at the Joseph McDowell property. Because the trail follows the river, it will be constructed in the floodplain close to the river. A parking area would be constructed on the property to allow greenway access. Although construction would take place in the floodplain, it does not require construction of elevated structure and would therefore not interfere with floodplain function. Trails are a compatible and commonly employed use in the floodplain. Risk to life and property could be minimized with management practices such as closing the trail during high water. Impacts associated with this project would be long-term, negligible and adverse.

It is also reasonable to expect that the properties around the site would continue to be developed for commercial uses, and that the practice of using fill to elevate the structures and other property improvements out of the 100-year floodplain would continue. The businesses on most of properties immediately adjacent to the site have already been constructed on fill. Further alteration of the floodplain would result in long-term moderate adverse impacts, as the floodplain would be constricted by additional fill and the floodplain would be reduced in area. Risks to the Joseph McDowell House property could increase, as floodwaters could be channeled onto this lower-lying property.

When these cumulative impacts are combined with the impacts from this alternative, the impacts to the floodplain would be long-term minor to moderate and adverse.

Conclusion

Restoration and adaptive reuse of the Joseph McDowell House and reconstruction of earlier additions with the application of mitigation measures such as elevation of the additional structure above the floodplain, and the use of pervious pavement, would result in long-term minor adverse impacts.

When these cumulative impacts are combined with the impacts from this alternative, the impacts to the floodplain would be long-term minor to moderate and adverse.,

ALTERNATIVE B: SITE ADJACENT TO QUAKER MEADOWS HOUSE, MORGANTON, NC**Analysis**

The site adjacent to Quaker Meadows House in Morganton sits above the river valley and does not contain any regulatory floodplains. This alternative would therefore have no impacts on the floodplain and there are no risks to life or property from being located in the floodplain.

Cumulative Impacts As there are no impacts to the floodplain from this alternative, there would be no cumulative impacts to the floodplain.

Conclusion

Construction of the HQ/VCS on the site next to the Quaker Meadows site would not affect floodplains, and there would be no cumulative impacts.

ALTERNATIVE C: CATAWBA MEADOWS PARK, MORGANTON, NC**Analysis**

The site at Catawba Meadows Park in Morganton is outside any regulatory floodplains. This alternative would therefore have no impacts on the floodplain and there are no risks to life or property from being located in the floodplain.

Cumulative Impacts

As there are no impacts to the floodplain from this alternative, there would be no cumulative impacts to the floodplain.

Conclusion

Construction of the HQ/VCS at the site at Catawba Meadows Park would not affect floodplains, and there would be no cumulative impacts on floodplains.

ALTERNATIVE D: ROCKY FORD ACCESS, MORGANTON, NC

Analysis

The Rocky Ford Access site is immediately adjacent to the river, but much of the site is elevated on a bluff above the river. There are small areas of 100-year and 500-year floodplain where the elevation drops off, particularly at the north end of the site. There is ample room to accommodate the required facilities out of regulated floodplains, although some disturbance would be necessary to incorporate the existing greenway into overall site design. This is an exempted activity under the Procedural Manual 77-2: *Floodplain Management* (NPS 2004). There would be no noticeable impact to floodplain values and functions from this small disturbance, so there would be no impact on the floodplain or increased risk to life or property associated with the floodplain. The floodplain base elevation would need to be accurately calculated and delineated at the design stage to ensure that the structures remain out of the floodplain and no adverse impacts occur. Because the site improvements would be located out of the floodplain, no further floodplain compliance would be necessary.

Cumulative Impacts

As there are no impacts to the floodplain from this alternative, there would be no cumulative impacts to the floodplain.

Conclusion

Construction of the HQ/VCS on the site next to the Rocky Ford Access site would not affect floodplains, and there would be no cumulative impacts to the floodplain.

SOILS

METHODOLOGY AND ASSUMPTIONS

Potential impacts to soils were assessed based on the extent of disturbance to natural undisturbed soils, the potential for soil erosion resulting from disturbance, and limitations associated with the soils. Analysis of possible impacts to soils was based on on-site inspection of the resource within the project area, review of existing literature and maps, information provided by the NPS and other agencies, and professional judgment.

STUDY AREA

The geographic study area for soils is limited to the boundaries of the candidate sites for the HQ/VCS. Where the cumulative projects are expected to occur on or immediately adjacent to these sites, their impacts to soil have been considered.

IMPACT THRESHOLDS

Analyses of the potential intensity of impacts on soils were derived from available information on the alternative sites and the professional judgment of the park staff. The following thresholds were used to determine the magnitude of impacts on soils resources:

Negligible – Soils would be impacted below or at the lower levels of detection. Any impacts to soils would be slight.

Minor – Impacts to soils would be detectable. Impacts to undisturbed areas would be over a small area. Mitigation would be needed to offset adverse impacts and would be relatively simple to implement and would likely be successful.

Moderate – Impacts to soils would be readily apparent and result in a change to the soil over a relatively wide area. Mitigation measures would be necessary to offset adverse impacts and would likely be successful.

Major – Impacts to soils would be readily apparent and would substantially change the character of the soils over a large area in or out of the park. Mitigation measures necessary to offset adverse impacts would be needed, extensive, and their success would not be guaranteed.

Duration – Short-term impacts occur during the implementation of the alternative or within a year; long-term impacts extend beyond implementation of the alternative or more than a year.

IMPACTS OF THE NO ACTION ALTERNATIVE

Analysis

Under the no action alternative, the Trail HQ would continue to be located in loaned space at King Mountain National Military Park. There would be no modification to the soils at the site, and therefore no impacts to any soils.

Cumulative Impacts

As there are no impacts to the soils from this alternative, there would be no cumulative impacts to the soils associated with the no action alternative.

Conclusion

There would be no effects on soils resulting from implementation of the no action alternative and no effects from cumulative impacts projects.

IMPACTS OF THE ACTION ALTERNATIVES

ALTERNATIVE A: JOSEPH MCDOWELL HOUSE, MARION, NC

Analysis

Placing the HQ/VCS at the Joseph McDowell House site would require disturbance of soils in order to demolish the additions to the original home, and to construct additions and site improvements, such as parking and stormwater management. It is likely that some of the fill previously placed at the rear of the site in the embankment would need to be reconfigured to accommodate the site improvements. Footers that can withstand the forces of flooding would also need to be placed beneath the addition that would make up the needed square footage. Construction disturbances would therefore create short-term minor adverse impacts to soils during the construction period with the implementation of a sediment and erosion control plan. Once construction is complete, soils would be stabilized and the disturbed area would be revegetated, preventing erosion, although there would be areas that would be compacted from construction. Long-term impacts would therefore be minor and adverse.

Cumulative Impacts

The construction of the McDowell Greenway would affect soil resources on this property. The greenway would require disturbance of soils within the construction footprint of the pathway, and the addition of parking and access to the trail would also require disturbance of soils elsewhere on the site. There would be short-term minor adverse impacts to the soil, resulting from construction of the greenway, with the use of sediment and erosion control practices. There would be some soil compaction associated with the construction of both the trail and the parking area, resulting in long-term minor adverse impacts to soil resources below these new areas. When considered together with the short-term minor adverse and the long-term minor adverse effects on soils from the construction of alternative A, there would be cumulative short- and long-term minor adverse effects on soils.

Conclusion

Soils would be disturbed for the construction of the HQ/VCS at the site of the Joseph McDowell House and for the construction of the greenway project. The construction of the HQ/VCS and associated site improvements would result in short-term minor adverse effects, and compaction beneath the construction footprint and site improvements would result in long-term minor impacts on soils. The impacts from the construction of the greenway would be the same as impacts from construction of the HQ/VCS. . Cumulative effects would therefore also be short- and long-term minor adverse.

ALTERNATIVE B: SITE ADJACENT TO QUAKER MEADOWS HOUSE, MORGANTON, NC

Analysis

The site next to the Quaker Meadows House is similar to the site of the Joseph McDowell House in that it has similar topography and soils with similar characteristics. An existing building pad and parking area would be torn up and the new HQ/VCS constructed in the same place similar to the removal and replacement of the additions to the Joseph McDowell House. Impacts to soil resources would be the same as those described for alternative A, with similar mitigation measures.

Cumulative Impacts

For this alternative and impact topic, none of the cumulative impacts projects take place near enough to the site to affect soil resources related to this alternative. There would therefore be no cumulative impacts.

Conclusion

Impacts to soils resources resulting from the construction of the HQ/VCS on the site adjacent to the Quaker Meadows House would be the same as for the Joseph McDowell House site, with both short- and long-term minor adverse effects from soil disturbance and compaction. There are no cumulative impacts projects related to soil resources to consider at this site, so there would be no cumulative impacts to soils related to this project..

ALTERNATIVE C: CATAWBA MEADOWS PARK, MORGANTON, NC**Analysis**

The topography and soils at the Catawba Meadows Park site are similar to the site adjacent to the Quaker Meadows House, and the disturbance would be similar, although there would not be the same level of demolition of existing features. The impacts on soil resources related to the development of the HQ/VCS at the Catawba Meadows Park site would be the same as for alternative B—short- and long term minor adverse effects related to soil disturbance and construction.

Cumulative Impacts

For this alternative, the impacts from full build out of Catawba Meadows Park need to be considered. Extension of the Greenway would not affect this site as it would occur well away from the lower section of the park. The full build out of the park involves some construction of structures such as guest cabins and restrooms, and several site improvements, including construction of parking lots and ball fields. The build out is phased, so that exposure of soils to potential erosion during the development process would be limited at any given time. The City would use sediment and erosion control measures similar to those used by NPS. There would therefore be several short- and long-term minor adverse impacts to soil resources related to soil disturbance and compaction. Because so many acres will be disturbed and compacted in the course of development for use as ball fields, parking, or structures, full development of the park would result in long-term minor to moderate adverse impacts due to the compaction needed to properly prepare sports fields. When considered in combination with the development of the HQ/VCS at Catawba Meadows Park, there would be short-term minor impacts from soil disturbance, and long-term minor to moderate adverse effects on soils as a result of compaction over such a large area.

Conclusion

The impacts to soil resources from development of the HQ/VCS at Catawba Meadows Park would be the same as for the other alternatives. Impacts from the development of the remainder of the park would create additional short-term minor adverse impacts during construction and long-term minor to moderate impacts resulting from compaction of large areas in the park. When considered together, there would be short-term minor impacts from soil disturbance, and long-term minor to moderate adverse effects on soils as a result of compaction over such a large area.

ALTERNATIVE D: ROCKY FORD ACCESS, MORGANTON, NC

Analysis

The Rocky Ford Access site has steeper topography than the other alternative sites. The soils have similar properties to soils on the other sites, are not easily or highly eroded, but are found on steeper slopes. It is likely that more disturbance and grading would be necessary on this site than on the others to accommodate these slopes and recommended changes to the driveway location, and there is a greater likelihood of erosion off this site during rain events, due to the steepness of the slope leading to the river. Appropriate sediment and erosion control measures would be used as mitigation, however, so impacts to soil resources during construction would therefore be short-term and minor adverse. Once construction is complete, however, the soils would be stabilized and revegetated to prevent future loss of soils. Long-term impacts would be similar to those at other sites—minor and adverse—and would relate to compaction.

Cumulative Impacts

Expansion of the Catawba Greenway would directly affect this site, as the greenway would be extended north from Rocky Ford Access and across the Lenoir Road bridge. There would therefore likely be additional reconfigurations to the site improvements to add a safe path for cyclists and pedestrians to leave the property and access the bridge, and there would be disturbance in the Lenoir Road right-of-way. Impacts to soil resources associated with this project would be short-term minor adverse due to soil disturbance, and long-term minor adverse due to compaction. This is similar to but fewer than the impacts associated with the construction of the McDowell Greenway through the Joseph McDowell property, since the southern end of the trail has already been constructed and ends on the site, and less disturbance would be required.

The primary area of development at the Catawba Meadows Park is well removed from this site, separated by several acres of woodland that will remain undisturbed. There would be no direct impacts from this project to the soils on this site.

Conclusion

The steeper topography at Rocky Ford Access would require more grading and site alterations than the other alternatives, although with soil and erosion control measures, the overall impacts to soil would be similar to the other alternatives. Impacts to soil resources during construction would therefore be long-term minor to moderate with the use of appropriate sediment and erosion control measures. Long-term impacts would be similar to those at other sites, as likelihood of erosion after construction is complete is relatively low, and a similar area of soil would be compacted.

Impacts related to the expansion of the Catawba Greenway would be similar to but somewhat less intense than those of the McDowell Greenway on the Joseph McDowell House property, so that when considered with the impacts from this alternative, there would be short-term minor adverse effects related to soil disturbance and long-term minor adverse impacts related to compaction.

WATER RESOURCES

The NPS *Management Policies 2006* state that the NPS would “take all necessary actions to maintain or restore the quality of surface waters and ground waters within the parks consistent with the Clean Water Act and all other applicable federal, state, and local laws and regulations” (NPS 2006; sec 4.6.3).

The Clean Water Act regulates and defines water quality through water quality standards. These standards define the water quality goals of a water body by designating uses for the water, typically allowing for healthy aquatic ecosystems, and being clean enough to swim in or recreate on; setting minimum criteria to protect those uses; and preventing degradation of water quality through anti-degradation provisions. The anti-degradation policy is only one portion of a water quality standard. Part of this policy (40 CFR 131.12[a] [2]) strives to maintain water quality at existing levels if it is already better than the minimum criteria. Anti-degradation should not be interpreted to mean that “no degradation” can or would occur, as even in the most pristine waters, degradation may be allowed for certain pollutants as long as it is temporary and short term.

METHODOLOGY AND ASSUMPTIONS

Because no work would occur directly in any water bodies, expected potential impacts to water quality would be from upland disturbance and the transport of sediments or pollutants from the site to the nearby water bodies, both during and after construction. Analysis of possible impacts to water quality was based on on-site inspection of the resource within the project area, review of existing literature and water quality standards, information provided by the NPS and other agencies, and professional judgment. Use of stormwater management practices to control both quantity and quality of runoff from the properties during rain events has been proven to protect the integrity of nearby streams and rivers, and additional management practices, such as riparian buffers, can also provide significant benefits; therefore, these measures have been considered on the alternative sites.

STUDY AREA

The geographic study area for water resources includes two reaches of the Catawba River: the segment of the Catawba River in Marion, NC, from where it flows under US 70 to the west until it runs under US Business 221 in the east; and in Morganton, from where it crosses Independence Boulevard to just downstream of the Lenoir Road bridge next to Rocky Ford Access. Also under consideration is stormwater drainage on the four candidate sites and the restored stream that is a tributary to the Catawba River and is in Catawba Meadows Park to the south of alternative C. The unnamed stream behind the current HQ in space loaned by Kings Mountain National Military Park is also considered.

Cumulative impacts projects that would affect water quality on the river or stream segment closest to the alternative site are considered for each alternative.

IMPACT THRESHOLDS

The following thresholds were used to determine the magnitude of impacts on water quality:

Negligible – Impacts (chemical, physical, or biological) would be barely detectable, but within desired water quality standards or criteria, and would be within historical or desired water quality conditions. No mitigation would be implemented.

Minor – Impacts (chemical, physical, or biological) would be detectable but would be within desired water quality standards or criteria and within historical or desired water quality conditions. Mitigation, if needed, would be simple and successful.

Moderate – Impacts (chemical, physical, or biological) would be detectable and historical baseline or desired water quality conditions would be temporarily altered; however, overall water quality would remain within regulatory standards. Mitigation measures to offset potential adverse impacts could be extensive and successful.

Major – Impacts (chemical, physical, or biological) would be detectable and would be frequently altered from the historical baseline or desired water quality conditions; and/or chemical, physical, or biological water quality standards or criteria would temporarily be slightly and singularly exceeded. Mitigation measures to offset potential adverse impacts would be extensive and their success could not be guaranteed.

Duration: Short-term impacts would last no longer than a year, or during the construction period. Long-term impacts would last more than one year or continue once the construction period is complete.

IMPACTS OF THE NO ACTION ALTERNATIVE

Analysis

Implementation of the no action alternative would involve no change at the current location of the Trail HQ at Kings Mountain National Military Park. There would therefore be no change at the site, and there would be no impact to water resources.

Cumulative Impacts

Because there would be no impacts to water resources associated with the no action alternative, there would be no cumulative impacts associated with this alternative.

Conclusion

There would be no impacts on water resources in Kings Mountain National Military Park from either the implementation of the no action alternative or any cumulative impacts.

IMPACTS OF THE ACTION ALTERNATIVES

ALTERNATIVE A: JOSEPH MCDOWELL HOUSE, MARION, NC

Analysis

The Joseph McDowell House property backs up to the Catawba River in Marion, and the house, which would be adaptively reused, is at the front of the property near the road. The additional square footage would be built as an addition or a new stand-alone structure, but near the existing house. The site improvements, such as parking, would bring the disturbance closer to the river, although it would mostly be shielded by the embankment and runoff would be directed toward the drainage swale to the east of the property. The potential to impacts to water quality associated with this alternative would therefore be from runoff of sediments and pollutants during construction and from stormwater runoff after rain events once construction is completed. The use of sediment and erosion control measures during construction and the use of biofiltration or a similar management approach near the parking lot would provide controls for sediment runoff and for both quality and quantity control and stormwater onsite. Biofiltration is a stormwater management technique designed to help the runoff recharge and mimic the natural hydrograph, as well as provide some level of pollutant removal. There are several other similar approaches, and the most appropriate and effective technique would be decided at the design stage. The existing wooded riparian buffer would also be maintained, and other measures, such as the planned use of porous pavement, would further attenuate runoff. The impacts to water quality from this alternative would therefore be short-term minor to moderate adverse during construction, mitigated to negligible through the use of regularly inspected sediment and erosion control

measures. The use of on-site stormwater management measures such as the biofiltration swales would provide mitigation and would limit long-term minor adverse effects to long term and minor by managing both stormwater quantity and quality.

Cumulative Impacts

The construction of the McDowell Greenway has the potential to affect water quality along the Catawba River in Marion, and directly on the Joseph McDowell House property. The paved greenway will be constructed along the river, and an access point to the greenway is planned from the Joseph McDowell House property. Construction of the greenway would necessitate some clearing within the limits of disturbance for the greenway, and disturbance of soils, all within several feet or yards of the river. There would be short-term adverse impacts to water quality from sediment runoff during construction, ranging from minor to moderate. The use of sediment and erosion control measures would limit short-term adverse effects to minor, Further similar short-term and long-term impacts would be likely from needed site improvements to provide trailhead parking (which could be combined with parking for the HQ/VCS), and greenway access at the Joseph McDowell property. Long-term impacts would be minor and adverse, resulting from small amounts of runoff from the trail after storm events, but not enough to affect water quality in the river.

Continued commercial development in the area has the potential to greatly increase the amount of impervious surface and the amounts of runoff from the commercial properties. These properties would need to use sediment and erosion control measures similar to those used by the NPS during construction, and would be required to treat stormwater quality and quantity. Short-term impacts from construction would be similar, although overall development could result in long-term minor to moderate adverse impacts to water quality, particularly if there is a significant amount of new development and the introduction of a large amount of impervious surface, which has been shown to compromise the integrity of aquatic ecosystem health if percentages of impervious surface in a watershed become too high.

The combination of the short-term minor impacts from construction of the greenway and continued commercial development in the area; long-term minor to moderate impacts from additional commercial development due to the increase in impervious surface and increased runoff; and the short-term and long-term negligible adverse impacts from the development of the site as the Trail HQ/VCS would result in cumulative short-term minor impacts associated with construction activities, and long-term minor to moderate adverse effects on water quality once construction is complete.

Conclusion

Impacts on water quality would come from erosion and sediment runoff during construction and from stormwater runoff once construction is complete. Although short-term and long-term impacts could range from minor to moderately adverse, the use of mitigation measures such as biofiltration, sediment and erosion control measures, pervious pavement, and maintenance and enhancement of riparian buffers, would limit the intensity of these impacts to minor and adverse.

Cumulative impacts from the greenway project would introduce short-term negligible adverse impacts during construction and long-term negligible adverse impacts from stormwater runoff. Continued development in the area would also cause short-term negligible adverse construction impacts on water quality and long-term minor adverse impacts once construction is complete. Together, the construction of the HQ/VCS at the Joseph McDowell House and the other projects would result in overall cumulative long-term minor adverse impacts from construction-related activities and long-term negligible to minor adverse impacts associated with additional development in the area.

ALTERNATIVE B: SITE ADJACENT TO QUAKER MEADOWS HOUSE, MORGANTON, NC

Analysis

Although the site next to the Quaker Meadows House is further from a large body of water than the Joseph McDowell House property, the impacts on water quality associated with this alternative would be similar, with both short-term and long-term minor adverse impacts to water quality. Confirmation of the location of the stream and swale would take place at the design stage, and the buffer to this drainage swale/intermittent stream would be maintained and enhanced, and biofiltration or other similar stormwater management techniques would be used, as would pervious pavement in the parking lot. The water running off this property would have more opportunities to recharge or to filter pollutants before being discharged into the Catawba River, given its distance from the river, but could still affect smaller streams that serve as receiving waters for discharge from the property.

Cumulative Impacts

Construction of the Catawba Greenway expansions would have similar, if less attenuated, effects on water quality as the construction of the McDowell Greenway (less of the greenway expansion will occur next to the river than with the new construction of the McDowell Greenway); although there is one segment planned along the river, most of the segments connect the community away from the river with the river and therefore would have fewer direct impacts on water quality, and there would not be additional site improvements to access the trail. There would be short-term minor adverse effects from construction activities and long-term negligible to minor impacts from the construction of the new trail segments.

Additional commercial and industrial development in the area would have similar effects on water quality as continued commercial development near the Joseph McDowell House would have on water resources in Marion.

Full build out at Catawba Meadows Park would also affect the reach of the Catawba River that flows through Morganton near the Quaker Meadows site. The park would have enough water quality protection measures in place to keep both the short-term and long-term adverse effects on water quality to minor.

Examined together, the effects of siting the HQ/VCS on the property next to the Quaker Meadows House, expansion of the Catawba Greenway, and continued industrial and commercial development in the area would have short-term minor adverse effects during construction periods, and long-term negligible to minor adverse impacts on water quality once construction is completed and stormwater management is installed.

Taken together with alternative B, there would be both short- and long-term minor adverse impacts to water quality.

Conclusion

Siting the HQ/VCS on the property next to Quaker Meadows would have short-term minor adverse impacts on water quality mitigated to negligible during construction, when a lot of soil is exposed and the likelihood of sediment runoff is high. Sediment and erosion control measures can be effective, though, if inspected regularly. The long-term effects on water quality would be minor and adverse, through the use of stormwater management measures that address both water quantity and quality, ensuring riparian buffers along the intermittent stream/drainage ditch and the use of additional measures such as pervious pavement.

The cumulative projects, although different from the projects in Marion at the Joseph McDowell House, would be similar to the impacts from those projects. When considered together, there

would be both short- and long-term minor impacts from increased impervious surfaces, periodic construction over time, and the potential range of stormwater management measures available to other properties.

ALTERNATIVE C: CATAWBA MEADOWS PARK, MORGANTON, NC

Analysis

Impacts on water quality from development of the HQ/VCS at Catawba Meadows Park would again be similar to the first two action alternatives, with both short- and long-term minor adverse effects on water quality. There is a restored stream to the west of the proposed site, and there is a water quality easement on the entire park that limits the percentage of overall impervious surface in the park. Similar sediment and erosion control and stormwater management measures would be employed. There would not be a need for a riparian buffer on the site since no stream is immediately adjacent to the site.

Cumulative Impacts

Cumulative impacts on water quality would be the same as discussed for the site next to Quaker Meadows House. It would also be necessary to consider development of Catawba Meadows Park. As with all construction projects, there would be short-term negligible adverse impacts related to sediment and erosion. Over the long term, the measures in place at the park, including the impervious surface restrictions; a wide, 250-foot buffer along the river; and use of stormwater management on the site would result in a minor adverse effect on water quality. All the cumulative projects together would therefore result in short- and long-term minor adverse impacts.

When impacts from the cumulative projects and activities are examined with the alternative C, there would be short-term minor adverse impacts related to construction, as well as long-term minor impacts from increased impervious surfaces and the potential range of stormwater management measures available to other properties.

Conclusion

The impacts on water quality would be similar to the first two alternatives, although slightly less attenuated given that there is no stream immediately on the site.

Cumulative impacts would be the same as for the Quaker Meadows site. The overall cumulative impacts, when considering impacts from this analysis, would therefore be the similar to those at the site next to Quaker Meadows House.

ALTERNATIVE D: ROCKY FORD ACCESS, MORGANTON, NC

Analysis

Impacts on water quality from development of the HQ/VCS at Catawba Meadows Park would again be similar to the first three action alternatives. The river would be closer to the development site than at the Joseph McDowell House and would require thoughtful planning for sediment and erosion control, riparian buffers, and stormwater management, but with these mitigation measures, the impacts minor and adverse in both the short-term during construction and in the long-term once construction is complete.

Cumulative Impacts

The cumulative impacts would be the same as for the site at Catawba Meadows Park. When considered together with the alternative, the overall impacts to water quality would also be the same—both short- and long-term minor adverse impacts to water quality.

Conclusion

Although the site would require more care in the design stages to ensure adequate mitigation than the other alternatives, due to the steeper topography of the site, the short-term and long-term impacts would be minor and adverse, similar to the Catawba Meadows site, and the cumulative impacts on water quality and water resources would also be minor and adverse over both the short- and the long-term.

VEGETATION

METHODOLOGY AND ASSUMPTIONS

Impacts on vegetation were based on general characteristics of the proposed sites and vicinity, available aerial photos, site observations, and proposed encroachment into vegetated areas associated with the siting of the HQ/VCS at the proposed locations as illustrated in chapter 2.

STUDY AREA

The study area for impacts to vegetation is limited to Kings Mountain National Military Park and the boundaries of the proposed sites for the HQ/VCS. Where the cumulative projects are expected to occur on or immediately adjacent to these sites, their impacts to vegetation have been considered.

IMPACT THRESHOLDS

The following thresholds were used to determine the magnitude of impacts on vegetation:

Negligible –Impacts on vegetation would not be measurable. The abundance or distribution of individual trees, shrubs, or grasses would be only slightly affected.

Minor – Impacts on vegetation would be measurable. The abundance or distribution of individual trees, shrubs, or grasses would be affected in a small area. Mitigation would be needed to offset adverse impacts but would be relatively simple to implement and would likely be successful.

Moderate – Impacts on vegetation would be measurable. The abundance or distribution of individual trees, shrubs, or grasses would be affected. Mitigation to offset adverse impacts could be extensive and would likely be successful.

Major – Impacts on vegetation would be measurable and clearly evident in areas that are prominent and highly visible. The abundance or distribution of individual trees, shrubs, or grasses would be greatly affected. Mitigation measures to offset the adverse impacts would be required and extensive, and success of the mitigation measures would not be guaranteed.

Duration: Short-term impacts last less than one year; long-term impacts last longer than one year.

IMPACTS OF THE NO ACTION ALTERNATIVE

Analysis

Under the no action alternative, the Trail HQ would continue to be located in loaned office space at Kings Mountain National Military Park in SC. Office space for the Trail would not be expanded and there would continue to be no VCS. There would be no construction and no change to the use or function of the space, resulting in no impacts to vegetation.

Cumulative Impacts

There are no impacts resulting from the no action alternative. therefore, there are no cumulative impacts to vegetation within the area of Kings Mountain National Military Park.

Conclusion

The implementation of the no action alternative would result in no impacts to vegetation because no trees, shrubs, or grasses would be removed. There are no impacts resulting from the no action alternative; therefore, there are no cumulative impacts to vegetation.

IMPACTS OF THE ACTION ALTERNATIVES

ALTERNATIVE A: JOSEPH MCDOWELL HOUSE, MARION, NC

Analysis

Alternative A proposes to site the new HQ/VCS at the Joseph McDowell House in Marion, NC. Although the proposed actions would permanently remove some of the grasses within the existing meadow due to the construction of a parking lot and driveway, the existing mature black walnut tree (*Juglans nigra*), the line of mixed hardwoods to the east, and the stand of hardwoods and riparian area to the north would remain untouched. In addition, the proposed site plan would include a potential biofiltration area which includes a planted tree within the parking lot. As a result of the removal of some of the grasses, there would be long-term minor adverse impacts to vegetation.

During construction, a larger amount of grass would be removed. However, these impacts would be mitigated by planting to enhance the riparian buffer and replanting all grass except for the areas within the footprint of the HQ/VCS, parking lot, and driveway, resulting in long-term minor adverse impacts to vegetation.

Cumulative Impacts

Cumulative projects in the vicinity of the proposed site include the development of the McDowell Greenway in Marion, NC. The proposed Greenway expansion would potentially remove some of the trees and riparian area vegetation at the northern end of the site, resulting in long-term negligible to minor adverse impacts depending on the specific amount of trees, shrubs, and grasses removed. These potential negligible to minor adverse impacts from other projects, in combination with the long-term minor adverse impacts from the proposed alternative A, would result in long-term minor adverse cumulative impacts to vegetation.

Conclusion

Implementation of alternative A would result in long-term minor adverse impacts to vegetation because a small amount of grass would be permanently removed. However, these adverse impacts would be mitigated by grass replanting after construction completion resulting in long-term minor adverse impacts to vegetation. The long-term minor adverse impacts from this alternative, in combination with the long-term negligible to minor adverse impacts from other projects within the vicinity, would result in long-term minor adverse cumulative impacts to vegetation.

ALTERNATIVE B: SITE ADJACENT TO QUAKER MEADOWS HOUSE, MORGANTON, NC

Analysis

Alternative B proposes to site the new HQ/VCS on a site adjacent to the Quaker Meadows House in Morganton, NC. The construction of an HQ/VCS at this site would result in the removal of a small amount of grass, which would not be noticeable because a large portion of the site is currently occupied by a concrete pad. Several existing trees from the mixed hardwoods and conifers stand on the southern portion of the site would be removed due to the construction of the parking lot, driveway, and bus parking. However, these impacts would be mitigated by planting landscaping and a small grove of trees on the northern portion of the site resulting in long-term negligible adverse impacts. There would be no net loss of trees.

During construction of the new HQ/VCS, grasses and shrubs would potentially be removed from the site. However, these impacts would be mitigated by landscaping and replanting all vegetation except for the areas within the footprint of the HQ/VCS, parking lot, and driveway.

Cumulative Impacts

There are no cumulative impact projects within the immediate vicinity of the proposed alternative; therefore, there are no impacts to vegetation from cumulative projects.

Conclusion

Implementation of alternative B would result in long-term negligible adverse impacts to vegetation because several trees as well as some shrubs and grasses would be removed. However, there are no cumulative impact projects within the area; therefore, there would only be the long-term negligible adverse impacts resulting from the implementation of this alternative.

ALTERNATIVE C: CATAWBA MEADOWS PARK, MORGANTON, NC**Analysis**

Alternative C proposes to site the new HQ/VCS on a site within Catawba Meadows Park in Morganton, NC. The construction of an HQ/VCS at this site would result in the removal of grass within the footprint of the proposed HQ/VCS, entranceway, and parking lot. Several existing pines from the two planted parallel rows would be removed due to the construction of entranceway, resulting in long-term minor adverse impacts to vegetation. However, these impacts would be mitigated to long-term negligible adverse by planting landscaping and several trees around the new HQ/VCS to replace those removed for the entranceway.

During construction, grass outside the footprint of the new HQ/VCS would be removed, resulting in short-term minor adverse impacts to vegetation. However, these impacts would be mitigated by landscaping and replanting all vegetation except for the areas within the footprint of the HQ/VCS, parking lot, and entranceway.

Cumulative Impacts

Cumulative projects in the immediate vicinity of the proposed site include the development and completion of Catawba Meadows Park. Completion of the park would include construction of several ball fields, shelters, overnight cabins, and comfort stations, resulting in the potential removal of trees, shrubs, and grasses in the vicinity of the proposed alternative. As a result of construction, there would be long-term negligible to minor impacts to vegetation depending on the specific amount of vegetation removed. These long-term negligible to minor adverse impacts to vegetation from cumulative projects, in combination with the long-term minor adverse impacts from alternative C would result in long-term minor cumulative impacts to vegetation.

Conclusion

Implementation of alternative C would result in long-term minor adverse impacts to vegetation because of the removal of several pine trees and a small amount of grass. However, these long-term adverse impacts would be mitigated by landscaping and replanting for no net loss of trees after construction completion resulting in long-term negligible adverse impacts to vegetation. The long-term negligible adverse impacts from this alternative, in combination with the long-term negligible to minor adverse impacts from other projects within the vicinity, would result in long-term minor adverse cumulative impacts to vegetation.

ALTERNATIVE D: ROCKY FORD ACCESS, MORGANTON, NC**Analysis**

Alternative D proposes to site the new HQ/VCS at Rocky Ford Access in Morganton, NC. The construction of an HQ/VCS at this site would result in the removal of grass and shrubs within the footprint of the proposed HQ/VCS, entranceway, and parking lot. However, much of the site is an

informal parking lot composed of gravel; therefore, only a small amount of vegetation would be removed. In addition, much of the site is covered in kudzu (*Pueraria lobata*), a non-native, invasive species that smothers other vegetation; therefore, its removal would not be detrimental to existing native vegetation in the area. Several existing trees from the mixed hardwood stands to the north, west, and east of the site would also be removed to accommodate the new facility and entranceway, resulting in long-term minor adverse impacts to vegetation. These impacts would be mitigated to long-term negligible adverse by landscaping and replanting to enhance the riparian buffer and the area cleared of kudzu, and by planting several trees for no net loss of trees within the area.

Short-term minor adverse impacts would result from the removal of grasses and shrubs during construction. However, these impacts would be mitigated by landscaping and replanting all vegetation except for the areas within the footprint of the HQ/VCS, parking lot, and entranceway.

Cumulative Impacts

Cumulative projects in the immediate vicinity of the proposed site include the development the Catawba River Greenway. Development of the Greenway would include expansion of a paved hiker/biker path that runs through a portion of the proposed site. Construction from this project would result in the potential removal of trees, shrubs, and grasses in the vicinity of the proposed alternative. As a result, there would be long-term negligible to minor impacts to vegetation, depending on the specific amount of vegetation removed. These long-term negligible to minor adverse impacts to vegetation from cumulative projects, in combination with the long-term minor adverse impacts from alternative D would result in long-term minor cumulative impacts to vegetation.

Conclusion

Implementation of alternative D would result in long-term minor adverse impacts to vegetation because of the removal of several trees within the proposed site. However, these impacts would be mitigated by planting trees for no net loss of trees in the area resulting in long-term negligible adverse impacts to vegetation. The long-term negligible adverse impacts from this alternative, in combination with the long-term negligible to minor adverse impacts from other projects within the vicinity, would result in long-term minor adverse cumulative impacts to vegetation.

WILDLIFE AND HABITAT

METHODOLOGY AND ASSUMPTIONS

The Organic Act of 1916, which directs parks to conserve wildlife unimpaired for future generations, is interpreted by the agency to mean that native animal life should be protected and perpetuated as part of the park's natural ecosystem. Natural processes are relied on to control populations of native species to the greatest extent possible; otherwise, they are protected from harvest, harassment, or harm by human activities. According to the NPS *Management Policies 2006* (NPS 2006) Section 4.1.5, "the NPS will use the best available technology, within available resources, to restore the biological and physical components of these systems, accelerating both their recovery and the recovery of landscape and biological community structure and function." Efforts may include, for example, restoration of native plants and animals. Management goals for wildlife include maintaining components and processes of naturally evolving park ecosystems, along with the natural abundance, diversity, and the ecological integrity of plants and animals. Information on wildlife and wildlife habitat occurring within the project area was taken from park documents and records. Analysis of possible impacts to wildlife and wildlife habitat was based on on-site inspection of the resource within the project area and inspection of aerial imagery, review of existing literature, information provided by the NPS and other agencies, and professional judgment.

STUDY AREA

The geographic study areas for wildlife and wildlife habitat are the individual sites examined as alternatives, and appropriate adjacent lands. Construction activities would not occur outside this area. Cumulative impacts would be drawn from projects or activities on properties within a quarter mile of these sites, in some cases further out, if there is a riparian corridor or large forested area that would benefit wildlife.

IMPACT THRESHOLDS

The following thresholds were used to determine the magnitude of impacts on wildlife and wildlife habitat:

Negligible – There would be no observable or measurable impacts to native species, their habitats, or the natural processes sustaining them. Impacts would be well within natural fluctuations.

Minor – Impacts would be detectable, but they would not be expected to be outside the natural range of variability of native species' populations, their habitats, or the natural processes sustaining them. Mitigation measures, if needed to offset adverse impacts, would be slight and successful.

Moderate – Readily detectable impacts outside the range of natural variability would occur on native animal populations, their habitats, or the natural processes sustaining them. The change would be measurable in terms of population abundance, distribution, quantity, or quality, and would occur over a relatively large area. Mitigation to offset adverse impacts could be extensive, but would likely be successful.

Major – Readily apparent impacts outside the range of natural variability would occur on native animal populations, their habitats, or the natural processes sustaining them. The change would be measurable in terms of population viability and could involve the displacement, loss, or restoration of a wildlife or aquatic life population or assemblage. Mitigation measures to offset the adverse impacts would be required and extensive, and success of the mitigation measures would not be guaranteed.

Duration – Short-term impacts would last no longer than a year, or during the construction period. Long-term impacts would last more than one year or continue once the construction period is complete.

IMPACTS OF THE NO ACTION ALTERNATIVE

Analysis

Implementation of the no action alternative would involve the continued use of the current space at Kings Mountain National Military Park, which involves no changes to the site. There would continue to be no disturbance to large tracts of forest that provide habitat for a large range of species, including some state-listed plant species of concern discussed in chapter 3,. There would therefore be no effects on wildlife habitat associated with the no action alternative.

Cumulative Impacts

As there were no effects on wildlife habitat related to the no action alternative, there are also no cumulative impacts to wildlife habitat associated with the no action alternative.

Conclusion

There would be no impacts on wildlife habitat at Kings Mountain associated with the no action alternative or with the cumulative impacts projects.

IMPACTS OF THE ACTION ALTERNATIVES

ALTERNATIVE A: JOSEPH McDOWELL HOUSE, MARION, NC

Analysis

Renovation and adaptive reuse of the Joseph McDowell House, along with construction of an addition to provide for the needs of the HQ/VCS would occur in an already developed part of the property. The site improvements would include construction of parking and installation of a bioretention area to provide stormwater management. These improvements would also take place in previously disturbed areas. Construction noise could disturb wildlife on the site, resulting in short-term minor adverse impacts. Over the long term, it would be possible to improve existing mediocre-quality habitat by widening the riparian buffer zone along the river at the rear of the property, and by removing exotic and invasive plant species noted during the site visit. Buffers on adjoining properties are considerably narrower, however, so the benefits would be limited. Therefore, there would be short-term minor adverse effects on habitat associated with construction noise, but long-term beneficial impacts on wildlife habitat through the management of exotic species and enhancement of the buffer.

Cumulative Impacts

Impacts to wildlife habitat from the completion of the McDowell Greenway and continued commercial development in the area both need to be considered. The Greenway is planned to follow the river, within the existing riparian buffer, requiring at least short-term disturbance of habitat in the riparian zone while the trail is constructed, resulting in short-term minor to moderate adverse impacts on habitat, given that the greenway is planned to affect riparian areas over several miles. Once complete, there would be a long-term minor adverse impact on wildlife habitat from the footprint of the trail, but disturbed vegetation outside the footprint of the trail could regenerate, allowing for continuation of a wildlife corridor along the river. The overall impacts to wildlife habitat from the construction of the greenway would be long-term minor and adverse.

Continued commercial development in the area along the river could significantly reduce the availability of wildlife habitat on the south side of the river, introducing more noise and impervious surfaces with increased runoff of pollutants, and encourage a higher percentage of pollutant tolerant species, and a decrease in biodiversity in the area, resulting in a long-term minor to moderate adverse effect on wildlife habitat.

The cumulative impacts would drive overall impacts to wildlife habitat, resulting in overall long-term minor to moderate adverse effects on wildlife habitat with small localized long-term benefits at the site itself.

Conclusion

Implementation of alternative A would result in short-term minor adverse effects on habitat associated with construction noise, and long-term beneficial impacts on wildlife habitat through the management of exotic species and enhancement of the buffer.

Cumulative impacts from continued commercial development and the construction of the McDowell Greenway would be mixed. The greenway would provide long-term protection of wildlife corridors, but it would fragment the habitat, increase impervious surfaces in the area and associated runoff, and introduce more people to the river, so that overall impacts from cumulative projects would be long-term minor to moderate adverse. The cumulative impacts would drive overall impacts to wildlife habitat, resulting in overall long-term minor to moderate adverse effects on wildlife habitat with small localized long-term benefits at the site itself.

ALTERNATIVE B: SITE ADJACENT TO QUAKER MEADOWS HOUSE, MORGANTON, NC

Analysis

Construction of the HQ/VCS would take place in the location of a remnant parking and building pad from a previous use that is surrounded by turf and pasture grass. There is very little notable wildlife habitat on the property other than the stand of trees buffering the drainage swale/intermittent stream at the rear of the property, and the larger stand of trees at the corner of the property. Development on the site would continue to reduce available open space in the greater area, which is already a patchwork of grass and pasture, small stands of trees and developed space, some of which have large paved parking areas. The resulting impact on wildlife habitat would be long-term negligible adverse. Careful landscaping with native trees, shrubs, and other plants and management of invasive species on the property could enhance the potential wildlife habitat. There would be potential short-term negligible to minor adverse impacts resulting from noise and site disruptions related to construction that could disturb wildlife species that use the area.

Cumulative Impacts

Continued commercial and industrial development around the site would undoubtedly alter the landscape and composition of available wildlife habitat by reducing the amount of undeveloped open space, potentially reducing the amount of wooded areas, converting pasture/lawn areas to impervious surface. The area is already a patchwork of many smaller areas of forest and open space common to suburban areas. The resulting adverse impact from continued development in the area would be long-term negligible to moderate, depending on the nature and intensity of the development. The overall impacts of the proposed HQ/VCS and continued development would be long-term negligible to moderate adverse impacts, with moderate impacts occurring if there is a large amount of industrial or high-intensity commercial development that converts open space into large areas of impervious surface.

Conclusion

Development of the HQ/VCS at the site next to Quaker Meadows House would alter available wildlife habitat to a minor extent and would result in long-term negligible adverse impacts that could be somewhat mitigated by careful landscaping enhancements and the use of native vegetation and management of invasive species. There would be short-term negligible to minor impacts to wildlife resulting from construction noise and site disturbance. Continued commercial and industrial development would reduce the amount of available habitat in the area and alter the composition of the habitat, creating long-term negligible to moderate adverse impacts on wildlife habitat. Taken together, there would be long-term negligible to moderate adverse impacts, mostly resulting from the cumulative projects.

ALTERNATIVE C: CATAWBA MEADOWS PARK, MORGANTON, NC

Analysis

The HQ/VCS at Catawba Meadows Park would be placed in an existing ball field, next to a stand of trees in which a ropes course has been built, so there is not high quality wildlife habitat on the existing site. Impacts to wildlife habitat would be the same as for the site next to Quaker Meadows House—long-term, negligible and adverse. Thoughtful landscaping could improve the quality of available habitat on the site and mitigate the adverse effects to some extent.

Cumulative Impacts

The surrounding park is being developed with ball fields, other recreational activity areas, and necessary parking areas and restrooms. There is a mandated 250-foot buffer along the river that provides a riparian corridor, and a tract of forest to the east and north between the developed portion of the park and the Rocky Ford Access. Full build out of the park would therefore result in long-term adverse minor impacts to habitat, mitigated somewhat by the wide buffer, and there would be long-term minor adverse impacts on wildlife habitat, with some short-term negligible adverse impacts due to noise and site disturbance during construction. Extension of the Greenway would not occur near this site. When considered together, the development of the HQ/VCS and the build out of the park would result in long-term minor adverse impacts on wildlife habitat, with some short-term minor adverse impacts due to noise and site disturbance during construction.

Conclusion

Impacts on wildlife habitat from the construction of an HQ/VCS at Catawba Meadows Park would be the same as for the site at the Quaker Meadows House. Continued build out of the park would result in long-term adverse minor impacts to habitat, mitigated somewhat by the 250-foot wide buffer. The park build out is more extensive than the development of the HQ/VCS, so the overall impacts from both projects would be long-term minor and adverse, with some short-term negligible adverse impacts due to noise and site disturbance during construction.

ALTERNATIVE D: ROCKY FORD ACCESS, MORGANTON, NC

Analysis

The HQ/VCS at Rocky Ford Access would be placed in a mostly cleared area that houses an existing parking lot, or in a previously disturbed area that is now overgrown with the invasive plant kudzu. The slopes on the property might necessitate additional clearing and disturbance of the wooded areas around these previously cleared areas to complete the development of the site. The site itself is also somewhat more remote than the other sites, and when considered along with the adjacent forested area to the south, could provide some good wildlife habitat. The impacts to wildlife habitat from this project would therefore be long-term minor adverse, with similar short-term negligible adverse impacts on wildlife as the previous two Morganton sites. The long-term

adverse effects could be mitigated by removing the kudzu and replacing it with native species, establishing a riparian buffer to the extent possible, and landscaping with native species resulting in a long-term negligible adverse effect on wildlife habitat, given the large tract of forest immediately adjacent to the site.

Cumulative Impacts

Two projects would need to be considered to understand cumulative impacts associated with this site: the extension of the Catawba Greenway, which would start at Rocky Ford Access and extend north, and build out of Catawba Meadows Park, which may push wildlife into the wooded area to the south of Rocky Ford Access. The greenway would necessitate some changes to the site, although it would likely be designed to complement the layout of the site improvements for the HQ/VCS and to minimize clearing. The result would be a long-term negligible adverse impact because it would require a small bit of clearing. There would also be short-term negligible adverse impacts from construction noise and site disturbance.

The build out of Catawba Meadows Park would be the same as those associated with alternative D—long-term minor adverse impacts on wildlife habitat, as a smaller amount of quality habitat would be available to wildlife.

When taken together with development of the HQ/VCS at Rocky Ford Access at the north end of the woods abutting Catawba Meadows Park, the resulting impact would be long-term minor adverse impacts to habitat, mitigated somewhat by the wide buffer, and short-term negligible adverse impacts from construction noise and site disturbance.

Conclusion

Because this site has slightly better opportunities for wildlife habitat than the other sites in Morganton, the impacts to wildlife habitat from this project would be long-term minor adverse, with similar short-term, negligible, adverse impacts as the previous two Morganton sites. These long-term effects could be mitigated by removing the kudzu and replacing it with native species, establishing a riparian buffer to the extent possible, and landscaping with native species, resulting in long-term, negligible adverse impacts to wildlife habitat at this site.

There would be long-term minor adverse impacts to habitat from the cumulative projects, which would be mitigated somewhat by the wide buffer at Catawba Meadows, and short-term negligible adverse impacts from construction noise and site disturbance. Examined together with alternative D, there would be overall long-term minor adverse impacts to wildlife habitat associated with this alternative.

CULTURAL RESOURCES

ARCHEOLOGICAL RESOURCES

Archeological resources consist of buried and above-ground prehistoric and historic remains and artifacts significant to our study of prehistory and history. As these resources exist primarily in subsurface contexts, potential impacts to archeological resources are assessed according to the extent to which the proposed alternatives would involve ground-disturbing activities such as excavation or grading. Analysis of possible impacts to archeological resources was based on a review of previous archeological studies, consideration of the proposed alternatives, and other information provided by the NPS. The analysis of potential impacts to archeological resources begins with the identification and evaluation of archeological sites in the study area. Information concerning site location, type, age and National Register eligibility provides an essential understanding of not only known sites, but also—based on certain environmental factors such as proximity to the river and slope of ground—where potential undocumented archeological resources sites may be found. National Register listed and eligible archeological sites are then assessed for potential impacts from the proposed alternatives.

METHODOLOGY AND ASSUMPTIONS

The methodology and assumptions used in the analyses of effects on archeological resources are predicated on the same set of rules, regulations, and guidance documents as those for historic districts and structures. The reviewer/reader is referred to the preceding Historic Resources and Sites section for a review of the guiding regulations.

STUDY AREA

Pursuant to Section 106 of the NHPA and 36 CFR 800, the area of potential effect (APE) was defined in consultation with the SHPO and NPS. The APE is the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist (36 CFR 800.16 [d]). For the purposes of this analysis, the APE for archeological resources includes the candidate sites where the actions would take place.

IMPACT THRESHOLDS

For purposes of analyzing potential impacts to archeological sites, the thresholds of change for the intensity of an impact are defined as follows:

- Negligible* — The impact is at the lowest levels of detection or barely perceptible and not measurable. For purposes of Section 106, the determination of effect would be no adverse effect.
- Minor* — The impact would not affect the character-defining features of an archeological site listed in or eligible for listing on the National Register. For purposes of Section 106, the determination of effect would be no adverse effect.
- Moderate* — The impact would alter a character-defining feature or features of the archeological site, but would not diminish the integrity of the archeological site to the extent that its National Register eligibility would be jeopardized. For purposes of Section 106, the determination of effect would be an adverse effect.
- Major* — The impact would alter a character-defining feature(s) of the archeological site, diminishing the integrity of the site to the extent that it would no longer be eligible to be listed in the National Register. For purposes of Section 106, the determination of effect would be adverse effect.

Beneficial: No levels of intensity of beneficial impacts are defined. Beneficial impacts can occur under the following scenarios: when an archeological site is stabilized to its current condition to maintain its existing level of integrity or when an archeological site is preserved in accordance with the Secretary of Interiors Standards for the Treatment of Historic Properties (NPS 1992), to accurately depict its form, features, and character as it appeared during its period of significance. For purposes of the National Historic Preservation Act, a beneficial effect is equivalent to no adverse impact.

Duration – All impacts are considered long term.

IMPACTS OF THE NO ACTION ALTERNATIVE

Analysis

Under the no action alternative, there would be no impacts to archeological resources, as the current practices regarding use, operations, and maintenance of the Trail HQ at the Kings Mountain National Military Park superintendent's residence would continue. As none of these activities would involve any ground-disturbing activities, any existing archeological resources would remain undisturbed. There would be no long-term impacts to archeological resources.

Cumulative Impacts

Although other past, present, and reasonably foreseeable future actions may affect archeological resources, the no action alternative would have no impacts on archeological resources and therefore would not contribute to the effects of other actions. Consequently, there would be no cumulative impacts to archeological resources under this alternative.

Conclusion

Implementation of the no action alternative would result in no direct, indirect, beneficial or adverse impacts to archeological resources in the study area. Cumulative effects of the no action alternative on archeological resources would not occur.

IMPACTS OF THE ACTION ALTERNATIVES

ALTERNATIVE A: JOSEPH McDOWELL HOUSE (31MC200), MARION, NC

The use of the Joseph McDowell House by the NPS as its new Trail HQ/VCS was reviewed by the NC SHPO. In its letter dated August 24, 2010 (see Appendix B), the NC SHPO noted that they have not received a copy of Preliminary Archeological Assessment of the Historic Joseph McDowell House in Marion, NC, prepared by the Kenneth W. Robinson of Wake Forest University for the McDowell House Project Committee. If any new ground-disturbing activities are proposed at this location, an archeological survey is recommended pending receipt of the Robinson report by the NC SHPO.

Analysis

Under alternative A, significant ground-disturbing activities may occur within the boundaries of archeological site associated with the Joseph McDowell House. Ground disturbance associated with adaptive reuse of the house and grounds to accommodate the HQ/VCS has the potential to cause appreciable loss of integrity to archeological resources that might be present in surface or near-surface contexts. Long-term impacts would be moderate, resulting in an adverse effect to this resource. Because a recorded archeological resource is present, potential effects on this resource would be assessed in consultation with the NC SHPO.

Once construction is completed, however, long-term beneficial impacts would result from efforts to protect, manage, and interpret the archeological resources located at the Joseph McDowell House.

Cumulative Impacts

There are no cumulative impact projects under consideration in the vicinity of alternative A, and there would be no cumulative impacts to archeological resources.

Conclusion

Under alternative A, long-term impacts to the archeological resource would be moderate, resulting in an adverse effect to this resource. Once construction is completed, however, long-term beneficial impacts would result from efforts to protect, manage, and interpret the archeological resources located at the Joseph McDowell House. No cumulative impacts are anticipated as there are no cumulative impact projects under consideration in the vicinity of this alternative.

ALTERNATIVE B: SITE ADJACENT TO QUAKER MEADOWS HOUSE, MORGANTON, NC

The use of the site adjacent to Quaker Meadows House by the NPS as its new Trail HQ/VCS was reviewed by the NC SHPO. In its letter dated August 24, 2010 (Appendix B), the NC SHPO recommended an intensive archeological survey if this location is selected for the HQ/VCS due to its proximity to known archeological resources associated with the neighboring Quaker Meadows House and grounds, and continued coordination with the NC SHPO.

Analysis

No previous archeological surveys have been conducted within this candidate site and there are no previously recorded archeological resources present. There is a moderate potential for the presence of archeological resources in areas that would be disturbed. Therefore, if development takes place at alternative B, there is the potential for moderate long-term impacts on any archeological resources present.

If selected, an intensive archeological survey should take place. The purpose of the survey would be to identify previously unrecorded archeological sites in the project area and determine their eligibility for the NRHP. Potential effects on unknown archeological resources would be assessed in consultation with the NC SHPO. Once archeological surveys, consultation, and construction are completed, long-term beneficial impacts would result from efforts to protect, manage, and interpret these archeological resources.

Cumulative Impacts

There are no cumulative impact projects under consideration in the vicinity of alternative B, and there would be no impacts to unknown archeological resources as a result of any of the cumulative impacts.

Conclusion

Under alternative B, there is a moderate potential for the presence of archeological resources in areas that would be disturbed for construction. Therefore, if development takes place at this alternative, there is the potential for moderate long-term impacts on any archeological resources present, although there would also be long term benefits from efforts to manage, protect and interpret these resources. If selected, an intensive archeological survey of this site should take place. There would be no cumulative impacts to unknown archeological resources. Once archeological surveys, consultation, and construction are completed, long-term beneficial impacts would result from efforts to protect, manage, and interpret these archeological resources.

ALTERNATIVE C: CATAWBA MEADOWS PARK, MORGANTON, NC

The use of the softball field at Catawba Meadows Park by the NPS as its new Trail HQ/VCS was reviewed by the NC SHPO. In its letter dated August 24, 2010, the NC SHPO recommended a comprehensive archeological survey if this location is selected for the HQ/VCS.

Analysis

No previous archeological surveys have been conducted within this candidate site and there are no previously recorded archeological resources present. There is a moderate potential for the presence of archeological resources. Therefore, if development takes place at alternative C, there is the potential for moderate long-term impacts to any archeological resources present.

If selected, an intensive archeological survey of this site and continued coordination with the NC SHPO should take place. The purpose of the survey would be to identify previously unrecorded archeological sites in the project area and determine their eligibility for the NRHP. Potential effects on unknown archeological resources would be assessed in consultation with the NC SHPO. Once archeological surveys, consultation, and construction are completed, long-term beneficial impacts would result from efforts to protect, manage, and interpret any archeological resources discovered on the site.

Cumulative Impacts

There are no cumulative impact projects under consideration in the vicinity of alternative C, and there would be no impacts to unknown archeological resources as a result of the any of the cumulative impacts.

Conclusion

Under alternative C, there is a moderate potential for the presence of archeological resources. Therefore, if development takes place at this alternative, there is the potential for moderate long-term impacts on any archeological resources present. If selected, an intensive archeological survey of this site is recommended. There would be long-term benefits from efforts to protect, manage, and interpret any archeological resources found on the site. There would be no cumulative impacts to unknown archeological resources.

ALTERNATIVE D: ROCKY FORD ACCESS, MORGANTON, NC

The use of the Rock Ford Access to the Catawba Greenway by the NPS as its new Trail HQ/VCS was reviewed by the NC SHPO. In its letter dated August 24, 2010, the NC SHPO recommended a comprehensive archeological survey if this location is selected for the HQ/VCS.

Analysis

No previous archeological surveys have been conducted within this candidate site and there are no previously recorded archeological resources present. There is a moderate potential for the presence of archeological resources. Therefore, if development takes place at alternative D, there is the potential for moderate long-term impacts on any archaeological resources present.

If selected, an intensive archeological survey of this site should occur. The purpose of the survey would be to identify previously unrecorded archeological sites in the project area and determine their eligibility for the NRHP. Potential effects on unknown archeological resources would be assessed in consultation with the NC SHPO. Once archeological surveys, consultation, and construction are completed, long-term beneficial impacts would result from efforts to protect, manage, and interpret any archeological resources found on the site.

Cumulative Impacts

There are no cumulative impact projects under consideration in the vicinity of alternative D, and there would be no impacts to unknown archeological resources as a result of the any of the cumulative impacts.

Conclusion

Under alternative D, there is a moderate potential for the presence of archeological resources. Therefore, if development takes place at alternative D, there is the potential for moderate long-term impacts on any archeological resources present. If selected, an intensive archeological survey of this site is recommended. There would be long-term benefits from efforts to protect, manage, and interpret any archeological resources found on the site. There would be no cumulative impacts to unknown archeological resources.

HISTORIC STRUCTURES AND SITES

METHODOLOGY AND ASSUMPTIONS

The analyses of effects on historic properties—that is, any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the NRHP—that are presented in this section respond to the separate requirements of both NEPA and Section 106 of the NHPA. Section 106 was handled separately from this document.

Federal actions that have the potential to affect cultural resources are subject to a variety of laws and regulations. The NHPA, as amended, is the principal legislative authority for managing cultural resources associated with NPS projects. Generally, Section 106 of the NHPA requires all federal agencies to consider the effects of their actions on cultural resources listed and/or determined eligible for listing in the NRHP. Such resources are termed “historic properties.” Agreement on mitigation of adverse effects to historic properties is reached through consultation with the SHPO, Tribal Historic Preservation Officer (THPO), if applicable; and, as required, the ACHP. In addition, the NHPA requires that federal agencies take actions to minimize harm to historic properties that would be adversely affected by a federal undertaking. Among other things, Section 110 of the NHPA also charges federal agencies with the responsibility for establishing preservation programs for the identification, evaluation, and nomination of historic properties to the NRHP.

Other important laws and regulations designed to protect cultural resources are the Native American Graves Protection and Repatriation Act, 1990; the American Indian Religious Freedom Act, 1978; NEPA, 1969; Archeological Resources Protection Act, 1979; and Executive Order 11593: Protection and Enhancement of the Cultural Environment, 1971.

In addition, the NPS is charged with the protection and management of cultural resources in its custody. This is furthered through the implementation of *Director’s Order #28: Cultural Resources Management Guideline* (NPS 1998b), *NPS Management Policies 2006* (NPS 2006), and the 2008 Servicewide Programmatic Agreement with ACHP and the National Conference of State Historic Preservation Officers. These documents charge NPS managers with avoiding, or minimizing to the greatest degree practicable, adverse impacts on park resources and values. Although the NPS has the discretion to allow certain impacts in parks, that discretion is limited by the statutory requirement that park resources and values remain unimpaired, unless a specific law directly provides otherwise.

The NPS categorizes cultural resources by the following categories: archeological resources, cultural landscapes, historic districts and structures, museum objects, and ethnographic resources. As noted in “Issues and Impact Topics” of the “Purpose and Need” chapter, only impacts to historic districts and structures are of potential concern for this project. There would be no impacts to cultural landscapes, ethnographic resources, or museum objects, so these topics were dismissed from consideration.

The analyses of effects on cultural resources that are presented in this section respond to the requirements of both NEPA and Section 106 of the NHPA. In accordance with the ACHP’s regulations implementing Section 106 (36 CFR Part 800, *Protection of Historic Properties*), impacts on cultural resources were identified and evaluated by (1) determining the APE; (2) identifying cultural resources present in the APE that are either listed in or are eligible to be listed in the NRHP (i.e., historic properties); (3) applying the criteria of adverse effect to affected historic properties; and (4) considering ways to avoid, minimize, or mitigate adverse effects.

Under the implementing regulations for Section 106, if no historic properties are identified or if there is no effect on historic properties and the SHPO concurs, then the Section 106 process is complete (36 CFR 800. d.). If, on the other hand, there is a determination that there are adverse

effects or no adverse effects to historic properties, continued consultation among the SHPO, consulting parties, and the public is required (36 CFR 800.5a). An adverse effect occurs whenever an impact alters any characteristic of a cultural resource that qualifies it for inclusion in the NRHP (for example, diminishing the integrity of the resource's location, design, setting, materials, workmanship, feeling, or association). Adverse effects also include reasonably foreseeable effects caused by the proposal that would occur later in time, be farther removed in distance, or be cumulative (36 CFR 800.5). A determination of no adverse effect means that the effect would not diminish in any way the characteristics of the historic property that qualify it for inclusion in the NRHP or that the project has been modified or conditions are imposed to ensure consistency with the Secretary of Interior's Standards for the Treatment of Historic Properties (36 CFR 68). CEQ regulations and the NPS *Conservation Planning, Environmental Impact Analysis and Decision-making* (NPS 2001; Director's Order #12) also call for a discussion of the appropriateness of mitigation, as well as an analysis of how effective the mitigation would be in reducing the intensity of a potential impact, e.g. reducing the intensity of an impact from major to moderate or minor. Any resultant reduction in intensity of impact due to mitigation, however, is an estimate of the effectiveness of mitigation under NEPA only. Cultural resources are non-renewable resources and adverse effects generally consume, diminish, or destroy the original historic materials or form, resulting in a loss in the integrity of the resource that can never be recovered. Therefore, although actions determined to have an adverse effect under Section 106 may be mitigated, the effect remains adverse.

The NPS guidance for evaluating impacts requires that impact assessment be scientific, accurate, and quantified to the extent possible (NPS 2001). For cultural resources, it is seldom possible to measure impacts in quantifiable terms; therefore impact thresholds must rely heavily on the professional judgment of resource experts.

STUDY AREA/AREA OF POTENTIAL EFFECT

Pursuant to Section 106 of the NHPA and 36 CFR 800, the APE was defined in consultation with the SHPO and NPS. The APE is the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist (36 CFR 800.16 [d]). For the purposes of this analysis, the APE for historic districts and structures includes the candidate sites where the actions would take place and a buffer of a quarter mile surrounding each site.

IMPACT THRESHOLDS

For an historic district or structure to be listed on the NRHP, it must possess significance (the meaning or value ascribed to the historic district or structure) and have integrity of those features necessary to convey its significance. For purposes of analyzing potential impacts to historic districts and structures, the thresholds of change for the intensity of an impact are defined as follows:

Negligible — Impacts at the lowest level of detection with neither adverse nor beneficial consequences. For purposes of Section 106, the determination of effect would be no adverse effect.

Minor — *Alteration* of a pattern(s) or feature(s) of a historic district or structure listed on or eligible for the NRHP is easily detectable but would not diminish the integrity of a character-defining feature(s) or the overall integrity of the historic property. For purposes of Section 106, the determination of effect would be no adverse effect.

Moderate — The impact would alter a character-defining feature(s) of a historic district or structure and diminish the integrity of that feature(s) of the historic property. For purposes of Section 106, the determination of effect would be adverse effect.

Major — The impact would alter a character-defining feature(s) of the historic district or structure and severely diminish the integrity of that feature(s) and the overall integrity of the historic property. For purposes of Section 106, the determination of effect would be adverse effect.

Beneficial — No levels of intensity for beneficial impacts are defined. Beneficial impacts can occur under the following scenarios: when character-defining features of the historic district or structure would be stabilized/preserved in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (US DOI 1992) to maintain its existing integrity; when the historic district or structure would be rehabilitated in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* to make possible a compatible use of the property while preserving its character-defining features; or when the historic district or structure would be restored in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* to accurately depict its form, features, and character as it appeared during its period of significance. For purposes of Section 106, a beneficial effect is equivalent to no adverse effect.

Duration — Short-term impacts would last for the duration of construction activities associated with the proposed alternative; long-term impacts would last beyond the construction activities.

IMPACTS OF THE NO ACTION ALTERNATIVE

Analysis

The no action alternative represents a continuation of the existing condition, operation, and maintenance of the Trail HQ at the Kings Mountain National Military Park superintendent's residence. Operation of the existing HQ would continue with no alteration to the exterior façade or interior plan of the HQ building. The setting of the building would remain unchanged from its present condition. No short-term impacts due to construction would occur. The long-term impacts of this alternative would be limited to continued use of the building by NPS personnel for the purposes of maintaining the Trail. Long-term impacts would be negligible to minor. There would be no effect on any other historic resources.

Cumulative Impacts

Cumulative actions would include routine maintenance of those portions of the residence dedicated to the Trail HQ. The cumulative effects would be negligible to minor adverse impacts from facility maintenance and upkeep.

Conclusion

Under the no action alternative, there would be no short-term impacts because no construction would occur. Long-term impacts to historic districts or structures would be negligible to minor. The cumulative impacts are negligible to minor adverse impacts from facility maintenance, resulting in no adverse effects.

IMPACTS OF THE ACTION ALTERNATIVES

ALTERNATIVE A: JOSEPH MCDOWELL HOUSE, MARION, NC

The use of the Joseph McDowell House by the NPS as its new Trail HQ/VCS was reviewed by the NC SHPO. In its letter dated August 24, 2010 (Appendix B), the NC SHPO determined that the area surrounding the house is clear of significant architectural resources. The Joseph McDowell House was determined not eligible for the NRHP in 1994 due to significant alterations to the house and surrounding property.

Analysis

Under alternative A, the NPS would establish the Trail HQ/VCS at the Joseph McDowell House, authorizing the reconfiguration and upgrade of the existing building. Implementation of this alternative would have no effect on historic districts or structures.

Cumulative Impacts

There would be no cumulative impacts to historic districts or structures under alternative A.

Conclusion

There would be no impacts to historic districts or structures under alternative A or from any cumulative projects under consideration. Implementation of this alternative would have no effect on historic districts or structures.

ALTERNATIVE B: SITE ADJACENT TO QUAKER MEADOWS HOUSE, MORGANTON, NC

The use of the site adjacent to the Quaker Meadows House by the NPS as its new Trail HQ/VCS was reviewed by the NC SHPO. The Quaker Meadows House and grounds are listed in the NRHP. This historic property is within study area/APE of the project. In its letter dated August 24, 2010, the NC SHPO requested that should this site be selected, further consultation will be required to ensure that the construction of the HQ/VCS would not have an adverse effect on the neighboring NRHP-listed property.

Analysis

Under alternative B, the NPS would establish the Trail HQ/VCS at the site adjacent to the Quaker Meadows House, authorizing the planning, design, and construction of a new park facility. Implementation of this alternative would have an impact on the neighboring historic property, triggering further consultation with the NC SHPO. If implementation of this alternative moves forward, steps would be taken in the planning and design of the facility to render the impacts negligible or minor resulting in a finding of no adverse effect. Short-term impacts due to construction and long-term impacts due to visual intrusion and noise are foreseeable.

Cumulative Impacts

Continued development in the area around the alternative site could result in cumulative impacts to the neighboring historic property. Impacts include removal of vegetation, alteration of drainage patterns, changes to the landscape during site preparation, construction noise, alterations to historic vistas, and transportation improvement projects. All of these impacts have the potential to introduce elements that could take the Quaker Meadows House out of its historic context, resulting in moderate impacts. Sympathetic architectural design and site work associated with cumulative impacts projects would mitigate the impacts to negligible or minor.

Conclusion

Under alternative B, the potential exists for moderate impacts to the Quaker Meadows House, a listed National Register property. Sympathetic architectural design and site work in consultation with the NC SHPO and other interested parties like the Historic Burke Foundation, Inc., could reduce the impacts from alternative B and cumulative projects to negligible or minor, resulting in a finding of no adverse effect on the Quaker Meadows House. There could be cumulative negligible to moderate adverse effects from development at other properties in the area.

ALTERNATIVE C: CATAWBA MEADOWS PARK, MORGANTON, NC

The use of the existing softball field located at Catawba Meadows Park by the NPS as its new Trail HQ/VCS was reviewed by the NC SHPO. In its letter dated August 24, 2010, the NC SHPO

determined that the area surrounding the softball field is clear of significant architectural resources.

Analysis

Under alternative C, the NPS would establish the Trail HQ/VCS at the existing softball field within the boundaries of Catawba Meadows Park, authorizing the planning, design, and construction of a new park facility. Implementation of this alternative would have no effect on historic districts or structures.

Cumulative Impacts

There would be no cumulative impacts to historic districts or structures under alternative C.

Conclusion

There would be no impacts to historic districts or structures under alternative C or from any cumulative projects under consideration. Implementation of this alternative will have no effect on historic districts or structures.

ALTERNATIVE D: ROCKY FORD ACCESS, MORGANTON, NC

The use of the Rock Ford Access to the Catawba Greenway Trail by the NPS as its new Trail HQ/VCS was reviewed by the NC SHPO. In its letter dated August 24, 2010, the NC SHPO determined that the area surrounding the parcel is clear of significant architectural resources.

Analysis

Under alternative D, the NPS would establish the Trail HQ/VCS at the Catawba Greenway Trail access point, authorizing the planning, design, and construction of a new park facility. Implementation of this alternative would have no effect on historic districts or structures.

Cumulative Impacts

There would be no cumulative impacts to historic districts or structures under alternative D.

Conclusion

There would be no impacts to historic districts or structures under alternative D or from any cumulative projects under consideration. Implementation of this alternative would have no effect on historic districts or structures.

CHAPTER 5: CONSULTATION AND COORDINATION

The National Park Service (NPS) places a high priority on public involvement in the National Environmental Policy Act (NEPA) process and on giving the public an opportunity to comment on proposed actions. As part of the NPS NEPA process, issues associated with the proposed action were identified during the internal scoping meeting held with NPS and have been communicated to other affected agencies and stakeholders.

PUBLIC SCOPING

NEPA regulations require an “early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action.” To determine the scope of issues to be analyzed in depth within this FS/EA, meetings were conducted with NPS staff, interested stakeholders, and members of the public. An internal scoping meeting was held with the NPS in February 2009 at the Overmountain HQ. Public scoping began on October 29, 2009, and ended on December 18, 2009. During this time a series of public meetings were held in four locations:

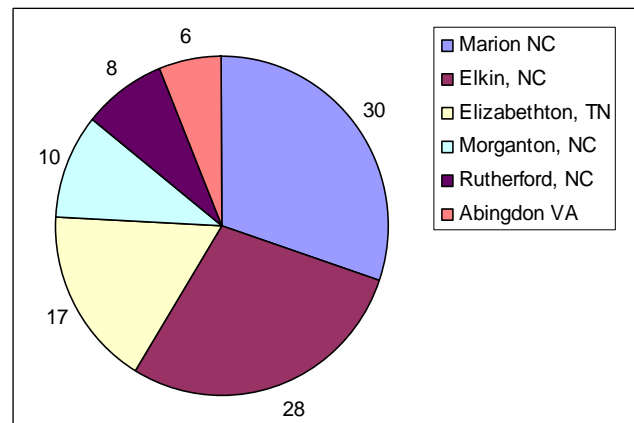
- November 4 at Sycamore Shoals State Historic Park in Elizabethton, TN
- November 17 at the McDowell Arts Center in Marion, NC
- November 18 at the Old Burke County Courthouse in Morganton, NC
- November 19 at Limestone College’s Stephenson Dining Hall in Gaffney, SC

The NPS notified interested parties of these meetings by distributing official letters to Overmountain partner organizations, and senate and congressional offices. In addition, meeting announcements were posted in several media outlets along the Trail, including the *Bristol News*, *Elizabethton Star*, *McDowell News*, *Morganton News Herald*, and *Gaffney Ledger*.

Attendees included individuals, organizations, and government representatives interested in learning more about the project, providing comments about the preliminary alternatives, and expressing issues and concerns. The meeting consisted of an open house during which attendees had the opportunity to read about the project on information posters. The National Park Service and consultant team were available to answer questions and to solicit comments. Meeting attendees were also provided the opportunity to submit comments via a standard form or online via the OVVI FS/EA project website (<http://parkplanning.nps.gov/projectHome.cfm?parkID=400&projectId=25061>).

At the end of the public comment period on December 18, 2009, 404 public comments were submitted via e-mail, U.S. Postal Service, in person, or on the Park’s PEPC website. Of these comments, 89 percent were submitted by members of the public (70 percent from individuals and 19 percent from groups and organizations) and 11 percent were submitted by government agencies, individuals, or representatives. Most of the comments stated a desire for the HQ/VCS to be sited in their own community. Other themes and concerns that arose from the public comments were consideration of the Trail’s history; the socioeconomic impacts of the new HQ/VCS, the need to increase educational and interpretive opportunities, and the need to increase tourism opportunities (see Figure 5.1).

Figure 5.1 – Public Comment Summary



The sign-in sheets at the four public meetings indicated the following numbers of attendees for a total of approximately 500 participants, not differentiating those attending multiple meetings:

- November 4 in Elizabethton, TN - 104 participants
- November 16 in Marion, NC - 306 participants
- November 17 in Morganton, NC - 74 participants
- November 18 in Gaffney, SC - 9 participants

Attendees included individuals, organizations, and government representatives interested in learning more about the project, providing comments about the preliminary alternatives, and expressing issues and concerns. The meeting consisted of an open house during which attendees had the opportunity to read about the project on information posters. The NPS and the consultant team were available to answer questions and to solicit comments. Meeting attendees were also provided the opportunity to submit comments via a standard form or online via the Trail FS/EA project website (<http://parkplanning.nps.gov/projectHome.cfm?parkID=400&projectId=25061>).

AGENCY CONSULTATION

Coordination with local and federal agencies and various interest groups was conducted during the NEPA process to identify issues and/or concerns related to the proposed actions. Correspondence related to the consultation process is available in Appendix A.

SECTION 7 CONSULTATION

In accordance with Section 7 of the Endangered Species Act, consultation letters were sent from the NPS to the United States Fish and Wildlife Service (USFWS) and the Natural Heritage Program at the North Carolina Department of Environment and Natural Resources (NC DENR) in June 2010.

The USFWS responded that there are no known rare, threatened or endangered species at any of the sites for the action alternatives, and that the project has a no effect determination for federally listed species. The agency recommended the use of stormwater management measures, including low impact development measures that attenuate stormwater runoff and filter pollutants, and also recommended the use of riparian buffers along intermittent and perennial streams.

The NC DENR also stated that there were no known species of concern on the state's natural heritage lists at any of the action sites, although it noted that there is a conservation easement on the Catawba Meadows Park site that merited further research.

SECTION 106

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to take into account the effects of their undertakings on historic properties. In accordance with the regulations implementing Section 106, letters initiating the process were sent to the North Carolina State Historic Preservation Officer (SHPO), Tribal Historic Preservation Office (THPO), and the Eastern Band of the Cherokee Nation in July 12, 2010.

Comments from the NC SHPO indicated that there are no known archeological resources at three of the four sites, although there is some potential for archeological sites. The Joseph McDowell house is not currently eligible for listing on the NRHP, although the Quaker Meadows House needs to be considered in any site design to ensure that the integrity of the site is not impaired. The NC SHPO recommended an archeological survey on the selected site and continued consultation with the SHPO through the design process to ensure that any concerns are properly addressed and Section 106 will be addressed separately from this FS/EA.

No response has been received from the Eastern Band of the Cherokee Nation.

TRAIL PARTNERS

In addition to formal consultation with state and federal agencies and the public scoping process, the NPS also coordinated with the Overmountain Victory Trail Association (OVTA), a nonprofit friends group. The OVTA representative participated in the CBA/VA workshops and site visits to help select the preferred alternatives.

LIST OF AGENCIES AND ORGANIZATIONS WHO WILL BE NOTIFIED OF THE PUBLICATION OF THE FS/EA

VIRGINIA

- Numerous Private Landowners
- Virginia DOT
- Virginia Department of Tourism
- Virginia Department of Historical Resources
- Smyth County
- Town of Abingdon
- Washington County
- Historical Society of Washington County

TENNESSEE

- Numerous Private Landowners
- Tennessee DOT
- Town of Elizabethton
- Town of Bluff City
- Carter County
- Sullivan County
- Southern Appalachian
- Greenway Alliance
- Tennessee Department of Tourism
- Roan Mountain State Park
- Sycamore Shoals State Historic Area
- Rocky Mount State Historic Site
- Hampton Creek Cove State Natural Area
- Cherokee National Forest – U.S.F.S
- Southern Appalachian Highlands Conservancy
- Appalachian National Scenic Trail – NPS
- Appalachian Trail Club
- Back Country Horsemen of East Tennessee

SOUTH CAROLINA

- Numerous Private Landowners
- SCDOT
- SC Department of Tourism
- Cowpens National Battlefield – NPS
- Kings Mountain NMP – NPS

NORTH CAROLINA

- Numerous Private Landowners
- NCDOT
- NC Dept. of Cultural Resources
- NC Dept. of Tourism
- Pisgah National Forest – U.S. F.S
- Blue Ridge Parkway – NPS
- The Altapass Foundation
- McDowell County
- Wilkes County
- Brittain Church
- McDowell County Historical Society
- Historic Burke Foundation, Inc.
- Wilkes County Historical Society
- Surry County Historical Society
- Rutherford County Historical Society
- Lake James State Park
- Fort Defiance Historic Site
- Yadkin River Greenway
- Catawba River Greenway
- Duke Energy Company
- Crescent Land Corp.
- Wilkes County Heritage Museum
- Unimin Corporation
- Catawba- Wateree Relicensing Coalition
- Rutherford County
- Polk County
- City of Morganton
- City of Kings Mountain
- Town of Elkin
- Town of Rutherfordton
- Town of Ruth
- Burke County
- Wake Forest University
- Piedmont Land Conservancy
- Foothills Land Conservancy
- Mountain to the Sea Trail

- Kings Mountain State Park
- SC Department of Parks
- Overmountain Victory Trail Committee
- Cherokee County
- Spartanburg County
- Town of Gaffney
- Carolina Backcountry Alliance
- The Palmetto Conservation Foundation
- Colonial Pipeline Company
- Cherokee County Historical Society

ALL STATES

- Overmountain Victory Trail Association, Inc.
- Federal Highway Administration
- Daughters of the American Revolution
- Sons of the American Revolution
- American Hiking Society
- History America Tours
- American Battlefield Protection Program
- Eastern National Monument Association
- National Park Foundation
- Student Conservation Association

- Kings Mountain Gateway Committee
- Betchler Development Corporation
- Brushy Mountain Cyclists Club
- W. Kerr Scott Reservoir – U.S. Army Corps of Engineers
- Yadkin River Heritage Corridor
- Foothills Nature Science Society
- Blue Ridge National Heritage Area
- NC State University
- White Oak Development
- Overmountain Vineyards
- The Bradley Fund, LLC
- Conservation Trust for NC
- Avery County
- Mitchell County
- High Country Council of Governments
- Caldwell County
- Surry County
- North Carolina Horse Council

COMMENT PERIOD

To comment on this FS/EA, you may mail comments or submit them online at <http://parkplanning.nps.gov/OVVI> and follow the appropriate links. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. Although you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so. Please mail comments to:

Paul Carson
Overmountain Victory National Historic Trail
National Park Service
2635 Park Road
Blacksburg, SC 29702

LIST OF PREPARERS

LOUIS BERGER GROUP, INC.

Jill Cavanaugh, Project Manager (through September 2010)
Architect/ Planner
MS, Architecture & Urban Design, Columbia University
Resource Area(s): Feasibility Study, Overall document support

Julie Eitner
Environmental Planner
BS, Cornell University
Resource Area(s): Visitor Use and Experience, Park Management and Operations, Vegetation, Overall document support
Nancy Van Dyke, Quality Assurance/ Quality Control
Senior Associate
MS, Environmental Sciences, University of Virginia

Heather Beers
Technical Editor
BS, Deaf Education, University of Montevallo

RHODESIDE AND HARWELL

Kurt E. Parker RLA, ASLA
BLA, Iowa State University
Conceptual Plans

KIRK ASSOCIATES, LLC

Stephen E. Garrett, CVS
Principal
Choosing by Design/ Value Analysis

CONTRIBUTORS

U.S. DEPARTMENT OF THE INTERIOR

NPS, SOUTHEAST REGIONAL OFFICE

Steven M Wright, Project Manager

NPS, OVVI

Paul Carson, Superintendent

Margaret Stewart, Project Manager
Senior Planner
MRP, University of North Carolina at Chapel Hill
Resource Area(s): Land Use, Floodplains, Soils, Water Resources, Wildlife and Wildlife Habitat, Overall document support

Lee Tippet
Senior Archeologist
MA (Master of Archeology), University of Tennessee- Knoxville
Resource Area(s): Archeology and Historic Sites and Structures

Dara Braitman
Planner
MUP (Master of Urban Planning), Hunter College
Resource Area: Socioeconomics

Stacilyn Feldman, LEED AP, ASLA
BLA, The Pennsylvania State University
Conceptual Plans

REFERENCES

Ashe, Samuel A., Stephen B. Weeks, and Charles L. Van Noppen (editors)

- 1908 *Biographical History of North Carolina: From Colonial Times to the Present.* Charles L. Van Noppen Publisher, Greensboro, North Carolina.

Babits, Lawrence E.

- 1998 *A Devil of a Whipping: The Battle of Cowpens.* The University of North Carolina Press, Chapel Hill.

Catawba Meadows Park

- 2009 Catawba Meadows Park Home website. Accessed August 20, 2010 at: <http://www.catawbameadowspark.com/>.

City of Marion, North Carolina

- 2010 History of Marion. Accessed August 2, 2010, at: <http://www.marionnc.org/history.php>.

City of Morganton

- 2009 *Mission 2030 Plan: A Vision for Economic Success.* Accessed August 27, 2010, at: <http://www.ci.morganton.nc.us/index.php/business-menu/building-codes>.
- 2010a *Morganton Zoning Ordinance.* Revised June 28, 2010. Accessed August 27, 2010, at: <http://www.ci.morganton.nc.us/index.php/business-menu/building-codes>.
- 2010b MorgantonGIS geo-database. Received from Morganton on May 19, 2010. Layers used: include zoning, land use, floodplain, and water and sewer lines, streams, soils.

Corbit, David Leroy

- 1987 *The Formation of the North Carolina Counties 1663-1943.* North Carolina Department of Cultural Resources, Division of Archives and History, Raleigh.

Historic Burke Foundation, Inc. (HBF, Inc.)

- 2010 Historic Burke Foundation, Inc. Home website. Accessed August 20, 2010, at: <http://www.historicburke.org/>.

Hudson, Charles

- 1990 *The Juan Pardo Expeditions: Exploration of the Carolinas and Tennessee, 1566-1568.* Smithsonian Institution Press, New York and London.

International Panel on Climate Change (IPCC)

- 2007 Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report on the Intergovernmental Panel on Climate Change (2007, Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Avery, M. Tignor, and H.L. Miller (eds.) Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

McDowell County

- 2007 *McDowell County Greenway Master Plan.* Approved September 10, 2007. Accessed August 27, 2010, at: <http://www.mcdowelltrails.com/MasterPlanComplete.htm>.
- 2010 McDowell County GIS. Accessed June 30, 2010 at <http://www.mcdowellcountygis.com/>.

Moore, David G.

- 2002 *Catawba Valley Mississippian: Ceramics, Chronology, and Catwaba Indians*. The University of Alabama Press, Tuscaloosa.

National Parks Conservation Association (NPCA)

- 2010 *Kings Mountain National Military Park: A Resource Assessment*. June 2010. Accessed August 31, 2010, at: <http://www.npca.org/stateoftheparks/kingsmountain/KIMO-report.pdf>.

National Park Service (NPS)

- 1982 *Comprehensive Management Plan*, Overmountain Victory National Historic Trail, Virginia, Tennessee, North Carolina, and South Carolina. (September 1982)
- 1991 *How to Apply the National Register Criteria for Evaluation*, National Register Bulletin 15. NPS, National Register of Historic Places, Washington, D.C.
- 1998a *National Register Bulletin 38, Guidelines for Evaluating and Documenting Traditional Cultural Properties*. Accessible at: http://www.nps.gov/history/history/online_books/hh/11/hh11m.htm.
- 1998b Director's Order 28: *Cultural Resource Management Guideline*.
- 2001 Director's Order 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making*.
- 2003 Director's Order 77-2: *Floodplain Management*. Accessed August 27, 2010, at: <http://home.nps.gov/applications/npspolicy/DOrders.cfm>.
- 2004 Procedural Manual 77-2: *Floodplain Management*. Accessed October 20, 2010, at: <http://www.nature.nps.gov/rm77/floodplain.cfm>.
- 2006 *Management Policies 2006*.
- 2009a Overmountain Victory National Historic Trail. Establishment of the National Historic Trail. Accessed October 27, 2009, at: <http://www.nps.gov/archive/ovvi/trail.htm>.
- 2009b Overmountain Victory National Historic Trail. Plan Your Visit. Accessed October 27, 2009, at: <http://www.nps.gov/ovvi/planyourvisit/index.htm>.
- 2009c National Park Service Spending and Payroll Impacts 2008. Prepared for the National Park Service by Daniel J. Stynes, Michigan State University, October 2009.
- 2009d NPS Facility Planning Model Report: OVVI 098411 (VC/HQ Feas) APPROVED. Prepared by the National Park Service. Approved November 2, 2009.
- 2010a Overmountain Victory National Historic Trail Headquarters / Visitor Contact Station Feasibility Study—Value Analysis Final Report. May 5, 2010. Prepared by Kirk Associates, LLC, for the NPS.
- 2010b Kings Mountain National Military Park. Plan Your Visit. Accessed August 20, 2010, at: <http://www.nps.gov/kimo/planyourvisit/>.
- 2010c NPS Stats. National Park Service Public Use Statistics Office. Accessed August 20, 2010 at: <http://www.nature.nps.gov/stats/viewReport.cfm>.

North Carolina Department of Environment and Natural Resources (NCDENR)

- 2004 15a ncac 02b.0243 Catawba River Basin: Protection and Maintenance of Existing Riparian Buffers. Accessed August 27, 2010, at:
<http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environment%20and%20natural%20resources/chapter%2002%20-%20environmental%20management/subchapter%20b/15a%20ncac%2002b%20.0243.html>.
- 2010 NC 2010 Integrated Report Category 5-303(d) List. Accessed September 14, 2010 at
http://portal.ncdenr.org/c/document_library/get_file?uuid=33a71505-6cdf-4497-b090-aadf79b1f02c&groupId=38364.

Oppermann, Joseph K.

- 2010 Conceptual Master Plan: Joseph McDowell House “Pleasant Gardens”. Prepared for the McDowell House Project Committee, April 2010.

Overmountain Victory Trail Association (OVTA)

- 2010 Overmountain Victory Trail Association Home website. Accessed August 20, 2010, at:
<http://www.ovta.org/>.

Powell, William S.

- 1968 *The North Carolina Gazetteer*. The University of North Carolina Press, Chapel Hill.
- 1989 *North Carolina Through Four Centuries*. The University of North Carolina Press, Chapel Hill.

Robinson, Kenneth W.

- 1994 *Archaeological Study Widening of U.S. 70 from East of the Catawba River Bridge to U.S. 7-221 Business, McDowell County, North Carolina*. Report on file at the North Carolina Office of State Archaeology, Raleigh.
- 2004 *Archeological Assessment of the Quaker Meadows Historic Site and Surroundings. Prepared for the Historic Burke Foundation and the Overmountain Victory National Historic Trail*, March 2004. Copy of Report on file at The Louis Berger Group, Inc., Raleigh, North Carolina.
- 2009 *Preliminary Archeological Assessment of the Historic Joseph McDowell House, Marion, McDowell County, North Carolina*. Prepared for the McDowell House Project Committee, April 2009. Copy of Report on file at The Louis Berger Group, Inc., Raleigh, North Carolina.

Robinson and Moore

- 1992 *Archaeology and Artifacts at the McDowell House, Quaker Meadows Plantation Morganton, Burke County, North Carolina*. Report on file at the North Carolina Office of State Archaeology, Raleigh.

Saunders, William L. (compiler and editor)

- 1887 *The Colonial Records of North Carolina, Volume V-1752 to 1759*. Josephus Daniels, Printer to the State, Raleigh, North Carolina.

South Carolina Department of Health and Environmental Control (SC DEHC)

- 2010 2010 State of South Carolina Integrated Report Part II: Assessment and Reporting. Accessed online August 27, 2010, at:
http://www.scdhec.gov/environment/water/tmdl/docs/tmdl_10-305b.pdf.

South Carolina Department of Parks, Recreation and Tourism (SCDPRT)

- 2010 History of Blacksburg. Accessed July 29, 2010, at:
<http://www.discoversouthcarolina.com/cities/179>.

USACOPS

- 2010 Police and Sheriff Department Information. Accessed July 21, 2010, at:
<http://www.usacops.com/>.

U.S. Census Bureau

- 2010a Incorporated Places and Minor Civil Divisions. 2010a. Accessed July 21, 2010, at:
<http://www.census.gov/popest/cities/>.
- 2010b. Population Estimates. Accessed July 21, 2010, at:
http://factfinder.census.gov/home/saff/main.html?_lang=en.
- 2010c. SF1 and SF3 Summary Files. Racial and Age Characteristics. Accessed July 21, 2010, at:
http://factfinder.census.gov/home/saff/main.html?_lang=en.
- 2010d. Small Area Income and Poverty Estimates. Accessed July 21, 2010, at:
<http://www.census.gov/did/www/saipe/index.html>.

U.S. Department of Agriculture (USDA)

- 2010 Web Soil Survey, National Resources Conservation Service, U.S. Department of Agriculture. Accessed August 27, 2010, at:
<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>.

U.S. Department of Commerce, Bureau of Economic Analysis

- 2010a. North Carolina and South Carolina Historical Population Growth 1969-2008, Table CA1-3. Accessed July 21, 2010, at: <http://www.bea.gov>.
- 2010b. Per Capita Income, Table CA1-3. Accessed July 21, 2010, at: <http://www.bea.gov>.
- 2010c. Total Employment by Industry, Table CA25. Accessed July 28, 2010, at:
<http://www.bea.gov>.

U.S. Department of Health and Human Services

- 2010 Health Resources Service Administration Geospatial Data Warehouse. Accessed August 2, 2010, at: <http://datawarehouse.hrsa.gov/default.aspx>.

U.S. Department of the Interior

- 1966 *The National Historic Preservation Act* (Public Law 89-665, 16 U.S.C. 470). Accessed 2010. Annotated version showing later technical and officially adopted revisions available from the National Park Service's preservation laws, regulations, and standards webpage at <http://www.nps.gov/history/laws.htm#pres>.
- 1971 *Executive Order Number 11593 Protection and Enhancement of the Cultural Environment*. Accessed 2010. Annotated version showing later technical and officially adopted revisions available from the National Park Service's preservation laws, regulations, and standards webpage at <http://www.nps.gov/history/laws.htm#pres>.

- 1978 *American Indian Religious Freedom Act* (Public Law 95-341, 42 U.S.C. 1996 and 1996a). Accessed 2010. Annotated version showing later technical and officially adopted revisions available from the National Park Service's preservation laws, regulations, and standards webpage at <http://www.nps.gov/history/laws.htm#pres>.
- 1979 *Archaeological Resources Protection Act* (Public Law 96-95; 16 U.S.C. 470aa-mm). Accessed 2010. Annotated version showing later technical and officially adopted revisions available from the National Park Service's preservation laws, regulations, and standards webpage at <http://www.nps.gov/history/laws.htm#pres>.
- 1981 *Determinations of Eligibility for Inclusion in the National Register of Historic Places*. Federal Register, 36 CFR 63. Accessed 2010. Annotated version showing later technical and officially adopted revisions available from the National Park Service's preservation laws, regulations, and standards webpage at <http://www.nps.gov/history/laws.htm#pres>.
- 1983 *Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines*. Federal Register, Part IV, 48(2):44716-44742. Accessed 2010. Annotated version showing later technical and officially adopted revisions available from the National Park Service's preservation laws, regulations, and standards webpage at <http://www.nps.gov/history/laws.htm#pres>.
- 1990 *Native American Graves Protection and Repatriation Act* (Public Law 101-601, 104 STAT. 3048). Accessed 2010. Annotated version showing later technical and officially adopted revisions available from the National Park Service's preservation laws, regulations, and standards webpage at <http://www.nps.gov/history/laws.htm#pres>.
- 1992 *The Secretary of the Interior's Standards for the Treatment of Historic Properties*. Federal Register, 36 CFR 68. Accessed 2010. Annotated version showing later technical and officially adopted revisions available from the National Park Service's preservation laws, regulations, and standards webpage at <http://www.nps.gov/history/laws.htm#pres>.
- 1999 *Protection of Historic Properties*. Federal Register, 36 CFR 800:27071-27084. Accessed 2010. Annotated version showing later technical and officially adopted revisions available from the National Park Service's preservation laws, regulations, and standards webpage at <http://www.nps.gov/history/laws.htm#pres>.

U.S. Department of Labor, Bureau of Labor Statistics

2010. Unemployment Rates. Accessed July 21, 2010, at: <http://www.bls.gov>.

U.S. Fire Administration

2010 National Fire Department Census Database. Accessed July 21, 2010, at: <http://www.usfa.dhs.gov/applications/census/>

Vance, Thomas

1994 *Pleasant Gardens: Preliminary Archaeological and Architectural Observations and Recommendations for Future Development*. Document on file at the North Carolina State Historic Preservation Office, Asheville, NC.

PERSONAL COMMUNICATIONS

City of Marion

- 2010 Phone conversation with Heather Cotton, Planning Director, and Margaret Stewart, Louis Berger Group, August 6, 2010 regarding zoning and potential cumulative impacts projects that might affect the area around the Joseph McDowell House.

City of Morganton

- 2010 Phone conversation with Lee Anderson, Planning Director, and Margaret Stewart, Louis Berger Group, August 27, 2010 regarding zoning on the property adjacent to Quaker Meadows, NCWTF easement restrictions at Catawba Meadows and Rocky Ford Access, and the Revolutionary War Heritage Corridor.

Crescent Properties, LLC.

- 2010 Phone conversation with Bryant Lindsey, and Julie Eitner, Louis Berger Group, May 28, 2010 regarding information and purchase options of the property adjacent to Quaker Meadows.

National Park Service

- 2010 Email from Paul Carson, OVVI Superintendent, to Margaret Stewart, Louis Berger Group, August 25, 2010 regarding park management and operations.

North Carolina Clean Water Management Trust Fund (NCCWTF)

- 2010 Phone conversation between Terri Smith, and Margaret Stewart, Louis Berger, July 12, 2010, regarding easement restrictions on the Catawba Meadows property in Morganton, NC.

North Carolina State Historic Preservation Office (NC SHPO)

- 2010 Phone conversations between Rebecca Johnson, Preservation Specialist, and Lee Tippet, Louis Berger, August 18, 2010, regarding the Joseph McDowell House.
- 2010 Phone conversation between Renee Shearin, and Lee Tippet, Louis Berger, August 18, 2010 regarding the Joseph McDowell House.

Warren Wilson College

- 2010 Phone conversations between David Moore, Professor of Archaeology/Anthropology, and Lee Tippet, Louis Berger, August 19, 2010, regarding archeology at Catawba Meadows Park and Quaker Meadows.

ACRONYMS

Advisory Council on Historic Preservation	ACHP
Architectural Barriers Act Accessibility Standard	ABAAS
Asbestos Containing Materials	ACM
Choosing by Advantages /Value Analysis	CBA/VA
Code of Federal Regulations	CFR
Comprehensive Management Plan	CMP
Commemorative Motor Route	CMR
Council on Environmental Quality	CEQ
Director's Order	DO
Environmental Assessment	EA
Feasibility Study	FS
Federal Emergency Management Agency	FEMA
Gross square feet	gsf
Headquarters	HQ
Lead-based paint	LBP
National Environmental Policy Act	NEPA
National Historic Preservation Act	NHPA
National Parks Omnibus Management Act	NPOMA
National Park Service	NPS
National Register of Historic Places	NRHP
National Trails System Act	NTSA
North Carolina	NC
North Carolina Department of Environment and Natural Resources	NC DENR
Planning, Environment, and Public Comment	PEPC
South Carolina	SC
State Historic Preservation Officer	SHPO
Tennessee	TN
Tribal Historic Preservation Office	THPO
United States Fish and Wildlife Service	USFWS
Virginia	VA
Visitor Contact Station	VCS

KEY WORD GLOSSARY

Affected Environment — The existing environment to be affected by a proposed action and alternatives.

Contributing Resource — A building, site, structure, or object that adds to the historic significance of a property or district.

Council on Environmental Quality — Established by Congress within the Executive Office of the President with passage of the National Environmental Policy Act of 1969. CEQ coordinates federal environmental efforts and works closely with agencies and other White House offices in the development of environmental policies and initiatives.

Cultural Resources — Prehistoric and historic districts, sites, buildings, objects, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reason.

Cumulative Impacts — Under NEPA regulations, the incremental environmental impact or effect of an action together with the effects of past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions (40 CFR Part 1508.7).

Enabling Legislation — Legislation that gives appropriate officials the authority to implement or enforce the law.

Endangered Species — Any species in danger of extinction throughout all or a significant portion of its range. The lead federal agency for the listing of a species as endangered is the U.S. Fish and Wildlife Service, and it is responsible for reviewing the status of the species on a five-year basis.

Endangered Species Act (16 U.S.C. 1531 et seq.) — An act which provides a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved and which provides a program for the conservation of such endangered species and threatened species.

Environmental Assessment — An environmental analysis prepared pursuant to the National Environmental Policy Act to determine whether a federal action would significantly affect the environment and thus require a more detailed environmental impact statement (EIS).

Executive Order — Official proclamation issued by the president of the United States that may set forth policy or direction or establish specific duties in connection with the execution of federal laws and programs.

Floodway— The waterway channel and area adjacent to the channel likely to accommodate flooding.

Impairment — Within this document, the term impairment has two separate definitions. The NPS requires an analysis of potential effects to determine whether actions would impact or impair Park resources. NPS is empowered with the management discretion to allow impacts on Park resources and values (when necessary and appropriate) to fulfill the purposes of a Park, as long as the impact does not constitute impairment of the affected resources and values.

National Environmental Policy Act (NEPA) — The act as amended, articulates the federal law that mandates protecting the quality of the human environment. It requires federal agencies to systematically assess the environmental impacts of their proposed activities, programs, and projects including the “no build” alternative of not pursuing the proposed action. NEPA requires agencies to consider alternative ways of accomplishing their missions in ways which are less damaging to the environment.

National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq.) — An act to establish a program for the preservation of historic properties throughout the nation, and for other purposes, approved October 15, 1966 (Public Law 89-665; 80 STAT. 915; 16 U.S.C. 470 as amended by Public Law 91-243, Public Law 93-54, Public Law 94-422, Public Law 94-458, Public Law 96-199, Public Law 96-244, Public Law 96-515, Public Law 98-483, Public Law 99-514, Public Law 100-127, and Public Law 102-575).

National Register of Historic Places (NRHP) — A register of districts, sites, buildings, structures, and objects important in American history, architecture, archeology, and culture, maintained by the secretary of the interior under authority of Section 2(b) of the Historic Sites Act of 1935 and Section 101(a)(1) of the National Historic Preservation Act of 1966, as amended.

Scoping — Scoping, as part of NEPA, requires examining a proposed action and its possible effects; establishing the depth of environmental analysis needed; and determining analysis procedures, data needed, and task assignments. The public is encouraged to participate and submit comments on proposed projects during the scoping period.

Threatened Species — Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

APPENDIX A: CONSULTATION AND CORRESPONDENCE

[This page intentionally left blank]

Stewart, Margaret

From: Stewart, Margaret
Sent: Friday, June 25, 2010 11:41 AM
To: bryan_tompkins@fws.gov
Cc: Steven_M_Wright@nps.gov; Paul_Carson@nps.gov; Cavanaugh, Jill; Eitner, Julia
Subject: Proposed Headquarters and Visitor Contact Station, Overmountain Victory National Historic Trail
Attachments: images for consultation letters-usfws.pdf

Dear Mr. Tompkins:

As we discussed on the phone the on June 14, I'm working with the National Park Service (NPS) on a project in North Carolina, and you recommended that I email the consultation request.

The NPS is preparing a feasibility study and environmental assessment (FS/EA) to identify the most appropriate location for the headquarters and visitor contact station (HQ/VCS) for the Overmountain Victory National Historic Trail, and to assess the potential effects of a new headquarters and visitor contact station on the candidate sites. The Overmountain trail is a 330-mile-long route for public use, both motorized and non-motorized, that traverses portions of Virginia, Tennessee, North Carolina, and South Carolina. The new facility would provide a centrally located space to accommodate functions associated with the expanding regional presence of the trail, including staff offices, meeting space, storage, support, educational and interpretive exhibits, and special events. This proposed action is needed to improve efficiency of park management and operations, and accommodate increased staffing and interpretive needs. The current Trail headquarters is at the southernmost end of the trail, making timely response to problems in the northern sections of the trail difficult.

The general location of the four proposed sites for the new HQ/VCS are delineated on the attached maps in red. They include:

- The 2.7 acre parcel adjacent to the historic Quaker Meadows House at the intersection of St. Mary's Church Road and NC 181 (119 St. Mary's Church Road, Morganton, NC)
- The existing softball field at the entrance to Catawba Meadows Park (Alexander Avenue and Sanford Drive, Morganton, NC)
- Rocky Ford Access to the Catawba Greenway Trail (US 64/NC 18, Morgantown, NC)
- Joseph McDowell House and property (136 US 70, Marion, NC)

All of the Morganton sites can be found on the Morganton North 7.5 minute USGS Quadrangle map, while the site in Marion can be found on the Marion West 7.5 minute Quadrangle.

This EA is being prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and implementing regulations, 40 CFR 1500-1508, and NPS Director's Order 12 and Handbook, *Conservation Planning, Environmental Impact Analysis, and Decision-making*. The purpose of this initial correspondence is to request a list of any federally listed species or habitats that may occur on the proposed project sites and to solicit any early input or concerns that you may have regarding this proposed action.

Thank you,

Margaret Stewart

Senior Planner

Direct 202-303-2648

Main 202-331-7775

Fax 202.293.0787



United States Department of the Interior

National Park Service
Overmountain Victory
National Historic Trail
2635 Park Road
Blackburg, South Carolina 29702



L7617(OVVI)

July 12, 2010

Linda Pearsall
Director
North Carolina Natural Heritage Program
1601 Mail Service Center
Raleigh, NC 27699-1601

**Re: Proposed Headquarters and Visitor Contact Station,
Overmountain Victory National Historic Trail**

Dear Ms. Pearsall:

The National Park Service (NPS), is preparing a feasibility study and environmental assessment (FS/EA) to identify the most appropriate location for the headquarters and visitor contact station (HQ/VCS) for the Overmountain Victory National Historic Trail, and to assess the potential effects of a new headquarters and visitor contact station on the candidate sites. The Overmountain trail is a 330-mile-long route for public use, both motorized and non-motorized, that traverses portions of Virginia, Tennessee, North Carolina, and South Carolina. The new facility would provide a centrally located space to accommodate functions associated with the expanding regional presence of the trail, including staff offices, meeting space, storage, support, educational and interpretive exhibits, and special events. This proposed action is needed to improve efficiency of park management and operations, and accommodate increased staffing and interpretive needs. The current Trail headquarters is at the southernmost end of the trail, making timely response to needs and issues in the northern sections of the trail difficult.

Four sites are being assessed:

- The 2.7 acre parcel adjacent to the historic Quaker Meadows House at the intersection of St. Mary's Church Road and NC 181 (119 St. Mary's Church Road, Morganton, NC)
- The existing softball field at the entrance to Catawba Meadows Park (Alexander Avenue and Sanford Drive, Morganton, NC)
- Rocky Ford Access to the Catawba Greenway Trail (US 64/NC 18, Morgantown, NC)
- Joseph McDowell House in (136 US 70, Marion, NC)

The project area is depicted on the attached maps. The candidate sites are outlined in red. All of the Morganton sites can be found on the Morganton North 7.5 minute USGS Quadrangle map, while the site in Marion can be found on the Marion West Quadrangle. Site plans of existing conditions at the Morganton locations are also enclosed. We are still waiting for GIS data from Marion and do not have a plan for that site yet.



This EA is being prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and implementing regulations, 40 CFR 1500-1508, and NPS Director's Order 12 and Handbook, *Conservation Planning, Environmental Impact Analysis, and Decision-making*. The purpose of this initial correspondence is to request a list of any federally listed species or habitats that may occur on the proposed project sites and to solicit any early input or concerns that you may have regarding this proposed action.

Since we are just starting the initial planning stages of this project, the conceptual site designs and action alternatives have yet to be developed. However, it is assumed that the site designs would avoid sensitive areas such as floodplains, wetlands, and potential archeological sites.

If you have any questions or require additional information, please contact me by phone at (864) 936-3477, or by e-mail at paul_carson@nps.gov. Thank you in advance for your assistance.

Sincerely,



Howard P. Carson
Superintendent

cc: The Louis Berger Group, Inc.
Enclosures



United States Department of the Interior

National Park Service
Overmountain Victory
National Historic Trail
2635 Park Road
Blackburg, South Carolina 29702



L7617(OVVI)

July 12, 2010

Renee Gledhill-Earley, Environmental Review Coordinator
Department of Cultural Resources, Environmental Review Branch
North Carolina State Historic Preservation Office
4617 Mail Service Center
Raleigh, North Carolina 27699-4617

**RE: Proposed Headquarters and Visitor Contact Station,
Overmountain Victory National Historic Trail
Section 106 Compliance**

Dear Ms. Gledhill-Earley;

The National Park Service (NPS), is preparing a feasibility study and environmental assessment (FS/EA) to identify the most appropriate location for the headquarters and visitor contact station (HQ/VCS) for the Overmountain Victory National Historic Trail, and to assess the potential effects of a new headquarters and visitor contact station on the candidate sites. The Overmountain trail is a 330-mile-long route, both motorized and non-motorized, for public use that traverses portions of Virginia, Tennessee, North Carolina, and South Carolina. The new facility would provide a centrally located space to accommodate functions associated with the expanding regional presence of the trail, including staff offices, meeting space, storage, support, educational and interpretive exhibits, and special events. This proposed action is needed to improve efficiency of park management and operations, and accommodate increased staffing and interpretive needs. The current Trail headquarters is at the southernmost end of the trail, making timely response to needs and issues in the northern sections of the trail difficult.

The general location of the four proposed sites for the new HQ/VCS are delineated on the attached maps and site plans in red. They include:

- The 2.7 acre parcel adjacent to the historic Quaker Meadows House at the intersection of St. Mary's Church Road and NC 181 (119 St. Mary's Church Road, Morganton, NC)
- The existing softball field at the entrance to Catawba Meadows Park (Alexander Avenue and Sanford Drive, Morganton, NC)
- Rocky Ford Access to the Catawba Greenway Trail (US 64/NC 18, Morgantown, NC)
- Joseph McDowell House and property (136 US 70, Marion, NC)

All of the Morganton sites can be found on the Morganton North 7.5 minute USGS Quadrangle map, while the site in Marion can be found on the Marion West Quadrangle. Site plans of existing conditions at the Morganton locations are also enclosed. We are still waiting for GIS data from Marion and do not have a plan for that site yet.



The FS/EA document will fulfill the requirements of the National Environmental Policy Act (NEPA) of 1969, as amended, and Section 106 of the National Historic Preservation Act (NHPA), as amended. In the FS/EA, the NPS is addressing potential environmental impacts associated with the siting of the proposed Headquarters. The EA will consider potential impacts of the project upon the natural and manmade environments, including analyses of land use, socio-economics, visitor use and experience, park management and operations, transportation, historic and cultural resources, aesthetics, floodplains, wetlands, and biological resources.

As part of this process, the NPS wishes to consult with the North Carolina State Historic Preservation Office concerning the historic significance of the proposed sites. We seek and will welcome any information, advice and input concerning important cultural resources, archaeological and historic sites, or other areas of special importance and sensitivity located in proximity to the proposed sites. Information received from your office will be used to guide any required cultural resources investigations at the proposed sites and make appropriate recommendations regarding site planning.

All stand-alone cultural resources reports will be submitted to you for NC SHPO review in advance of or concurrent with submittal of the EA. The NC SHPO will be included among the recipients of the EA upon its publication.

Under the NHPA and NEPA, the NPS as a federal agency must consider the potential impacts of the proposed project on resources of concern to Native American tribes. Therefore, in compliance with 36 CFR 800.2c(5) and 800.3c(3), the NPS will consult with the Eastern Band of the Cherokee Indians in order to notify them of the proposed project and to seek their opinion on the possible effect to sacred areas, archaeological sites, burial grounds or other areas of special sensitivity to the tribe and their members. We will provide copies for your files of letters sent by the NPS to tribal officials and representatives.

If you have any questions or need additional information about this project, please contact me at (864) 936-3477. Thank you for your assistance and support.

Sincerely,



Howard P. Carson
Superintendent

cc: The Louis Berger Group, Inc.
Enclosures



United States Department of the Interior

National Park Service
Overmountain Victory
National Historic Trail
2635 Park Road
Blackburg, South Carolina 29702



L7617(QVVI)

July 12, 2010

Eastern Band of the Cherokee Indians
Mr. Russ Townsend
Tribal Historic Preservation Officer
P.O. Box 455
Cherokee, North Carolina 28719

**RE: Proposed Headquarters and Visitor Contact Station,
Overmountain Victory National Historic Trail
Section 106 Compliance**

Dear Mr. Townsend;

The National Park Service (NPS), is preparing a feasibility study and environmental assessment (FS/EA) to identify the most appropriate location for the headquarters and visitor contact station (HQ/VCS) for the Overmountain Victory National Historic Trail, and to assess the potential effects of a new headquarters and visitor contact station on the candidate sites. The Overmountain trail is a 330-mile-long route, both motorized and non-motorized, for public use that traverses portions of Virginia, Tennessee, North Carolina, and South Carolina. The new facility would provide a centrally located space to accommodate functions associated with the expanding regional presence of the trail, including staff offices, meeting space, storage, support, educational and interpretive exhibits, and special events. This proposed action is needed to improve efficiency of park management and operations, and accommodate increased staffing and interpretive needs. The current Trail headquarters is at the southernmost end of the trail, making timely response to issues and needs in the northern sections of the trail difficult.

The general location of the four proposed sites for the new HQ/VCS are delineated on the attached maps and site plans in red. They include:

- The 2.7 acre parcel adjacent to the historic Quaker Meadows House at the intersection of St. Mary's Church Road and NC 181 (119 St. Mary's Church Road, Morganton, NC)
- The existing softball field at the entrance to Catawba Meadows Park (Alexander Avenue and Sanford Drive, Morganton, NC)
- Rocky Ford Access to the Catawba Greenway Trail (US 64/NC 18, Morgantown, NC)
- Joseph McDowell House and property (136 US 70, Marion, NC)

All of the Morganton sites can be found on the Morganton North 7.5 minute USGS Quadrangle map, while the site in Marion can be found on the Marion West Quadrangle. Site plans of existing conditions at the Morganton locations are also enclosed. We are still waiting for GIS data from Marion and do not have a plan for that site yet.



The FS/EA document will fulfill the requirements of the National Environmental Policy Act (NEPA) of 1969, as amended, and Section 106 of the National Historic Preservation Act (NHPA), as amended. In the FS/EA, the NPS is addressing potential environmental impacts associated with the siting of the proposed Headquarters. The EA will consider potential impacts of the project upon the natural and manmade environments, including analyses of land use, socio-economics, visitor use and experience, park management and operations, transportation, historic and cultural resources, aesthetics, floodplains, wetlands, and biological resources.

As part of this process, the NPS wishes to consult with the Eastern Band of the Cherokee Indians concerning the historic significance of the proposed sites. We seek and will welcome any information, advice and input concerning important cultural resources, archaeological and historic sites, or other areas of special importance and sensitivity located in proximity to the proposed sites. Information received from your office will be used to guide any required cultural resources investigations at the proposed sites and make appropriate recommendations regarding site planning.

Under the NHPA and NEPA, the NPS as a federal agency must consider the potential impacts of the proposed project on resources of concern to Native American tribes. Therefore, in compliance with 36 CFR 800.2c(5) and 800.3c(3), the NPS is consulting with the Eastern Band of the Cherokee Indians in order to notify them of the proposed project and to seek their opinion on the possible effect to sacred areas, archaeological sites, burial grounds or other areas of special sensitivity to the tribe and their members.

If you have any questions or need additional information about this project, please contact me at (864) 936-3477. Thank you for your assistance and support.

Sincerely,



Howard P. Carson
Superintendent

cc: The Louis Berger Group, Inc.
Enclosures



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Asheville Field Office
160 Zillicoa Street
Asheville, North Carolina 28801

July 21, 2010

Ms. Margaret Stewart
Louis Berger Group, Inc.
2445 M Street NW
Washington, D.C. 20037

Dear Ms. Stewart:

Subject: Proposed Construction of Headquarters and Visitor Contact Station for Overmountain Victory National Historic Trail, in North Carolina

On June 25, 2010, we received information from you via e-mail describing the preparation of an Environmental Analysis for the subject project. In that e-mail you also requested our comments regarding the potential impacts of this project on natural resources and/or the potential impacts this project may have on federally listed species. We have reviewed the information presented and we provide the following comments in accordance with the provisions of the National Environmental Policy Act (42 U.S.C. § 4321 *et seq.*); Migratory Bird Treaty Act, as amended (16 U.S.C. 703); and section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543) (Act).

According to the information that you presented, the National Park Service is preparing an EA and feasibility study to identify the most appropriate location for the proposed Overmountain Victory National Historic Trail headquarters and visitor contact station. The new facility would improve efficiency of park management and operations, and accommodate increased staffing and interpretive needs. The general location of the four proposed sites for the new HQ/VCS are as follows:

- The 2.7 acre parcel adjacent to the historic Quaker Meadows House at the intersection of St. Mary's Church Road and NC 181 (119 St. Mary's Church Road, Morganton, NC)
- The existing softball field at the entrance to Catawba Meadows Park (Alexander Avenue and Sanford Drive, Morganton, NC)
- Rocky Ford Access to the Catawba Greenway Trail (US 64/NC 18, Morgantown, NC)
- Joseph McDowell House and property (136 US 70, Marion, NC)

Federally Listed Endangered and Threatened Species

According to our records and a review of the information provided in your letter, no federally listed species or their habitats occur on any of the sites being reviewed. Therefore, we believe the requirements under section 7 of the Act are fulfilled. However, obligations under section 7 of the Act must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed

species or critical habitat in a manner not previously considered, (2) this action is subsequently modified in a manner that was not considered in this review, or (3) a new species is listed or critical habitat is determined that may be affected by the identified action.

Stream and Wetland Buffers

The sites at Rocky Ford Access and Joseph McDowell House are both located adjacent to the Catawba River. If either of these sites are chosen for construction, we emphasize that stringent measures to control sediment and erosion should be implemented prior to any ground disturbance and should be maintained throughout project construction. One of the most important and effective measures that can be taken to protect stream health is the preservation of riparian buffers. Wide, contiguous riparian buffers have greater and more flexible potential than other options to maintain biological integrity¹ and can ameliorate many ecological issues related to land use and environmental quality.² Riparian buffers accomplish the following:

1. catch and filter runoff, thereby preventing nonpoint-source pollutants from reaching streams;
2. enhance the in-stream processing of both point- and nonpoint-source pollutants;
3. act as “sponges” by absorbing runoff (which reduces the severity of floods) and, by allowing runoff to infiltrate and recharge groundwater levels, maintains stream flows during dry periods;
4. catch and help prevent excess woody debris from entering the stream and creating logjams;
5. stabilize stream banks and maintain natural channel morphology;
6. provide coarse woody debris for habitat structure and most of the dissolved organic carbon and other nutrients necessary for the aquatic food web; and
7. maintain air and water temperatures around the stream.

As we do for most projects, we recommend the maintenance or establishment of minimum 100-foot native forested buffers along each side of perennial streams and 50-foot native forested buffers along each side of intermittent streams and wetlands adjacent to the proposed project.³ We additionally encourage the implementation of buffers on ephemeral streams due to the important functions they provide as headwater streams.^{4,5} Buffers should be measured

¹R. Horner, C. May, E. Livingston, and J. Maxted. 1999. Impervious Cover, Aquatic Community Health, and Storm Water BMPs: Is There a Relationship? *In*: Proceedings of the Sixth Biennial Storm Water Research and Watershed Management Conference. Southwest Florida Water Management District, Tampa, FL.

²R. J. Naiman, H. DeCamps, and M. Pollock. 1993. The role of riparian corridors in maintaining regional biodiversity. *Ecol. Appl.* 3:209-212.

³J. S. Stewart, D. M. Downes, L. Wang, J. A. Wierl, and R. Bannerman. 2000. Influences of riparian corridors on aquatic biota in agricultural watersheds. Pages 209–214 *in* P. J. Wigington, Jr., and R. L. Beschta, eds. Proceedings of the American Water Resources Association International Conference on riparian ecology and management in multi-land use watersheds, Portland, OR.

⁴R. B. Alexander, R. A. Smith, and G. E. Schwarz. 2000. Effect of Stream Channel Size on the Delivery of Nitrogen to the Gulf of Mexico. *Nature* 403:758-761.

⁵B. J. Peterson, W. M. Wolheim, P. J. Mulholland, J. R. Webster, J. L. Meyer, J. L. Tank, E. Marti, W. B. Bowden, H. M. Valett, A. E. Hershey, W. H. McDowell, W. K. Dodds, S. K. Hamilton, S. Gregory, and D. D. Morrall. 2001. Control of Nitrogen Export from Watersheds by Headwater Streams. *Science* 292:86-90.

horizontally from the edge of the stream bank,⁶ which may result in wider buffers at higher gradients, and must be provided over the entire length of the stream, including headwater streams, springs, and seeps.

Floodplains

Executive Order 11988 requires federal agencies (and their designated nonfederal representatives) to consider and protect floodplain functions. We believe the examples of flooding in this area of North Carolina highlight the importance of avoiding the long- and short-term impacts associated with the occupancy and modification of floodplains and that we should avoid any direct or indirect support of floodplain development. Therefore, we recommend that the subject project not be built in the 100-year floodplain or in any way result in the alteration of the 100-year floodplain.

Storm-water Management

Impervious surfaces (such as roofs, roads, and parking lots) collect pathogens, metals, sediment, and chemical pollutants and quickly transmit them (via storm-water runoff) to receiving waters. According to the Environmental Protection Agency, this nonpoint-source pollution is one of the major threats to water quality in the United States, posing one of the greatest threats to aquatic life, and is linked to chronic and acute illnesses in human populations from exposure through drinking water and contact recreation. Increased storm-water runoff also directly damages aquatic and riparian habitat, causing stream-bank and stream-channel scouring. In addition, impervious surfaces reduce groundwater recharge, resulting in even lower than expected stream flows during drought periods that can induce potentially catastrophic effects for fish, mussels and other aquatic life.

Best management practices can reduce, but not eliminate, pollutant loadings of common storm-water pollutants. Designs that collect runoff and allow it to infiltrate the soil have the highest documented pollutant-removal efficiency, eliminating nearly all lead, zinc, and solids and more than 50 percent of total phosphorous. Ponds and wetlands, which allow contaminants to settle out of the water column or be broken down by sunlight and biological activity, can remove more than 70 percent of bacteria. Where detention ponds are used, storm-water outlets should drain through a vegetated area prior to reaching any natural stream or wetland area. Detention structures should be designed to allow for the slow discharge of storm water, attenuating the potential adverse effects of storm-water surges; thermal spikes; and sediment, nutrient, and chemical discharges. Also, because the purpose of storm-water-control measures is to protect streams and wetlands, no storm-water-control measures or best management practices should be installed within any stream (perennial or intermittent), wetland or, when practicable, riparian area.

Accordingly, we recommend the implementation of storm-water retention and treatment measures designed to replicate and maintain the hydrograph at the preconstruction condition in order to avoid any additional impacts to habitat quality within the watershed. We also recommend the use of low-impact-development techniques, such as grassed swales, rain gardens, and wetland retention areas, for retaining and treating storm-water runoff rather than the more traditional measures, such as large retention ponds, etc. Sufficient retention designs should be implemented to allow for the slow discharge of storm water, attenuating the potential adverse effects of storm-water surges; thermal spikes; and sediment, nutrient, and chemical discharges. These designs often cost less to install and significantly reduce environmental impacts from development.

⁶K. L. Knutson and V. L. Naef. 1997. Management recommendations for Washington's priority habitats: riparian. Washington Department of Fish and Wildlife, Olympia, WA. 181 pp.

We recommend that consideration be given to the use of pervious materials (i.e., pervious concrete, interlocking/open paving blocks, etc.) for the construction of roads, driveways, sidewalks, etc. Pervious surfaces minimize changes to the hydrology of the watershed and can be used to facilitate groundwater recharge. Pervious materials are also less likely to absorb and store heat and allow the cooler soil below to cool the pavement (thus preventing heated water from entering adjacent waterways). Additionally, pervious concrete requires less maintenance and is less susceptible to freeze/thaw cracking due to large voids within the concrete.

The North Carolina Wildlife Resources Commission has developed a "Guidance Memorandum to Address and Mitigate Secondary and Cumulative Impacts to Aquatic and Terrestrial Wildlife Resources and Water Quality" that we support and encourage you to use. It can be accessed via the Internet as follows:

http://www.ncwildlife.org/pg07_wildlifespeciescon/pg7c3_impacts.pdf.

We appreciate the opportunity to provide these comments. If we can be of assistance or if you have any questions, please do not hesitate to contact Mr. Allen Ratzlaff of our staff at 828/258-3939, Ext. 229. In any future correspondence concerning this project, please reference our Log Number 4-2-10-182.

Sincerely,

-- original signed --

Bryan Tompkins
Fish & Wildlife Biologist

08/02/2010 10:38 8649363477

OVNHT

PAGE 02



North Carolina Department of Environment and Natural Resources

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

July 28, 2010

Mr. Howard P. Carson
National Park Service
2635 Park Road
Blacksburg, SC 29702

Subject: Proposed Headquarters and Visitor Contact Station -- Overmountain Victory National Historic Trail; Burke and McDowell counties, NC

Dear Mr. Carson:


The Natural Heritage Program has no record of rare species, significant natural communities, significant natural heritage areas, or conservation/managed areas at or within 1/2-mile of three of the four sites being assessed -- Rocky Ford Access, Quaker Meadows House, and Joseph McDowell House near Marion. The fourth site -- at Catawba Meadows Park -- lies within a NC Clean Water Management Trust Fund easement. Please contact this agency about the project for their input.

You may wish to check the Natural Heritage Program database website at www.ncnhp.org for a listing of rare plants and animals and significant natural communities in the county and on the quad map. Our Program also has a new website that allows users to obtain information on element occurrences and significant natural heritage areas within two miles of a given location: http://nhpweb.enr.state.nc.us/nhis/public/gmap75_main.phtml. The user name is "public" and the password is "heritage". You may want to click "Help" for more information.

NC OneMap now provides digital Natural Heritage data online for free. This service provides site specific information on GIS layers with Natural Heritage Program rare species occurrences and Significant Natural Heritage Areas. The NC OneMap website provides Element Occurrence (EO) ID numbers (instead of species name), and the data user is then encouraged to contact the Natural Heritage Program for detailed information. This service allows the user to quickly and efficiently get site specific NHP data without visiting the NHP workroom or waiting for the Information Request to be answered by NHP staff. For more information about data formats and access, visit www.nconemap.com, then click on "FTP Data Download", and then "nheo.zip" [to the right of "Natural Heritage Element Occurrences"]. You may also e-mail NC OneMap at datag@ncmail.net for more information.

Please do not hesitate to contact me at 919-715-8697 if you have questions or need further information.

Sincerely,


Harry E. LeGrand, Jr., Zoologist
Natural Heritage Program

1601 Mail Service Center, Raleigh, North Carolina 27699-1601
Phone: 919-733-4984 \ FAX: 919-715-3060 Internet: www.enr.state.nc.us
An Equal Opportunity / Affirmative Action Employer - 50% Recycled / 10% Post Consumer Paper

One
North Carolina
Naturally

08/30/2010 09:30 8649363477

OVNHT

PAGE 02



**North Carolina Department of Cultural Resources
State Historic Preservation Office**

Peter B. Sandbeck, Administrator

Beverly Faves Perdue, Governor
Linda A. Carlisle, Secretary
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History
Division of Historical Resources
David Brook, Director

August 24, 2010

Howard Carson
Overmountain Victory National Historic Trail
2635 Park Road
Blackburg, SC 29702

Re: Headquarters and Visitor's Center, Overmountain Victory National Historic Trail, Multi County,
ER 09-2683

Dear Mr. Carson:

Thank you for your letter of July 12, 2010, concerning the above project.

The Catawba Valley is extremely rich in historic and prehistoric archaeological resources, ranging from the significant archaeological components associated with the early historic occupations and roads, to the major prehistoric and early historic settlements of the Catawba Indians, such as the Berry Site north of Morganton. Each of the four proposed HQ/VCS locations has potential for the presence of historic or prehistoric archaeological sites.

The McDowell House property, archaeological site number 31MC200, although very disturbed in parts, has been the subject of recent investigations by Kenneth Robinson, Wake Forest University. We have not yet received a report detailing the results of his research. If any new ground disturbing activities are proposed at this location an archaeological survey is recommended pending our receipt of the report.

The Quaker Meadows HQ/VCW location is also partially disturbed. It has not been intensively surveyed by an archaeologist and no previously recorded sites are recorded here; however, a preliminary assessment of archaeological resources at the Quaker Meadows Historic site and selected areas in the vicinity identified several potentially significant resources associated with the historic era occupations and landscape. We recommend an intensive archaeological survey if this location is selected.

There are no known recorded archaeological sites at the Catawba Meadows Park or the Rocky Ford Access locations. However, these areas have never been systematically surveyed to determine the location or significance of archaeological resources. Based on the topographic and hydrological situation, there is a high probability for the presence of prehistoric or historic archaeological sites.

At these locations we also recommend that a comprehensive survey be conducted by an experienced archaeologist to identify and evaluate the significance of archaeological remains that may be damaged or destroyed by the proposed project. Potential effects on unknown resources must be assessed prior to the initiation of construction activities.

Location: 109 East Jones Street, Raleigh NC 27601

Mailing Address: 4617 Mail Service Center, Raleigh NC 27699-4617

Telephone/Fax: (919) 807-6570/807-6599

Two copies of the resulting archaeological survey report, as well as one copy of the appropriate site forms, should be forwarded to us for review and comment as soon as they are available and well in advance of any construction activities.

A list of archaeological consultants who have conducted or expressed an interest in contract work in North Carolina is available at www.arch.dcr.state.nc.us/consults.htm. The archaeologists listed, or any other experienced archaeologist, may be contacted to conduct the recommended survey.

With regard to architectural resources in the area, three (3) of the sites are clear of significant properties. We would have no comment regarding architectural resources, if building the new HQ/VCS occurred on these sites. They are:

- ♦ The existing softball field at the entrance to Catawba Meadows Park (Alexander Avenue and Sanford Drive, Morganton, Burke County),
- ♦ Rocky Ford Access to the Catawba Greenway Trail (US 64/NC 18, Morganton, Burke County), and
- ♦ The Joseph McDowell House (136 US 70 Highway, Marion, McDowell County). This property was determined ineligible for listing on the National Register of Historic Places in 1994 due to significant alterations to the house and surrounding property.

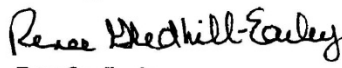
The remaining site for the HQ/VCS location (the 2.7-acre parcel at 119 St. Mary's Church Road, Morganton, Burke County) is adjacent to Quaker Meadows, which was listed on the National Register of Historic Places in 1973. Should this site be selected, we need to review site plans and architectural drawings for construction of the HQ/VCS to ensure that it will not have an adverse effect on the neighboring National Register-listed property.

Once a site is selected and plans are further developed, please forward this information to us so that we may complete our review.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comments, please contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579. In all future communication concerning this project, please cite the above-referenced tracking number.

Sincerely,


for Peter Sandbeck

[Response from Eastern Band of the Cherokee Nation: No response received as of September 2, 2010]

[This page was intentionally left blank.]

APPENDIX B: VALUE ANALYSIS

[This page intentionally left blank]

National Park Service

National Park Service
U.S. Department of the Interior



Value Analysis Study

May 5, 2010

Overmountain Victory National Historic Trail

Blacksburg, SC



Headquarters / Visitor Contact Station Feasibility Study

Value Analysis Final Report

July 7, 2010



Prepared by:
Kirk Associates, LLC
3007 North 156 Drive
Goodyear, AZ 85395
Phone: 248.240.9605
www.kirkvalueplanners.com

Value Analysis Study
Headquarters / Visitor Contact Station Feasibility Study

Overmountain Victory National Historic Trail
Blacksburg, SC

TABLE OF CONTENTS

FORWARD

SECTION A: EXECUTIVE SUMMARY	Page
• Summary Description of Project	2
• Project Budget / Schedule	4
• Value Analysis Objectives	4
• Alternatives Considered	4
• Preferred Alternative	9
 SECTION B: VALUE ANALYSIS STUDY	
• Phase I Information and Function Analysis	12
○ Study Specifics	12
○ Stakeholders, Primary Interests and Concerns	16
○ Function Logic Diagram	16
○ Cost Model and Economic Criteria	18
○ Force Field Analysis (per original alternatives)	18
• Phase II Creativity	20
• Phase III Evaluation (Part 1 - Evaluation Factors & Definitions)	21
• Phase III Evaluation (Part 2 – Choosing by Advantages)	21
• Phase IV Development	31
• Part V Recommendations (90% & 75% Proposals)	31
• Part VI Implementation	32
• VA Team	32
 SECTION C: APPENDIX	
• Value Analysis Process	35
• Workshop Agenda	38
• Cost Estimates (CBA Alternatives)	40
• Reference Documents	46

**Value Analysis Study
Headquarters / Visitor Contact Station Feasibility Study**

Overmountain Victory National Historic Trail
Blacksburg, SC

FORWARD

This report includes recommendations to the Headquarters / Visitor Contact Station Feasibility Study at Overmountain Victory National Historic Trail (OVVI). They stem from a value analysis (VA) workshop initiated by OVVI and held on May 5, 2010 at the King's Mountain Headquarters in Blacksburg, SC.

Coordination of this VA was done by Steven Wright at the NPS Southeast Regional Office and Jill Cavanaugh from The Louis Berger Group, Inc. Stephen Garrett, a certified value specialist & Principal / Chief Operating Officer of Kirk Associates, led the team's deliberations during the workshop.

Value Analysis Study
Headquarters / Visitor Contact Station Feasibility Study

Overmountain Victory National Historic Trail
Blacksburg, SC

SECTION A: EXECUTIVE SUMMARY

"He has the right to criticize who has the heart to help," A. Lincoln



Summary Description of Project:

The National Park Service (NPS) proposes to establish a new Headquarters (HQ) and Visitor's Contact Station (VCS) for the Overmountain Victory National Historic Trail (Overmountain or Trail), a 330-mile long non-motorized route for public use that traverses portions of Virginia (VA), Tennessee (TN), North Carolina (NC), and South Carolina (SC).

The Feasibility Study and Environmental Assessment (FS/EA) presents a range of action alternatives and assesses the impacts that could result from establishing a new HQ/VC at one of four different sites. One option common to all the alternatives is to rent or lease space from an existing facility while the other alternatives would require the construction and of a new facility. The EA also analyzes the baseline, or no action alternative, which is the continued use and operation of the current HQ at King's Mountain National Park, located in Blacksburg, SC.

OBJECTIVES

Objectives are "what must be achieved to a large degree for the action to be considered a success" (NPS Director's Order 12) and represent more specific statements of purpose and need. All alternatives selected for detailed analysis must meet all objectives to a large degree and must resolve the purpose of and need for action. The following objectives were identified by the planning team for this project:

- Acquire space that will accommodate the growing Overmountain administrative functions and staff.
- Consolidate staff, storage, administrative functions, and maintenance operations in a HQ/VC on one site ensuring efficient park management and operations, visitor use, and maintenance.
- Maximize efficiency for park operations and management by siting the new facility at a location that reduces travel distance for Park staff from the HQ location to the other parts of the entire route.
- The selected location should have easy access to major transportation routes or hubs, and allow for better response to on-site needs than is currently available.
- The site should provide a convenient venue for trail wide consultations and meetings.
- The site should facilitate the development of interpretive displays and the presentation of educational and interpretive programs and special events.
- Ensure that the selected site can accommodate the HQ/VC in a manner that avoids or minimizes adverse impacts to environmental and cultural resources.

PROJECT BACKGROUND

Overmountain Victory National Historic Trail was congressionally authorized in September 1980 to commemorate and preserve the Primary Historic Route used by Patriot militia to the Battle of Kings Mountain in 1780. The legislated purpose of Overmountain is to establish on, or as closely as possible, a trail from Abingdon, VA and Elkin, NC, which link at Morganton, NC and terminate at Kings Mountain National Military Park, SC.

At its inception the Trail stretched approximately 220 miles from Abingdon, Virginia, through East Tennessee, through North and South Carolina, to Kings Mountain National

Military Park with a 70 mile branch extending from Morganton, NC to Elkin, NC (NPS 2009a). In 1982, the Trail had expanded to 310 miles including approximately 10 miles of federally owned land divided into 1 to 3 mile sections. These segments run through the Cherokee National Forest in Tennessee, the Pisgah National Forest in North Carolina, Cowpens National Battlefield and Kings Mountain National Military Park in South Carolina, Blue Ridge Parkway and W. Kerr Scott Reservoir in North Carolina (NPS 1982). In 1982 approximately 97 percent of the Trail was on non-federally owned land including variety of land types such as urban and rural lands, forests, roads, and highways. Approximately 60 percent of the Trail followed modern roads with no unpaved segments longer than a full day's walk (NPS 1982).

Since its creation, the route has grown to 330 miles and includes a non-motorized pathway, as well as a marked Commemorative Motor Route, that utilizes existing state roadways. The Trail also included affiliated historic sites, museums, and wayside exhibits to enhance visitors' interpretive and educational experience. These additions have been acquired through one of two ways: (1) expansion on federally owned land or (2) added to the Trail through a written cooperative agreement with landowners, private organizations, and individuals to either provide public right-of-ways or acquire the land (NPS 1982).

Along the way, the Trail passes through several local, state and federally owned lands including four NPS areas, two National Forests, an Army Corps of Engineers Dam and Reservoir, and several state and county parks. The Trail's route affords visitors unique opportunities to experience and learn about natural heritage and history of this historic region of the United States (NPS 2009b).

Of the portion of non-motorized pathway, 67 miles are available for visitation. Under the provisions of the authorizing legislation, as well as the provisions of the National Trails System Act and its Amendments, the mission of the Overmountain is to preserve related resources and interpret the story of the 1780 Kings Mountain campaign through a variety of partnerships, with the NPS serving as the administering agency for the federal government. Currently, over 100 different partner groups and organizations are involved in the ongoing effort to expand the non-motorized route for public use.

PROJECT HISTORY

As a result of the public scoping process conducted during the fall of 2009, 18 site proposals / alternatives were submitted to the National Park Service by various public and private entities. During the week of February 1, 2010, a Choosing by Advantages (CBA) / Value Analysis panel convened for two days at the National Park Service, Southeast Regional Office, in Atlanta, Georgia. The purpose of this meeting was to evaluate the 18 proposals and to recommend four alternatives that will be evaluated in further detail for a proposed OVHNT Headquarters / Visitor Contact Station. On February 4, 2009 the National Park Service evaluated the 18 sites and identified 4 sites evaluated in this CBA.

PROJECT LOCATION

Figure 1.2 depicts the location of the Trail and the four proposed sites. The study area, or area of analysis, for each topic addressed in this EA varies by site location, resource, and anticipated impacts.

Project Budget / Schedule

A net construction budget has not been established since this project is in the feasibility stage. Class C estimates for the original four alternatives were developed before the workshop by the study team of The Louis Berger Group, Inc.

Some of the key schedule dates for the project schedule are as follow:

- Submit Draft VA Report June, 2010
- Receive VA Comments June, 2010 (may change)
- Submit Final VA Report June, 2010 (may change)
- DAB or Region Presentation To Be Determined

Value Analysis Objectives

The VA workshop focused on the following:

1. Develop "Preferred" alternative for the Headquarters / Visitor Contact Station Feasibility Study by using Choosing By Advantages (CBA);
2. Establish budget estimates for the various site alternatives; and
3. Identify opportunities to improve value for the project.

Alternatives Considered

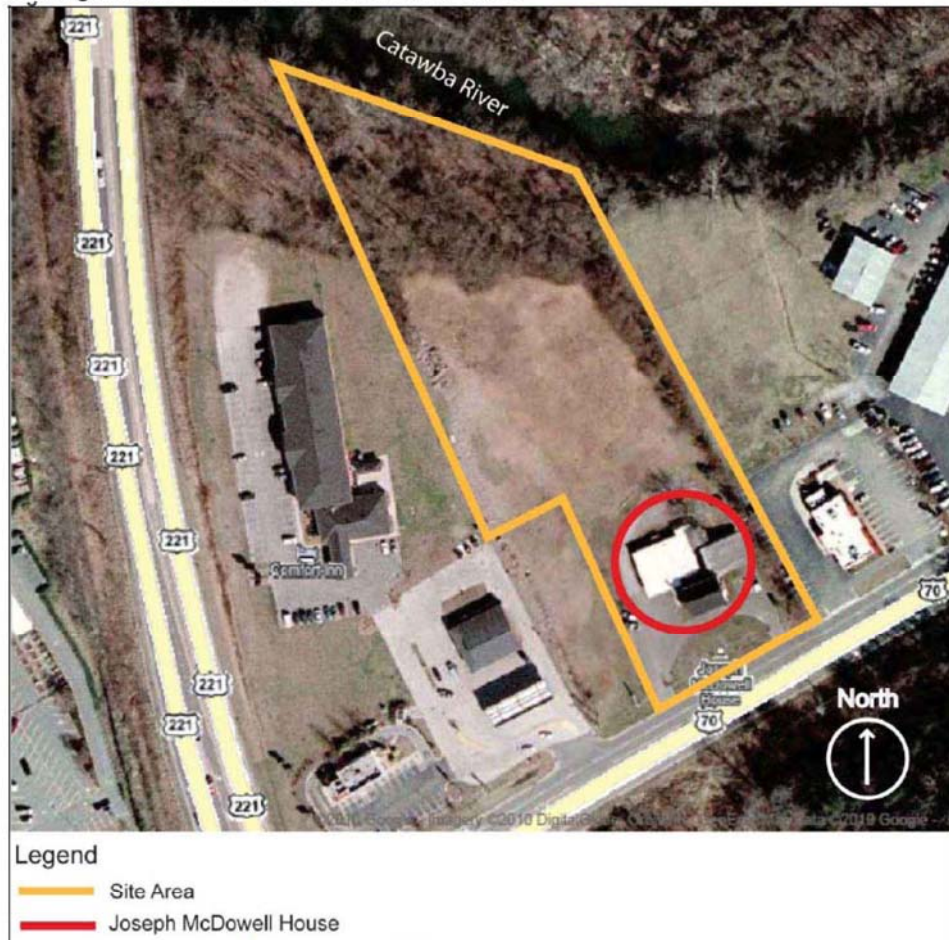
The VA team reviewed the four original sites for the project. These 4 were the result of a previous CBA effort used to reduce 18 potential sites to the 4 most viable alternatives (see reference documents in Section C) that were reviewed thoroughly and evaluated in the VA workshop. Ultimately, the 4 alternatives were evaluated in the Choosing by Advantages (CBA) completed in the May 5, 2010 VA workshop. During the reconsideration phase no additional alternatives were developed to maximize the advantages of all the alternatives.

Alternatives evaluated in CBA:

Alternative:	Description:	Status:	Initial Costs:	Life Cycle Costs:
Alternative 0	No Action	Dismissed from further consideration because it did not meet the purpose and need of the project		
Alternative 1	Joseph McDowell House Marion, NC	Evaluated in CBA	\$4,182,400	\$4,528,900
Alternative 2	Quaker Meadows Site Morganton, NC	Evaluated in CBA	\$4,469,700	\$4,703,500
Alternative 3	Catawba Meadows Park Site Morganton, NC	Evaluated in CBA	\$3,911,700	\$4,013,500
Alternative 4	Rock Ford Access Site Morganton, NC	Evaluated in CBA	\$3,972,300	\$4,229,400

A more detailed summary of the alternatives considered in CBA 1 is as follows:

- Alternative 0: No Action: DISMISSED
This alternative does not meet the basic purpose and needs of project. This would mean continued use and operation of the current HQ at King's Mountain National Park, located in Blacksburg, SC. This would not meet the basic function or complete any goals established for this project.
- Alternative 1: Joseph McDowell House - Marion, NC: In CBA
The Joseph McDowell House sits on a 4.09-acre site located along the Catawba River and U.S. Highway 70 West approximately 0.1 miles from the intersection with Highway 221 in Marion, NC. The site is also located on the Commemorative Driving Route for the Overmountain Trail.



Source: <http://maps.google.com/maps>, 2010

The Joseph McDowell House is currently owned and operated by McDowell County through an interlocal agreement between McDowell County Tourism Authority, the City of Marion, NC, and McDowell County, NC. At present, the house is under short term lease to a local business and a local nonprofit organization that uses the addition at the rear of the house (site visit, May 4,

2010). There are plans for extensive renovations seeking to return the house to its original conditions (McDowell County Tourism Development Authority 2009). The property is also the planned location for the trailhead of a greenway trail along the river, at the rear of the property, and there are plans to provide some parking for use by trail users. The trail is planned to run from this property, along the river, and connect to the historic Carson House and the Little Round Hill Cemetery, where McDowell family members are buried (McDowell Trails Association 2007).

- **Alternative 2: Quaker Meadows Site - Morganton, NC: In CBA**
This is a vacant, 2.75-acre parcel adjacent to the historic Quaker Meadows House owned by Crescent Resources, Inc., on which the NPS would construct a new 5,000 sf HQ/VCS and parking. The site includes a building pad and remnants of a parking area from a previous dairy distribution operation.



Source: National Agricultural Imagery Program, 2009, and Morganton, NC GIS.

The Quaker Meadows McDowell House is a historic structure listed on the National Register of Historic Places, adjacent to the vacant property a few hundred yards from the intersection on St. Marys Church Road with NC Highway 181 in Morganton, Burke County, NC. The structure was built in 1812 after the

Overmountain Victory campaign, but was owned by a family prominent in that campaign. The Quaker Meadows McDowell House on the property to the north is a certified location on the Overmountain Victory National Historic Trail, and is currently owned and operated by the Historic Burke Foundation, Inc. The house is open to the public on Sunday afternoons from 2:00 pm to 4:00 pm from April to November (HBF Inc. Website 2010).

- **Alternative 3: Catawba Meadows Park Site - Morganton, NC: In CBA**
The proposed site in Catawba Meadows Park is an approximately 4-acre site located adjacent to the main entrance of the park and offers good visitor access and visibility (Morganton 2009). There is an existing softball field [the aerial is out of date] on the site offered by the County. That area is shown on the park's facilities map as a general use field, with rental cabins and cabin facilities around the edges of that site (Catawba Meadows Park 2008). During the visit, workmen were constructing a zip line course where the cabin facilities are shown on the map. The acreage available to NPS would be provided by the City of Morganton at no cost.



Source: National Agricultural Imagery Program, 2009, and Morganton, NC GIS.

Catawba Meadows Park is located in Morganton, NC along the banks of the Catawba River. At 200+ acres, the park is the largest municipal park in western NC, offering abundant recreational and historic heritage opportunities for visitors. The Catawba River Greenway trail runs through the park along the Catawba River. The Greenway offers an extensive bike and pedestrian path network with nearly four miles of paved, accessible trails, 2.5 miles of which is a certified segment of the non-motorized Overmountain Trail. (City of Morganton government website 2010). US 64, which is adjacent to the park, is part of the Overmountain Commemorative Motor Route.

Alternative 4: Rock Ford Access Site - Morganton, NC: In CBA

The Rocky Ford Access is a 6- acre site on a bluff above the banks of the Catawba River in Morganton, NC along US 64/NC18 that would be provided by the City of Morgantown at no cost. The site is also adjacent to the Catawba River Greenway, as established Overmountain non-motorized trail segment, and the Commemorative Motor Route.



Source: National Agricultural Imagery Program, 2009, and Morganton, NC GIS.

Owned by the City of Morganton, NC, the site is currently undeveloped and heavily vegetated with kudzu and some mixed hardwoods. There is a roughly-graded gravel parking area to serve the trailhead of the Greenway. There is relatively steep topography on the site in the area offered for development. Also in this area is a drainage channel running from the road toward the river, and possibly a second channel under the kudzu. The bluff is about 20 feet above the river, and the site drops approximately 30 feet in elevation from the road to the top of the bluff at the greenway trail.

The City has suggested that the site can be developed in various ways, either jointly, with other compatible uses, or as an independent NPS facility, and that the area south of the entrance drive, between the greenway and the road is best for siting the facility. The City has also suggested that common grounds maintenance is possible given the site's close proximity to other City facilities such as Catawba Meadows Park, located approximately one-half mile away (Morganton 2009).

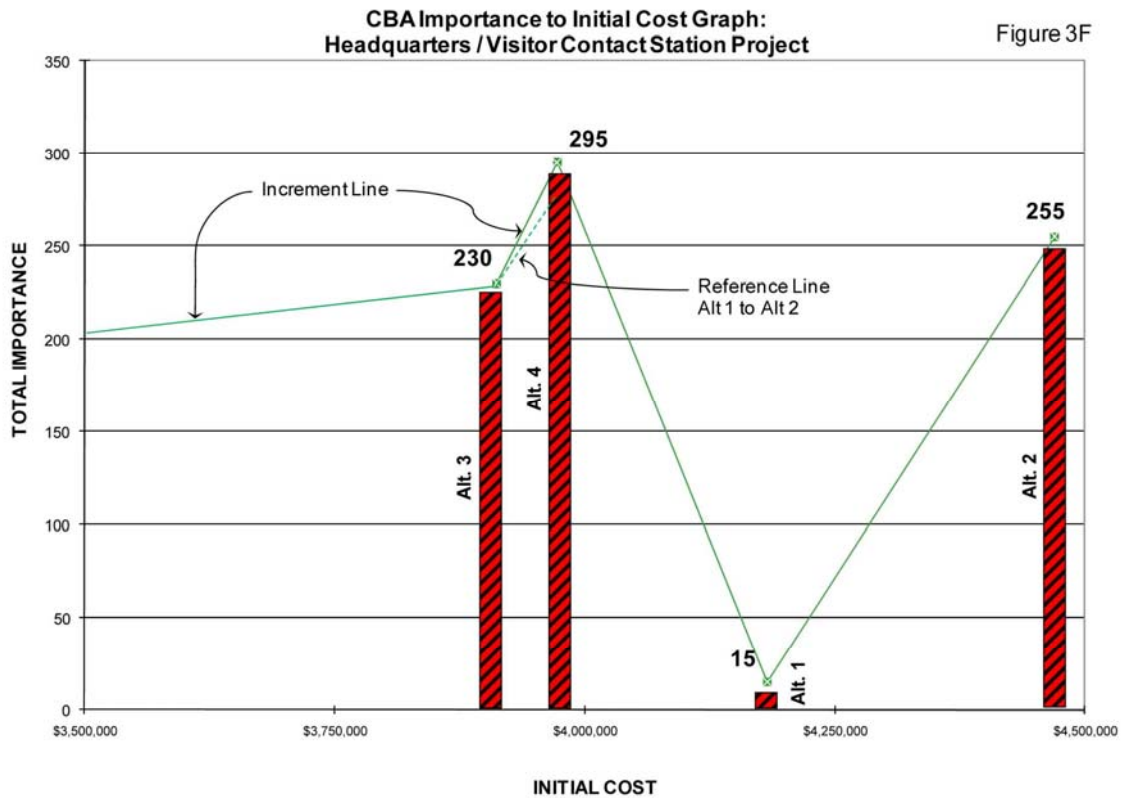
Preferred Alternative (via Choosing By Advantages - CBA)

In determining a preferred alternative, the VA team identifies the alternative that offers the highest total importance of advantages at the lowest cost (both initial and life cycle). This is reflected in the greatest slope of the increment or reference lines produced in the CBA graphs. These slopes are reflected using increment lines (slope between two adjacent alternatives) and reference lines (slope between two non-adjacent alternatives). The resulting graphs compare the total importance of advantages to cost which identifies the preferred alternative. Life Cycle Costs includes initial costs of construction, repair and replacement costs for the 50 year useful life, and any annual operating or maintenance costs. Here is the total importance summary for CBA:

	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
	Joseph McDowell House Marion, NC		Quaker Meadows Site Morganton, NC		Catawba Meadows Park Site Morganton, NC		Rock Ford Access Site Morganton, NC	
Total Importance of Advantages		15		255		230		295
Initial Cost	\$4,182,400		\$4,469,700		\$3,911,700		\$3,972,300	
Life Cycle Cost	\$4,528,900		\$4,703,500		\$4,013,500		\$4,229,400	

The 4 CBA alternatives were evaluated to determine the alternative with the highest total importance of advantages. After a preferred alternative is developed, a reconsideration phase is also considered to possibly combine all the advantages into a single alternative. In this study, Alternative 4 "Rock Ford Access Site" was identified as the preferred alternative.

The following chart reflects the result of the CBA analysis.



In this workshop, Alternative 4 “Rock Ford Access Site” was identified as having the highest total importance to cost slope, for both initial and life cycle costs. This alternative was selected as it offered the following advantages:

- Best at creating visitor experience when considering the ability to create park like setting (including view shed), effectiveness of interpretive talk area, and parking constraints;
- Best at directing the public to certified sites, adjacent commemorative motor route and non-motorized trail;
- Better at reducing staff response time when evaluating the approximate distance to center point of trail (Historic Route); and
- Best at creating cost effective development when considering the site options, site size, fee or free site, and offer for grounds maintenance.

Finally, this VA concentrated on the basic selection of the preferred alternative. Further design development, including the development of the Headquarters / Visitor Contact Station and site constraints are among many items anticipated to be further refined.

Value Analysis Study
Headquarters / Visitor Contact Station Feasibility Study

Overmountain Victory National Historic Trail
Blacksburg, SC

SECTION B: VALUE ANALYSIS STUDY



Phase I Information and Function Analysis

Study Specifics

The study team was composed of a mix of professional disciplines and varied design, operations, design and engineering. Members of the park staff and The Louis Berger Group, Inc. grounded the team with knowledge of the site and its operation. The VA team members consisted of:

PARTICIPANTS:	
Name/ Title:	Job Function:
Overmountain Victory National Historic Trail (OVNI)	
Paul Carson	Superintendent
NPS Southeast Regional Office	
Steven Wright	Project Manager
Overmountain Victory Trail Association, Inc.	
Alan Bowen	OTVA President
The Louis Berger Group, Inc.	
Jill Cavanaugh	Project Manager
Julie Eitner	Environmental Planner
Lee Tippet	Cultural Resource Specialist
Kirk Associates, LLC	
Steve Garrett	Workshop Facilitator & Life Cycle Costing

PURPOSE OF AND NEED FOR ACTION

The purpose of this action is to provide a HQ/VC facility to accommodate the functions associated with the expanding regional presence of Overmountain Victory National Historic Trail (Overmountain) including centralized space for staff offices, meetings, storage, support, and educational and interpretive exhibits, and special events.

In recent years, Overmountain has dramatically increased its visibility and regional importance. The NPS has collaborated with more than 100 various partner groups and organizations to expand the Trail into nearly 74 miles of marked trail sections available for public use, an increase of 58 miles since 2002. Currently, more than one million people use marked trail sections annually. As a result of this increased regional presence and involvement, as well as growing public support for the trail and its history, additional NPS presence is needed to accomplish operational and administrative tasks and assist partners with various projects and initiatives. However, expanded and regional NPS presence is currently inhibited by the lack of a dedicated and centrally located Overmountain facility. The current HQ inhabits loaned office space at King's Mountain National Park and the existing NPS staff presence is limited to the Superintendent, who is the only federal employee assigned to Overmountain.

The expansion of the Trail itself and the increase in partner relationships necessitates additional staff; however, space is limited at King's Mountain. This facility is located at the southern end of the route, and depending on road and weather conditions, travel time to other sections of the Trail can take up to five hours. By reducing travel time, the NPS could provide a quicker response to on-site needs along the entire route, maximizing the actual time available to perform tasks and duties. A reduction in travel time would also result in lower costs associated with vehicle maintenance and fuel.

The lack of dedicated and adequate space has resulted in the scattered storage of required supplies (such as signs and equipment) and relevant materials (such as official publications, maps, and files) at various partner facilities in multiple locations along its 330-mile length. This lack of centralized storage makes it difficult to inventory and access these materials, creating inefficiencies for park management and operations.

The EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and implementing regulations, 40 CFR 1500-1508, and NPS Director's Order 12 and Handbook, Conservation Planning, Environmental Impact Analysis, and Decision-making (NPS 2001).

PURPOSE AND SIGNIFICANCE OF THE OVERMOUNTAIN VICTORY NATIONAL HISTORIC TRAIL

Establishment. In 1978, Congress amended the National Trails System Act of October 2, 1968 (16 U.S.C. 1241. Seq.), giving the Department of the Interior the opportunity to include the Overmountain Victory Trail as a national scenic or historic trail in the National Trails System. The National Park Service determined that the Overmountain Victory Trail qualified as a national historic trail, but not as a national scenic trail. On September 8, 1980, Congress passed an Act to Improve the Administration of the Historic Sites, Buildings, and Antiquities Act of 1935 (94 Stat. 113) and to amend Section 5(a) of the National Trails System Act, solidifying the establishment of the Overmountain Victory Trail as a national historic trail (NPS 1982).

As per the National Trails System Act, the Trail was created by a detailed identification study of the historic route. The study team relied on the 1881 historic accounts of the historian Lyman C Draper in Kings Mountain and its Heroes as well as the input from other local historians and descendants of battle participants. In 1982, a Comprehensive Management Plan was written for the Trail that proposed a commemorative and interpretive effort to enhance public appreciation of the significance of the Overmountain victory march. This plan included the development of certain federal lands that cross the historic route and marking of the commemorative motor route (NPS 1982).

Purpose. The purpose of the Overmountain Victory Trail as a national historic trail is "the identification and protection of the historic route and its historic remnants and artifacts for public use and enjoyment" (Section 3(c), National Trails System Act) (NPS 1982).

Significance. Park significance statements capture the essence of a park's importance to the nation's natural and cultural heritage. Understanding park significance helps managers make decisions that preserve the resources and values necessary to the park's purpose.

The areas encompassed by the Overmountain Victory Trail commemorate the route used by upcountry patriots in their march to Kings Mountain, South Carolina, where they would eventually defeat Loyalist forces on October 7, 1780, marking a turning point in the Revolutionary war. This march took place over the course of 14 days. However, the events leading up to the march and battle were more extensive and are listed in Table 1.1. The Trail is an important symbol of American heritage representing American solidarity and the fight for independence from England. In addition, the Trail provides interpretive opportunities for visitors to learn about American history.

1780	Event
September 12	Skirmish at Bedford Hill in North Carolina between troops under Col. Charles McDowell and British Major Patrick Ferguson inspires the Overmountain expedition.
September 24	Various Overmountain troops from Nolichucky, Holston, and Watauga settlements muster and camp near the South Fork of the Holston River and at Rocky Mount.
September 25	Overmountain men under Colonels William Campbell, Isaac Shelby, John Sevier, and Charles McDowell rendezvous and overnight at Sycamore Shoals on the Watauga River
September 26	Overmountain troops camp at Shelving Rock near Roan and yellow Mountains
September 27	Overmountain men reach Roaring Creek campsite. Troops under patriot Colonels Benjamin Cleveland and Joseph Winston proceed southward along Yadkin River to meet with initial Overmountain force from over the Blue Ridge Mountains.
September 28	Overmountain troops reach Grassy creek campsite on the North Toe River.
September 29	Overmountain troops split at Gillespie Gap in Blue Ridge Mountains. Troops under Col. William Campbell proceed to Turkey Cove; remainder continued to North cove. Troops under Colonels Cleveland and Winston reach Fort Crider.
September 30	Overmountain men rendezvous with Winston and Cleveland's troops at Quaker Meadows on the Catawba River.
October 1-2	Overmountain men reach head of cane Creek and stay two nights due to hard driving rain. Col. Campbell of Virginia is elected chief commander.
October 3	Overmountain men camp near Andrews place on Cane Creek.
October 4	Overmountain troops reach mouth of Can Creek and learn that British colonel Patrick Ferguson has retreated from nearby Gilbert Town.
October 5	Overmountain troops reach Alexander's Ford of Green River. Col. Edward Lacey of South Carolina meets them and provides intelligence on Ferguson's whereabouts. A number of weary men left behind at Green River. Of the 1400 troops reaching Alexander's Ford, about 700 of the best-armed and best-mounted pushed on in search of Ferguson.
October 6	Overmountain troops rendezvous with South Carolina militia forces under Colonels Hill, Lacey, Williams, and Graham at Cowpens in South Carolina. Nine hundred horsemen and a squad of footmen selected to continue pursuit of Ferguson.
October 7	Battle of Kings Mountain.

The team reviewed the design alternatives, considered cost estimates, and prepared a "function logic diagram" as a part of the workshop. Certain value analysis analytical tools and methods were used during the 1 day workshop to focus the VA team on the issues, problems and opportunities presented by the proposed project. The VA agenda, in conformance with the standards of NPS and SAVE International, can be found in **Section C** of this report.

The VA workshop focused on the following:

1. Develop "Preferred" alternative for the Headquarters / Visitor Contact Station Feasibility Study by using Choosing By Advantages (CBA);
2. Establish budget estimates for the various site alternatives; and
3. Identify opportunities to improve value for the project.

Alternatives Presentation

The Louis Berger Group, Inc. team provided the Conceptual Site Alternatives along with a presentation that helped explain the project and its objectives. The following documents were provided to the VA team:

- From The Louis Berger Group Team:
 - Conceptual Sites presentation; and
 - Class C Cost Estimates for the 4 CBA alternatives.
- National Park Service provided:
 - Operational knowledge of the OVVI;
 - Operational Costs; and
 - Project Description.
- Kirk Associates provided:
 - Value Models used in the VA Study.

Stakeholders, Primary Interests and Concerns

The following table reflects the projects primary stakeholders, their interest and the concerns reflected over the Headquarters / Visitor Contact Station Feasibility Study Project.

Stakeholders	Primary Interest
<ul style="list-style-type: none"> Federal Government <ul style="list-style-type: none"> NPS - DSC 	<ul style="list-style-type: none"> Resource Preservation Improvement in Visitor Services Maintenance efficiency Mission of NPS / OVVI Public & employee safety Work efficiency Sustainability (LEED) Energy savings Employee Attraction / Retention
<ul style="list-style-type: none"> State Government <ul style="list-style-type: none"> State officials State Historic Preservation Office Department of Natural Resources 	<ul style="list-style-type: none"> Natural & Cultural Resources Education Research Protection of Resources Building Codes Water quality
<ul style="list-style-type: none"> Local Governments <ul style="list-style-type: none"> Police Fire EMS Operations 	<ul style="list-style-type: none"> Protection of Resources Emergency Response Total availability to all public programs Safety Building Codes
<ul style="list-style-type: none"> Design Team 	<ul style="list-style-type: none"> All of the above

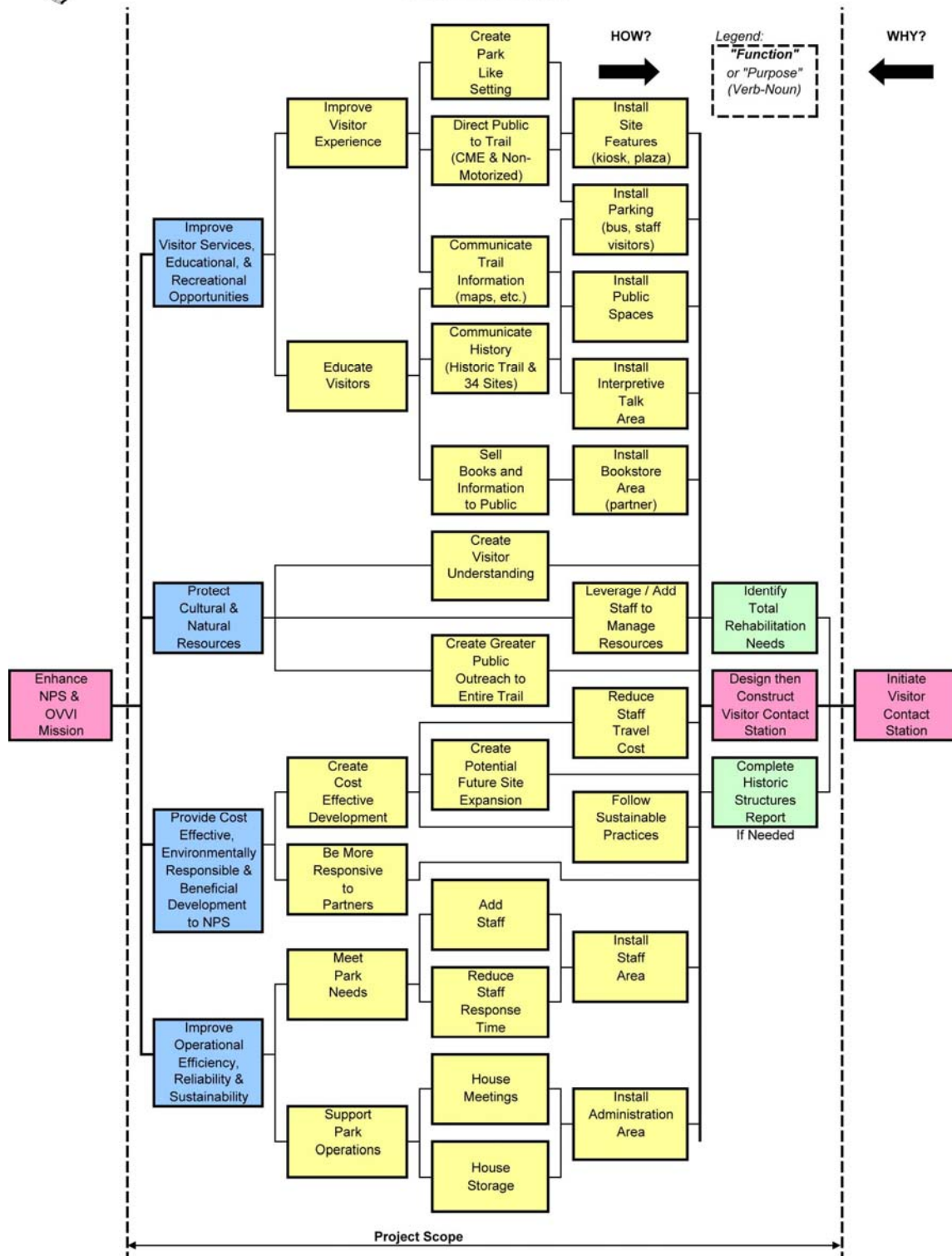
Function Logic Diagram

Function analysis is core to any value study. For this project, the VA team prepared a function logic diagram to help understand the overall purpose of the project. This diagram describes the essential functions of the project that will “enhance The Overmountain Victory National Historic Trail mission.” The function-logic diagram (**Figure 1**) can be found on the following page.



Feasibility Study Overmountain Victory National Historic Trail Function Logic Diagram

Figure 1



Cost Model

To better understand the total construction costs for the project, Kirk Associates prepared the following cost matrix (figure 2) that compares all the Class C summary costs prepared for the CBA alternatives. The cost factors were provided by the NPS. The full Class C estimates for the 4 CBA alternatives can be referenced in Section C of the report. Figure 2A shows the economic criteria used in developing the Life Cycle Costing for the CBA's.

Comparison Cost Matrix of CBA Alternatives:

Figure 2

		Alt. 1	Alt. 2	Preferred Alternative	
				Alt. 3	Alt. 4
Subtotal Direct Construction Costs		1,474,625	1,699,012	1,486,930	1,509,930
Published Location Factor	-7%	-103,224	-118,931	-104,085	-105,695
Remoteness Factor	12%	176,955	203,881	178,432	181,192
Federal Wage Rate Factor	6%	35,391	40,776	35,686	36,238
Design Contingency	30%	442,388	509,704	446,079	452,979
Total Direct Construction Costs		2,026,135	2,334,442	2,043,042	2,074,644
Standard General Conditions	18%	364,704	420,200	367,748	373,436
Government General Conditions & Bond	10%	202,613	233,444	204,304	207,464
Historic Preservation Factor	10%	202,613	0	0	0
Historic Preservation Factor	0%	0	0	0	0
Subtotal NET Construction Cost		2,796,066	2,988,086	2,615,094	2,655,544
Overhead	15%	419,410	448,213	392,264	398,332
Profit	10%	279,607	298,809	261,509	265,554
Estimated NET Construction Cost		3,495,082	3,735,108	3,268,867	3,319,430
Contracting Method Adjustment (Sole Source)	15%	524,262	560,266	490,330	497,915
Inflation Escalation (14 Months @ 4%)	5%	163,104	174,305	152,547	154,907
Total Estimated NET Cost of Construction		4,182,400	4,469,700	3,911,700	3,972,300

Economic Criteria:

Figure 2A

All of the economic criteria associated with the project have been summarized in the following table for reference.

Discount Rate:	4%	per NPS
Life Cycle:	50 Years	Per NPS
Escalation Rates:		
Maintenance	1.0% per year	per NPS
Electricity	1.0% per year	per NPS

Force Field Analysis (per original alternatives)

In generating ideas for improvement, the VA team used this tool to identify "best" and "areas of concern" features for each original five CBA alternatives. The best features were identified so the VA team would retain these characteristics in developing additional alternatives. The areas of concern were identified so they could be improved during the creativity sessions. The result of this analysis is shown on the following matrix:

Force Field Analysis

Joseph McDowell House

Best Features:

- Adjacent land is available for future expansion
- Certified site
- Connection to The Cuitaba Greenway
- Highway 221 is part of Commemorative Motor Route (CMR)
- Artifact rich site (partial archeological survey completed)
- Historically significant structure
- Public utilities available
- Room for future expansion
- No soil problems
- No significant presence of threatened or endangered species

Features of Concern:

- Aesthetics from existing structure
- Farthest from site
- Parts of this site are located within the 100 year flood plain (deal breaker)
- Artifact areas could restrict potentially for development
- Part of site may be considered wetlands
- Site has some dramatic topography in back
- May need hazardous waste removal when rehab is done on structure

Quaker Meadows Site

Best Features:

- Certified site
- Public utilities available
- Cleared undeveloped site
- Site is relatively flat
- Adjacent to certified site
- Adjacent to historically significant structure
- Room for future expansion
- Not in 100 year flood plain
- No soil problems
- No significant presence of threatened or endangered species

Features of Concern:

- Potential underground natural gas pipeline
- Access will need to not disturb the historic access road
- Archeological significance of site is unknown
- Previous use of front structure
- No archeological survey conducted

Catawba Meadows Park

Best Features:

- Visually prominent from main road
- Adjacent to Commemorative Motor Route
- No significant presence of threatened or endangered species
- Site has been disturbed
- Public utilities available
- Cleared undeveloped site
- Site is relatively flat
- City may provide common grounds maintenance

Features of Concern:

- Many recreational activities adjacent to site

Rocky Ford Access Site

Best Features:

- Visually prominent from main road
- Adjacent to Commemorative Motor Route and non motorized trail
- No significant presence of threatened or endangered species
- Site has been disturbed
- Believe all public utilities available (sewer not sure)
- City may provide common grounds maintenance
- No significant presence of threatened or endangered species

Features of Concern:

- Many recreational activities adjacent to site
- Steep topography at part of the site
- Major storm sewer line may run through site
- Parts of site are heavily vegetated
- Site access may require changes to accommodate bus loops
- Site access is more steep than typical

Phase II Creativity (Creative Idea Listing)

Creative Ideas

The creative session of the workshop usually focuses on developing ideas or alternatives during the VA Workshop. In this case, the VA team did have discussions regarding the Quaker Meadows House and its possible adaptive reuse for the purposes of this facility while conducting the site visits. In addition to this new alternative, 18 alternatives were considered and discussed over the course of the last year. There will be a follow up VA session once funding for the project is secured. In that session additional ideas will be generated during the "brainstorming" portion of the VA workshop.

Phase III Evaluation (Part 1 - Evaluation Factors & Definitions)

As the first task of the evaluation phase the team developed and discussed the factors which would be used to evaluate the CBA alternatives. The study team then defined variables and sub factors to tailor the evaluation factors to the needs of this project. The following is a table of the evaluation factors and definitions used.

Factors for CBA 1:

NPS OBJECTIVE: Provide for Visitor Enjoyment	
Factor 1: Improve visitor services, educational and recreational opportunities	
Sub-factor	Criterion:
Improve Visitor Experience	<ul style="list-style-type: none">• Ability to Create Park Like Setting (including view shed);• Effectiveness of Interpretive Talk Area;• Parking Constraints
Direct Public to Trail	<ul style="list-style-type: none">• Certified Site;• Access to Commemorative Motor Route (CMR);• Access to Non-Motorized Trail (NHT)
Supplement Visitor Education / Communicate History	<ul style="list-style-type: none">• Proximity to Historic Structures / Interpretive Opportunities
NPS OBJECTIVE: Provide Beneficial Development for the NPS	
Factor 2: Provide Cost-Effective, Environmental Responsible, and Otherwise Beneficial Development for the NPS	
Sub-factor	Criterion:
Create Expandable Cost Effective Development	<ul style="list-style-type: none">• Site Options;• Site Size;• Fee or Free Site;• Offer for Grounds Maintenance
NPS OBJECTIVE: Improve efficiency of park operations	
Factor 3: Improve operational efficiency and sustainability	
Sub-factor	Criterion:
Reduce Staff Response Time	<ul style="list-style-type: none">• Approximate Distance to Center Point of Trail (Historic Route)
SPECIAL FACTOR: COST	
Sub-factor	Definition/Variables
INITIAL COST (Short-term)	<ul style="list-style-type: none">• Capital Costs
LIFE CYCLE COST (Long-term)	<ul style="list-style-type: none">• Operating & Maintenance Costs• Equipment Replacement• Material Supplies• Operational Costs• Staffing Costs

Phase III Evaluation (Part 2 – Choosing by Advantages)

The selected alternatives were evaluated using a process within the Value Analysis Workshop called Choosing by Advantages, where decisions are based on the importance of advantages between alternatives. The evaluation involves the identification of the attributes or characteristics of each alternative relative to the evaluation criteria, a determination of the advantages for each alternative within each evaluation factor, and the weighing of the importance of each advantage.

The highest importance advantage is identified in each factor. The paramount advantage, across factors, was determined and assigned a weight determined by the team. Remaining advantages were rated on the same scale. Construction and life cycle costs were developed for each alternative. Recommendations are based on a balance of cost and importance. The evaluation sheets form the basis for presenting the developed alternatives and design sketches and cost estimates are attached. The evaluation tables present many types of information. Attributes of an alternative are shown above the dotted line in the tables. Advantages between alternatives are shown below the dotted line. An anchor statement summarizes those advantages. The advantage with the highest importance within a factor is indicated by a highlight around the advantage cell. The advantages are all rated on a common scale.

The VA team reviewed the four original concept sites for the project. These 4 were reviewed thoroughly and evaluated in the Choosing by Advantages (CBA). Following is the summary of the alternatives developed:

Alternative:	Description:	Status:	Initial Costs:	Life Cycle Costs:
Alternative 0	No Action	Dismissed from further consideration because it did not meet the purpose and need of the project		
Alternative 1	Joseph McDowell House Marion, NC	Evaluated in CBA	\$4,182,400	\$4,528,900
Alternative 2	Quaker Meadows Site Morganton, NC	Evaluated in CBA	\$4,469,700	\$4,703,500
Alternative 3	Catawba Meadows Park Site Morganton, NC	Evaluated in CBA	\$3,911,700	\$4,013,500
Alternative 4	Rock Ford Access Site Morganton, NC	Evaluated in CBA	\$3,972,300	\$4,229,400

On purely a total importance basis Alternative 4 provides the greatest total importance of advantages to the NPS. Initial Class C cost estimates for the alternatives were developed by The Louis Berger Group, Inc. Results were graphed with total importance on the vertical scale and initial or life cycle cost on the horizontal scale. The most positive slope of the increment is from Alternative 3 to Alternative 4 which reflects the best value for the monies spent. Alternative 4 was selected as the preferred alternative. Following is CBA developed for this project (**Figure 3**).

Value Analysis Recommendation-Choosing By Advantages

Figure 3A

Project: Overmountain Victory National Historic Trail - Feasibility Study**VA No.****Item: Visitor Contact Station****CBA-1****Original Design**

The VA team reviewed the four original schematic designs and developed three additional alternatives for consideration. The alternatives evaluated included:

- No Action Alternative (dismissed from consideration);
- Alternative 1: Joseph McDowell House - Marion, NC;
- Alternative 2: Quaker Meadows Site - Morganton, NC;
- Alternative 3: Catawba Meadows Park Site - Morganton, NC;
- Alternative 4: Rock Ford Access Site - Morganton, NC (Preferred Alternative).

Preferred Alternative

Based on the CBA analysis, the VA team identified alternative 4 as the preferred alternative.

Advantages of Alternative 4:

- Best at Creating Visitor Experience
- Better at Directing the Public to Adjacent Commemorative Motor Route and Non-Motorized Trail
- Better at Reducing Staff Response Time
- Best at Creating Cost Effective Development

Life Cycle Cost Summary

	<u>Initial Cost</u>	<u>Life Cycle Cost</u>
Proposed Design (Preferred Alternative 4)	<u>3,972,300</u>	<u>4,229,400</u>

Figure 3B

Choosing By Advantages Matrix

Project/Location: Overmountain Victory National Historic Trail - Feasibility Study

Component: Visitor Contact Station

Functions: Enhance NPS Mission & Improve Visitor Experience

	Alternative 1 Joseph McDowell House Marion, NC	Alternative 2 Quaker Meadows Site Morganton, NC	Alternative 3 Catawba Meadows Park Site Morganton, NC	Alternative 4 Rock Ford Access Site Morganton, NC
Provide for Visitor Enjoyment				
Sub Factor: Improve Visitor Experience				
Criterion: - Ability to Create Park Like Setting (including view shed); - Effectiveness of Interpretive Talk Area; - Parking Constraints Advantages:	(Attributes) - Site is in Urban Location; - Urban location creates noise issues; - Does have some parking constraints ----- 0	(Attributes) - Can create park like setting; - Does not inhibit interpretive talking; - No known parking constraints ----- 55 Best at Creating Visitor Experience	(Attributes) - Site is in community park adjacent to recreation activities; - Recreation activities creates noise issues; - No known parking constraints ----- 20 Better at Creating Visitor Experience	(Attributes) - Site is in on edge of community park, can create park like setting; - Does not inhibit interpretive talking; - No known parking constraints ----- 55 Best at Creating Visitor Experience
Sub Factor: Direct Public to Trail				
Criterion: - Certified Site; - Access to Commemorative Motor Route (CMR); - Access to Non-Motorized Trail (NHT) Advantages:	(Attributes) - Certified site; - 300 yards away from CMR; - Approx. 15 miles to the NM certified trail; ----- 0	(Attributes) - Certified site - Approx. 1 mile from established certified NM trail segment and CMR ----- 50 Good at Directing the Public to Adjacent Commemorative Motor Route and Non-Motorized Trail	(Attributes) - Not Certified site; - Approx. 300 yards from CMR - Approx. 0.5 miles from established certified NM trail segment; ----- 70 Better at Directing the Public to Adjacent Commemorative Motor Route and Non-Motorized Trail	(Attributes) - Not Certified site; - Adjacent to CMR; - Adjacent to an established NM trail segment; ----- 80 Best at Directing the Public to Adjacent Commemorative Motor Route and Non-Motorized Trail
Sub Factor: Supplement Visitor Education / Communicate History				
Criterion: - Proximity to Historic Structures / Interpretive Opportunities Advantages:	(Attributes) - Has historic structure on site (Joseph McDowell House is significant and contributing feature to historic trail) ----- 15 Better at Educating / Communicating History	(Attributes) - Adjacent to Quaker Meadows home (Quaker Meadows House is significant listed on NRHP and contributing feature to historic trail) ----- 30 Best at Educating / Communicating History	(Attributes) - No proximity to historic structures ----- 0	(Attributes) - No proximity to historic structures ----- 0

Figure 3B

Choosing By Advantages Matrix

Project/Location: Overmountain Victory National Historic Trail - Feasibility Study

Component: Visitor Contact Station

Functions: Enhance NPS Mission & Improve Visitor Experience

	Alternative 1 Joseph McDowell House Marion, NC	Alternative 2 Quaker Meadows Site Morganton, NC	Alternative 3 Catawba Meadows Park Site Morganton, NC	Alternative 4 Rock Ford Access Site Morganton, NC
Improve Efficiency of Park Operations				
Sub Factor: Reduce Staff Response Time				
Criterion: - Approximate Distance to Center Point of Trail (Historic Route)	(Attributes) - 20 Miles to Center Point of Trail	(Attributes) - 1.5 Miles to Center Point of Trail	(Attributes) - Less than 1 Mile to Center Point of Trail	(Attributes) - 1.2 Miles to Center Point of Trail
Advantages:	0	Good at Reducing Staff Response Time	Best at Reducing Staff Response Time	Better at Reducing Staff Response Time
		85	100	90
Provide Cost-Effective, Environmental Responsible, and Otherwise Beneficial Development for the NPS				
Sub Factor: Create Expandable Cost Effective Development				
Criterion: - Site Options; - Site Size; - Fee or Free Site - Offer for Grounds Maintenance	(Attributes) - Limited site options for programs (skinny site with flooding) - 4.09 acres available; - Free land and building (needs major work), both would like a joint use facility; - No offer for sharing grounds maintenance	(Attributes) - Very good program options; - 2.7 Acres with options up to 12.1 acres; - Fee land; - No offer for sharing grounds maintenance	(Attributes) - Very limited site options (programs); - 4 acres; - Free land - Offer for sharing grounds maintenance	(Attributes) - Very good program options; - 6 acres; - Free land; - Offer for sharing grounds maintenance
Advantages:	0	Good at Creating Cost Effective Development	Better at Creating Cost Effective Development	Best at Creating Cost Effective Development
		35	40	70
Total Importance of Advantages	15	255	230	295
Initial Cost	\$4,182,400	\$4,469,700	\$3,911,700	\$3,972,300
Life Cycle Cost	\$4,528,900	\$4,703,500	\$4,013,500	\$4,229,400

Project/Location: Overmountain Victory National Historic Trail - Feasibility Study

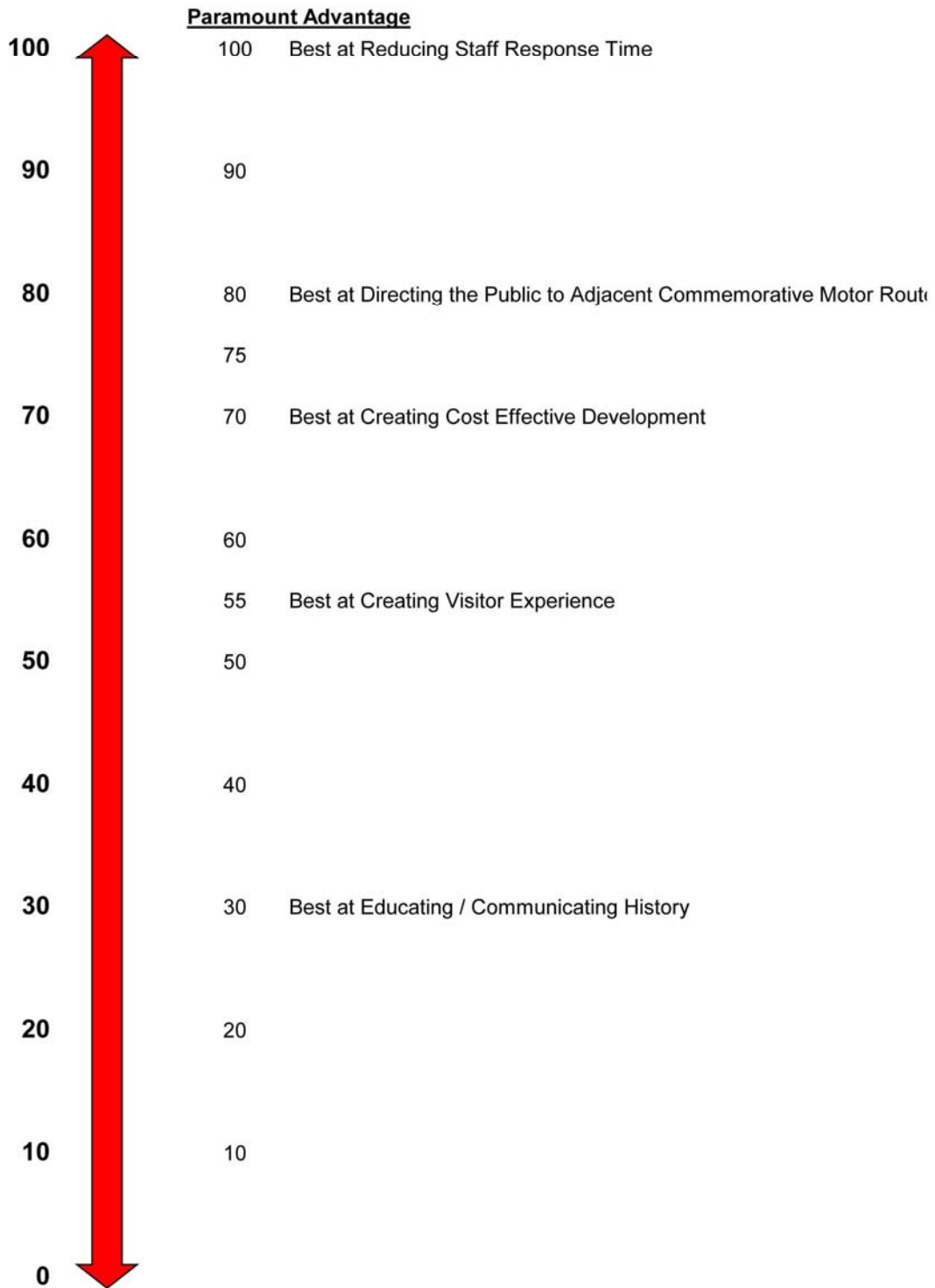
5

INITIAL COSTS			Quantity	UM	Cost / SF	Est.	PW	Est.	PW	Est.	PW			
Alternative 1	VCS and 4.09 Acres of Land	5,100	SF	\$820	4,182,449	4,182,449					0			
Alternative 2	VCS and 2.70 Acres of Land	5,100	SF	\$876				4,469,679	4,469,679		0			
Alternative 3	VCS and 2.00 Acres of Land	5,100	SF	\$767					3,911,744	3,911,744	0			
Alternative 4	VCS and 6.00 Acres of Land	5,100	SF	\$779						3,972,251	3,972,251			
Total Initial Cost						4,182,400		4,469,700		3,911,700	3,972,300			
REPLACEMENT COST/ SALVAGE VALUE														
Description (source: Whitestone)					Year	PW Factor								
Interior Finishes					10	0.6756								
Interior Finishes					20	0.4564								
Interior Finishes					30	0.3083								
Interior Finishes					40	0.2083								
Mechanical & Electrical Systems					20	0.4564								
Mechanical & Electrical Systems					40	0.2083								
Exterior Envelope					20	0.4564								
Exterior Envelope					40	0.2083								
Total Replacement/Salvage Costs						29,000		24,200		24,200	24,200			
ANNUAL COSTS														
Description		Diff.		Cost	Escl. %	PWA								
Grounds Maintenance		\$0.00	1.00%	25,876			12,270	317,493	8,100	209,592	0			
Grounds Maintenance (shared)		\$0.00	1.00%	25,876			0	0	0	0	0			
Utility Costs (same)		\$0.00	1.00%	25,876			0	0	0	0	0			
Staffing (same)		\$0.00	0.00%	21,482			0	0	0	0	0			
Repair & Replacement (same)		\$0.00	0.00%	21,482			0	0	0	0	0			
Total Annual Costs (Present Worth)			0.00%	21,482			0	0	0	0	0			
								317,500	209,600	77,600	232,900			
Total Life Cycle Costs (Present Worth)							4,528,900		4,703,500		4,229,400			
Total Life Cycle Costs (Annualized)							PP Factor	0.0466	210,821	Per Year	218,949	Per Year	196,879	Per Year

Choosing By Advantages
Overmountain Victory National Historic Trail - Feasibility Study
 Visitor Contact Station

Figure 3D

Importance Allocation to Advantages Scale



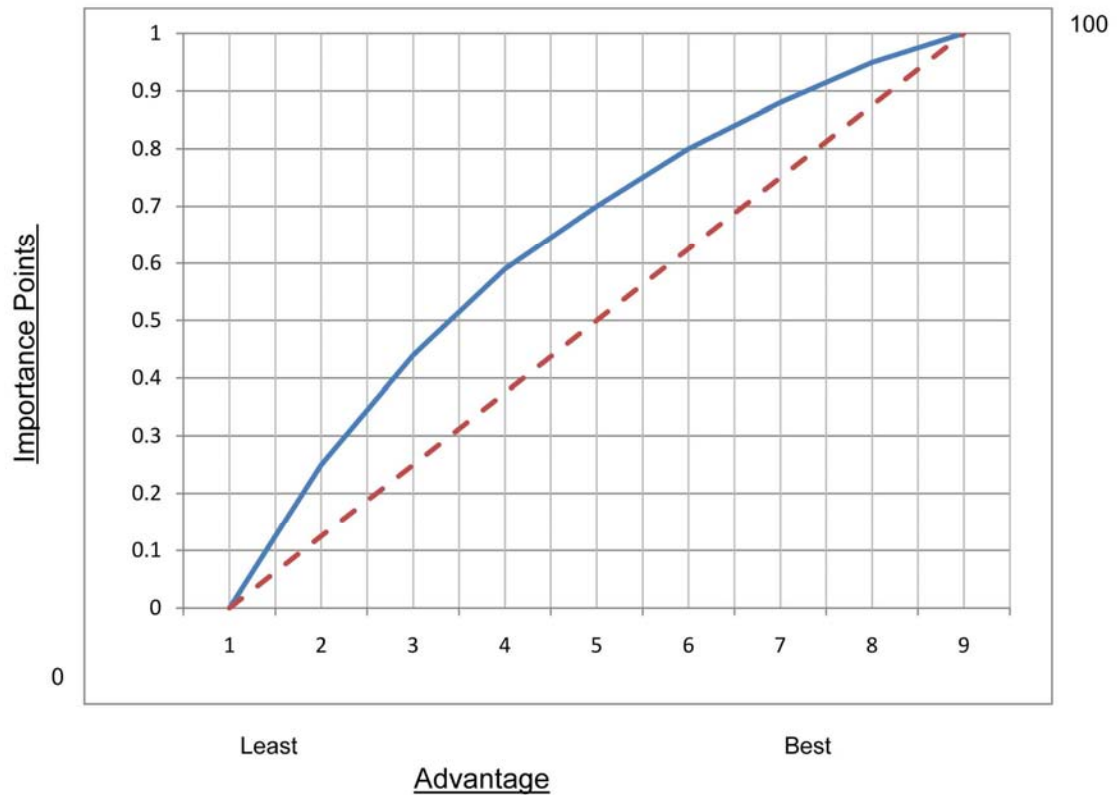
Choosing By Advantages
Overmountain Victory National Historic Trail - Feasibility Study
Visitor Contact Station

Figure 3E

Importance Points Advantage Allocation within Each Factor

Solid line indicates decision maker stronger preference to greater benefit

Dashed line indicates decision maker straight line preference to greater benefit



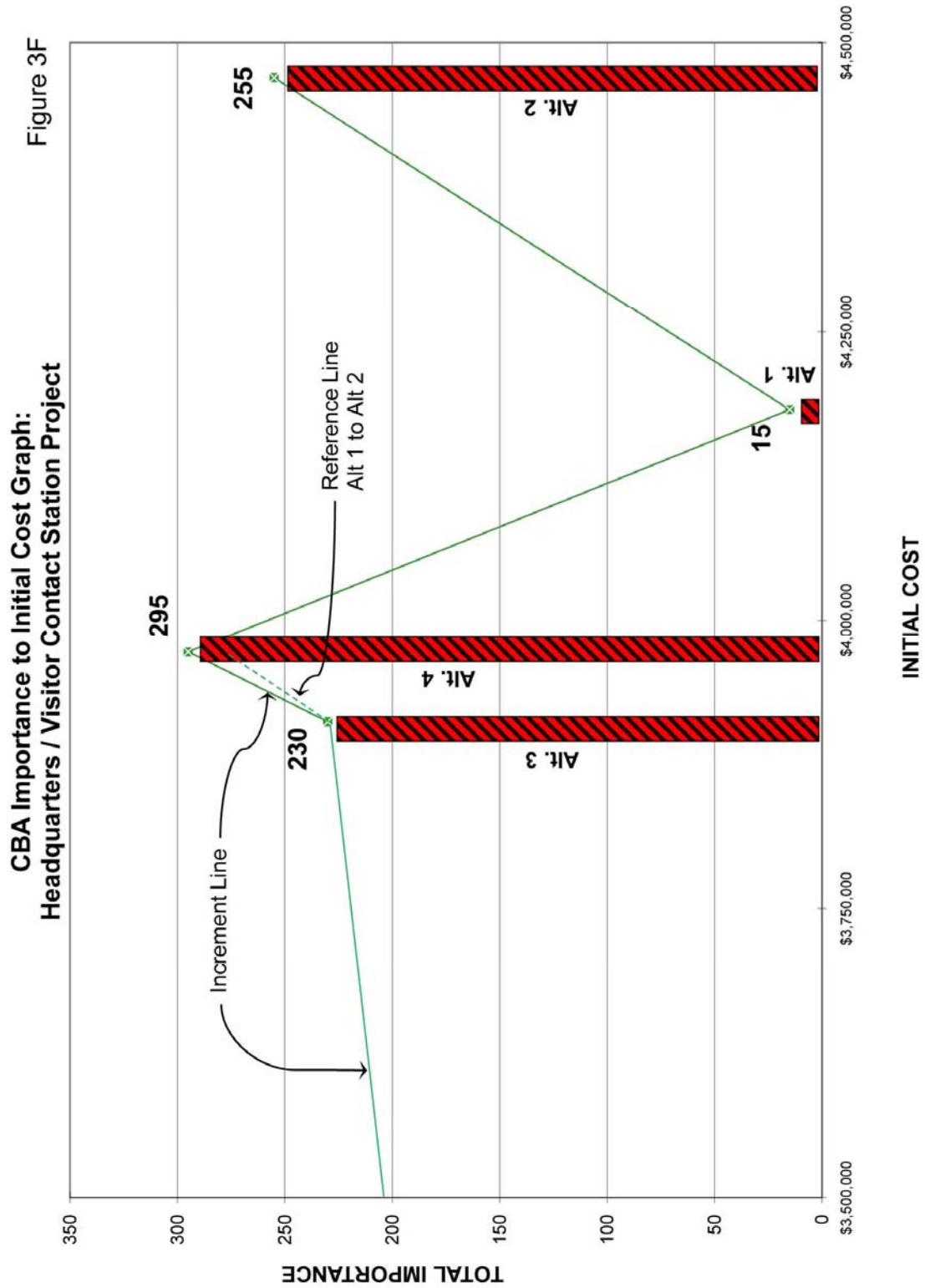
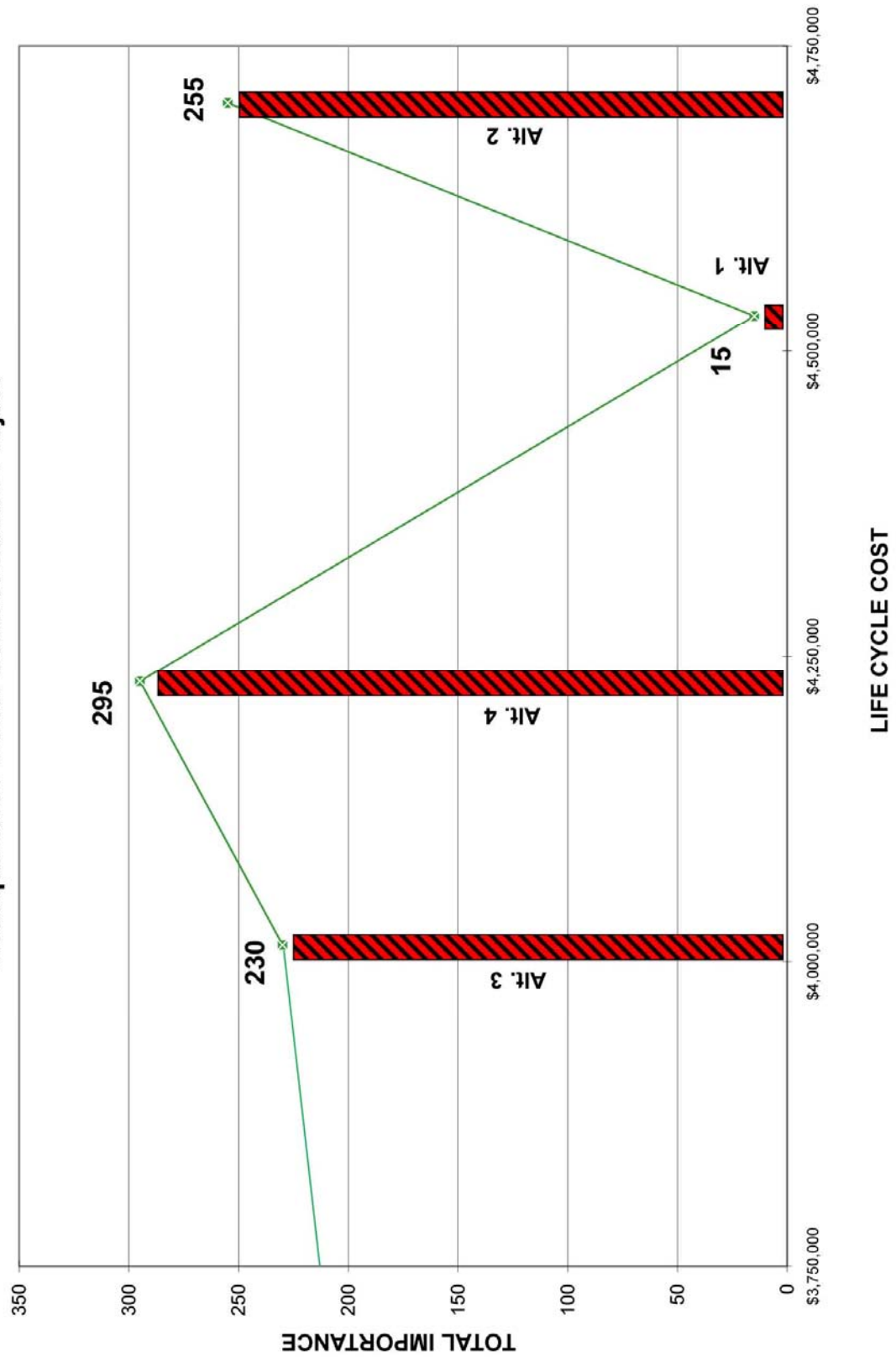


Figure 3G

CBA Importance to Life Cycle Cost Graph:
Headquarters / Visitor Contact Station Project



Phase IV Development

In this workshop, requirements to develop the 90% and 75% contingency options were expressed. The VA Team discussed the options of meeting the design basic functions while using 10% to 25% less funds.

Part V Recommendations (Proposals)

90% and 75% Alternatives

In response to NPS criteria, each workshop normally identifies 90% and 75% alternatives. These are alternatives developed to reduce the project cost by either 10% or 25% should the budget be further constrained during the project's development into design or construction. Both alternatives are based on accomplishing the project primary functions with only the respective percentage of the original budget. These alternatives are usually more drastic in nature and are considered more of a contingency plan than a probable recommendation.

This workshop was to focus on the feasibility of evaluating site options for a headquarters / visitor contact station. It was the consensus of the VA team that the 90% and 75% alternatives would have to be developed if the project moves forward for some adaptive reuse. For this reason, these options were postponed until a project could be created that identified budget and schedule criteria.

Part VI Implementation

Implementation of the value study recommendations will rest with the design and the client teams, as work progresses into the next stages. Value analysis may be recommended throughout any re-design phases.

VA Team

The study team was composed of a mix of professional disciplines and varied design, engineering, operations and maintenance experience. Members of the park staff grounded the team with knowledge of managing and working on this site. A list of VA team participants is contained on **Figure 4** that follows.

Acknowledgements

It would be a serious oversight in documenting this study without acknowledging the significant contributions made by the well-informed, spirited and cooperative staff of the VA team members. Their hard work and input from their specific area of expertise made the VA Study a success.

ATTENDANCE LIST

Figure 4

Value Analysis Study

Project: Overmountain Victory National Historic Trail - Feasibility Study
 Location: Blacksburg, South Carolina
 Date: May 5 - 6, 2010

PARTICIPANTS:

Name / Title:	Job Function:	Organization/Address:
Overmountain Victory National Historic Trail (OVVI)		
Paul Carson	Superintendent	OVVI 2635 Park Road Blacksburg, SC 29702
NPS Southeast Regional Office		
Steven Wright	Project Manager	NPS Southeast Regional Office Atlanta Federal Center 100 Alabama Street S.W. Atlanta, GA 30303
Overmountain Victory Trail Association, Inc.		
Alan Bowen	OTVA President	Overmountain Victory Trail Association, Inc. 102 Aubrey Road NE White, GA 30184
The Louis Berger Group, Inc.		
Jill Cavanaugh Architect / Planner	Project Manager	The Louis Berger Group, Inc. 2300 N Street, NW Washington, D.C. 20037
Julie Eitner	Environmental Planner	same as above
Lee Tippet	Cultural Resource Specialist	same as above
Kirk Associates, LLC		
Steve Garrett CVS, Principal Chief Operating Officer	Workshop Facilitator & Life Cycle Costing	Kirk Associates, LLC 675 Spruce Hill Ln, Suite 100 Ortonville, MI 48462

Value Analysis Study Headquarters / Visitor Contact Station Feasibility Study

Overmountain Victory National Historic Trail
Blacksburg, SC

SECTION C: APPENDIX



The appendix includes the following:

- Value Analysis Process
- Workshop Agenda
- Cost Estimates (4 CBA alternatives)
- Reference Documents
 - Original CBA to reduce the site options to 4 primary options; and
 - Site Information.

VALUE ANALYSIS PROCESS

INTRODUCTION

Value Analysis (VA) is an organized, creative process, which focuses attention on the requirements of a project for the purpose of achieving essential functions and attendant benefits at the lowest, total costs for materials, equipment, staffing, energy usage, facilities, professional services, maintenance, etc. over the life of the project. In other words, value engineering is a systematic approach to obtain optimum **value** for each dollar spent. As a result of thorough investigation, using experienced, multi-disciplined teams, value and economy are improved by the study of alternate systems, concepts, materials, methods and procedures.

A Certified Value Specialist (CVS) guides a value analysis study. Experience has shown that project studies performed by a person or team with little or no value engineering leadership will tend to steer in the direction of a superficial review and concentrate on errors made by others. A value analysis study, on the other hand, focuses on both reducing the total cost of ownership and improving overall performance. Application of the VA methodology and coordination of the activities before and after the study also significantly increase the probability the recommendations will be implemented.

This approach has been successfully applied to projects of all types and magnitudes and allows value analysis teams to be responsive to clients by producing practical results. The VA approach also encourages participation of the clients in the study in order to take advantage of their experience and knowledge. Multi-disciplined teams, using a value analysis job plan, analyze the functions of the buildings, products or processes under study, identify high cost areas, ascertain the benefits sought and propose alternatives to those planned or currently being used.

A value analysis job plan is organized into three distinct parts: (1) Pre-Study Preparation, (2) Study Workshop Phase, and (3) Post-Study Implementation.

PRE-STUDY PREPARATION

The success of a value analysis study is largely dependent on proper preparation and coordination. Information and documents are furnished by the client and distributed to the team to enable them to prepare for their role in the study. All participants are briefed on the project and their responsibility prior to the study.

The pre-study activities include the following tasks:

- Identification of context of the value analysis study.
- Review of project documentation and distribution of information to team members. The VA team relies on the client for the completeness and organization of the material to be used.
- Finalization of team and team assignments.
- Preparation of analytic models, as appropriate.
- Finalization of arrangements for workshop.

Each VA study is designed in response to the goals of the client. The analytic models developed prior to the workshop are consistent with these goals and are based on the information provided to the study team. While not every model is used for every study, it is important the team have sufficient data to develop at least a few of the analytic models to ensure a measure of thoroughness and perspective.

STUDY WORKSHOP PHASE

During the workshop portion of a value analysis study, a Study Plan is followed which usually includes specific phases to ensure a thoughtful, professional analysis.

Information Phase

At the beginning of a value analysis study, it is important to understand the background and decisions that have influenced the development of the client's goals. For this reason, the client normally describes the history and scope of the project.

Function Phase

The functions of the project are the controlling elements in the overall value engineering approach. Explicitly identifying the functions that drive the project is essential to the team because it forces the participants to think in terms of the purposes for the project and the desired results and costs associated with those functions.

Creativity Phase

This step in a value analysis study involves the listing of creative ideas. During this portion of a workshop, the value analysis team thinks of as many ways as possible to provide the necessary functions, keeping in mind the benefits important to the client and, at the same time, the need to reduce costs in a responsible manner. During this creative session, judgment about the ideas is not permitted.

Evaluation Phase

All of the information created up to this point must undergo careful consideration. The value analysis team assesses the ideas stemming from the creativity session to test, first, whether the creativity session addressed the problem areas, opportunities and functions identified earlier and, second, whether the specific strategies generated during the creativity session can be, at least in a preliminary fashion, linked with them.

Development Phase

The development phase includes preparing sketches, engineering calculations, cost estimates and life cycle cost analyses to verify the idea adds value to the project. The results of this effort are then used to prepare a presentation.

Recommendation Phase

The last phase of the value analysis study involves the presentation of recommendations. The team carefully reviews the recommendations before they are formally presented, generally on the last day of the workshop. The recommendations, the rationale that went into the development of each proposal and a summary of the cost savings are presented at this time so that the client can begin an evaluation of the value analysis recommendations prior to the receipt of the report itself.

POST-STUDY PROCEDURES

The post-study portion of a value analysis study includes the preparation of a report describing the activities undertaken during the study and incorporating the recommendations stemming from the workshop. This post-study effort may require follow-up to resolve questions remaining from the study. Either the value analysis team leader or an appropriate team member may work directly with the client to further implementation strategies.



OVERMOUNTAIN VICTORY TRAIL FEASIBILITY STUDY / EA
Overmountain Victory National Historic Trail - NC, SC, TN, VA

VALUE ANALYSIS WORKSHOP
May 5 - 6, 2010

TWO DAY AGENDA

Tuesday May 4, 2010 – Site Visit

- | | |
|---------|---|
| 8:30am | Meet at Morganton Hampton Inn (115 Bush Drive, Morgantown, NC)
Introductions, Depart for Site Visits |
| 9:30am | Catawba Meadows State Park, Morgantown, NC |
| 11:00am | Rocky Ford Access, Morgantown, NC |
| 1:00pm | Quaker Meadows McDowell House, Morgantown, NC |
| 3:00pm | Joseph McDowell House, Marion, NC |

Day 1: Wednesday, May 5th King's Mountain Headquarters-2635 Park Road,Blacksburg,SC

- | | |
|-----------|---|
| 8:30 a.m. | INTRODUCTION TO VA WORKSHOP
Welcome & Opening Remarks
Team Member Introductions
Objectives of Workshop
Workshop Organization & Agenda |
| 8:30 | VALUE ANALYSIS BRIEFING |
| 8:45 | PROJECT DESIGN PRESENTATION (By Design Team)
Project Goals, Background, History, Importance (Superintendent or Designee)
Alternatives Considered (Site Selection for New HQ / VC, EA Impacts)
Project Budget / Cost Estimate, Project Schedule
VA Team Questions (Use of Force Field Analysis to record opportunities) |
| 12:00 | LUNCH |
| 1:00 p.m. | FUNCTION ANALYSIS & VALUE MODELS
Stakeholders, Primary Interest Discussion / Listing
Function Logic Diagram Preparation
Function Cost Model Review
Risk Model Exercise (time permitting for Thursday)
LEED Checklist Exercise (time permitting for Thursday) |
| 3:00 p.m. | CREATIVITY, EVALUATION, DEVELOPMENT PHASE
Alternative Options Considered / Brainstorm Additional Alternatives
(Identify Opportunities to Achieve Best Balance of Life Cycle Cost,
Performance, Sustainability & Durability, while meeting Required
Functions) |
| 5:00 | ADJOURN |
-



OVERMOUNTAIN VICTORY TRAIL FEASIBILITY STUDY / EA
Overmountain Victory National Historic Trail - NC, SC, TN, VA

VALUE ANALYSIS WORKSHOP
May 5 - 6, 2010

TWO DAY AGENDA

Day 2: Thursday, May 6th (same location)

- 8:30 a.m. **CREATIVITY, EVALUATION, DEVELOPMENT PHASE**
Finalize Alternatives Considered for CBA Consideration
Choosing by Advantages*
Cost Estimate of Alternatives / Sketches of Alternatives
Estimates of Maintenance, Energy, Replacements / Life Cycle Cost Calculations
Importance to Cost Graphs - Preferred Alternative
Reconsideration, Other Alternative(s)
- 12:00 **LUNCH**
- 1:00 p.m. **90% & 75% ALTERNATIVES**
Brainstorm 90% and 75% Alternatives
Cost Estimate of Alternatives
Written Proposals (Present, Proposed, Discussion)
- 2:00 **CREATIVITY FOR OTHER VALUE MODELS** (time permitting)
Risk Model Idea Generation & VA Proposal Development
LEED Checklist Idea Generation & VA Proposal Development
- 4:30 p.m. **PRESENTATION / REVIEW PHASE**
Next Steps (VA Implementation Plan)
Closing Remarks
- 5:00 **ADJOURN/ CELEBRATION!**
-

*** CHOOSING BY ADVANTAGES (CBA)**

Alternatives & Importance

- Define CBA Alternatives (including sketches)
- Define Evaluation Factors / Identify Attributes & Advantages
- Score Importance of Advantages
- Determine Total Importance of Each Alternative

Life Cycle Cost Analysis

- Estimate Construction Costs, O & M Costs & Revenue Potential
- Determine Life Cycle Cost of Each Alternative

Importance to LCC Graphs/ Reconsideration

- Importance to Cost Graphs
 - Reconsideration, Other Alternatives
 - CBA/ LCC/ Importance to Cost Graph Updates
 - Consensus of Preferred Alternative
-

COST

Class C Estimates for CBA Alternatives

Class C Construction Cost Estimate

Project: Overmountain Victory National Historic Trail (OVVI) HQ/VCS
Park: Overmountain Victory National Historic Trail
PMIS: unknown

Basis of Estimate

Date of Estimate: 14 May 2010

Estimated By: The Louis Berger Group
2445 M Street NW
Washington, DC 20037
(202) 331-7775

Supporting Material: NPS Facility Planning Model Report
Value Analysis (May 5, 2010)

Cost Data: Square Foot Cost Data.
Unit Prices based on 2010 Cost data

Mark-ups and Add-ons: **Published Location Factor:** RS Means (Burke County, NC).
Project Remoteness: Site is 120 miles from nearest published commercial center.
Federal Wage Rate Factor: 6 Percent Guidance from NPS.
Taxes: 4.75 Percent Sales Tax included in Unit Costs
Standard General Conditions: Within Normal Range 18 Percent.
Government General Conditions: 10 Percent within NPS Guidance Recommendations.
Bonds and Permits: 1.5 percent bond included in General Conditions. No permit costs.
Historic Preservation Factor: For Joseph McDowell House only
Overhead:
Profit: 10 Percent
Inflation Escalation: Assume start of construction to be September 2012
12 month construction period. Inflation predictions indicate 4% per year.

Comments: Four Cost Estimates are provided for the site preparation, design, and construction of a new Headquarters and Visitor Contact Station for the OVVI

Summary Sheet

ALTERNATIVE 1: Joseph McDowell House	\$	4,182,449
ALTERNATIVE 2: Quaker Meadows Parcel	\$	4,469,679
ALTERNATIVE 3: Catawba Meadows Park	\$	3,911,744
ALTERNATIVE 4: Rocky Ford Access	\$	3,972,251

Project: Overmountain Victory National Historic Trail (OVVI) HQ/VCS
Park: Overmountain Victory National Historic Trail
PMIS: unknown

Estimate By: Berger
Date: 14 May 2010

Reviewed By: _____
Date: _____

Estimate is based on **2010** costs

ALTERNATIVE 1: Joseph McDowell House

This site and structure would be provided by the City of Marion at no cost. The Joseph McDowell House is two story wood sided house built in 1,780 that is approximately 2,500 sf on a 4.09 acre site in Marion NC. The existing house has had several single story additions in the rear of the structure and many interior renovations that have detracted from the historic significance of the original house. The house is historic but is not listed on the National Register of Historic Places. The existing additions in the rear of the building are approximately 800 sf and require demolition. The interior will be made compliant with life safety, accessibility, and fire code. An elevator will be required to access the second floor. The site is cleared but has some floodplains and wetlands present. There is potentially archeological artifacts on the site. A new supporting structure to house the functions of the HQ/VC that cannot fit within the rehabilitated house will need to be considered in the costs. The site is narrow, which constrains parking.

Item No.	Description	Quantity	Unit	Cost/Unit	Total
1	Site Preparation (clearing, demo, earthwork)				\$51,800
2	Site Development (paving for parking)				\$286,200
3	Site Lighting				\$80,000
4	Sanitary Sewer connection				\$35,000
5	Storm Sewer connection				\$20,000
6	Water Supply System connection				\$35,000
7	Renovate Existing Building (assume 2,500 SF)	2,500	SF	\$182.35	\$455,875
8	New Structure (assume 2,500 SF)	2,500	SF	\$204.30	\$510,750
9	Cost of Property (Provided to NPS at no Cost)				
	Subtotal Direct Construction Costs				\$1,474,625
	Published Location Factor	-7%			(\$103,224)
	Remoteness Factor	12%			\$176,955
	Federal Wage Rate Factor	6%			\$35,391
	Design Contingency	30%			\$442,388
	Total Direct Construction Costs				\$2,026,135
	Standard General Conditions	18%			\$364,704
	Government General Conditions	10%			\$202,613
	Historic Preservation Factor	10%			\$202,613
	Subtotal NET Construction Cost				\$2,796,066
	Overhead	15%			\$419,410
	Profit	10%			\$279,607
	Estimated NET Construction Cost				\$3,495,082
	Contracting Method Adjustment (Sole Source)	15%			\$524,262
	Inflation Escalation (14 Months @ 4%)	5%			\$163,104
	Total Estimated NET Cost of Construction				\$4,182,449

APPENDIX B: VALUE ANALYSIS

Class C Construction Cost Estimate

Project: Overmountain Victory National Historic Trail (OVVI) HQ/VCS
Park: Overmountain Victory National Historic Trail
PMIS: unknown

Estimate By: Berger
Date: 14 May 2010

Reviewed By: _____
Date: _____

Estimate is based on **2010** costs

ALTERNATIVE 2: Quaker Meadows Parcel

This is a vacant, undeveloped (cleared), relatively flat 2.7-acre parcel fronting on St. Mary's Church Road, and at the intersection of NC 81. This parcel is adjacent to the historic Quaker Meadows House owned by Crescent Resources, Inc. (Record 37886 and 31171 in Burke County, NC Land Records) on which the NPS would construct a new 5,000 gsf HQ/VCC and parking. The property is offered for sale to the NPS at fair market value. There are remnants of a parking lot and building pad from a previous commercial use in the center of the site (approx 1 acre) that will need to be demolished as part of the site preparation. There is an additional 9.4-acre parcel also owned by Crescent Resources, Inc. that fronts NC 81 and wraps to the rear of the Quaker Meadows property and has been discussed as potentially available to NPS for future expansion.

Item No.	Description	Quantity	Unit	Cost/Unit	Total
1	Cost of Property (Local Cost for 2.7 Acres = \$220,082)				\$220,082
2	Site Preparation (clearing, demo, earthwork)				\$32,000
3	Site Development (paving for parking)				\$245,000
4	Site Lighting				\$80,000
5	Sanitary Sewer connection				\$30,000
6	Storm Sewer connection				\$20,000
7	Water Supply System connection				\$30,000
8	Renovate Existing Building (Not Applicable)				
9	New Structure (assume 5,100 SF)	5,100	SF	\$204.30	\$1,041,930
Subtotal Direct Construction Costs					\$1,699,012
	Published Location Factor	-7%			(\$118,931)
	Remoteness Factor	12%			\$203,881
	Federal Wage Rate Factor	6%			\$40,776
	Design Contingency	30%			\$509,704
Total Direct Construction Costs					\$2,334,442
	Standard General Conditions	18%			\$420,200
	Government General Conditions	10%			\$233,444
	Historic Preservation Factor	0%			\$0
Subtotal NET Construction Cost					\$2,988,086
	Overhead	15%			\$448,213
	Profit	10%			\$298,809
Estimated NET Construction Cost					\$3,735,108
	Contracting Method Adjustment (Sole Source)	15%			\$560,266
	Inflation Escalation (14 Months @ 4%)	4%			\$174,305
Total Estimated NET Cost of Construction					\$4,469,679

Project: Overmountain Victory National Historic Trail (OVVI) HQ/VCS
Park: Overmountain Victory National Historic Trail
PMIS: unknown

Estimate By: Berger
Date: 14 May 2010

Reviewed By: _____
Date: _____

Estimate is based on **2010** costs

ALTERNATIVE 3: Catawba Meadows Park

The proposed site in Catawba Meadows Park is an approximately 4-acre site located adjacent to the main entrance of the park and offers good visitor access and visibility (Morganton 2009). There is an existing softball field [the aerial is out of date] on the site offered by the County. That area is shown on the park's facilities map as a general use field, with rental cabins and cabin facilities around the edges of that site (Catawba Meadows Park 2008). For life cycle costing, Catawba Meadows Park would provide the grounds maintenance.

Item No.	Description	Quantity	Unit	Cost/Unit	Total
1	Cost of Property (Provided to NPS at no Cost)				
2	Site Preparation (clearing, demo, earthwork)				\$40,000
3	Site Development (paving for parking)				\$245,000
4	Site Lighting				\$80,000
5	Sanitary Sewer connection				\$30,000
6	Storm Sewer connection				\$20,000
7	Water Supply System connection				\$30,000
8	Renovate Existing Building (Not Applicable)				
9	New Structure (assume 5,100 SF)	5,100	SF	\$204.30	\$1,041,930
	Subtotal Direct Construction Costs				\$1,486,930
	Published Location Factor	-7%			(\$104,085)
	Remoteness Factor	12%			\$178,432
	Federal Wage Rate Factor	6%			\$35,686
	Design Contingency	30%			\$446,079
	Total Direct Construction Costs				\$2,043,042
	Standard General Conditions	18%			\$367,748
	Government General Conditions	10%			\$204,304
	Historic Preservation Factor	0%			\$0
	Subtotal NET Construction Cost				\$2,615,094
	Overhead	15%			\$392,264
	Profit	10%			\$261,509
	Estimated NET Construction Cost				\$3,268,867
	Contracting Method Adjustment (Sole Source)	15%			\$490,330
	Inflation Escalation (14 Months @ 4%)	4%			\$152,547
	Total Estimated NET Cost of Construction				\$3,911,744

APPENDIX B: VALUE ANALYSIS

Project: Overmountain Victory National Historic Trail (OVVI) HQ/VCS
Park: Overmountain Victory National Historic Trail
PMIS: unknown

Estimate By: Berger
Date: 14 May 2010

Reviewed By: _____
Date: _____

Estimate is based on 2010 costs

ALTERNATIVE 4: Rocky Ford Access

The Rocky Ford Access is a 6- acre site on a bluff above the banks of the Catawba River in Morganton, NC along US 64/NC18 that would be provided by the City of Morgantown at no cost. The site is also adjacent to the Catawba River Greenway, as established Overmountain non-motorized trail segment, and the Commemorative Motor Route. Owned by the City of Morganton, NC, the site is currently undeveloped and heavily vegetated with kudzu and some mixed hardwoods. There is a roughly-graded gravel parking area to serve the trailhead of the Greenway. There is relatively steep topography on the site in the area offered for development. For life cycle costing, Catawba Meadows Park would provide the grounds maintenance.

Item No.	Description	Quantity	Unit	Cost/Unit	Total
1	Cost of Property (Provided to NPS at no Cost)				
2	Site Preparation (clearing, demo, earthwork)				\$60,000
3	Site Development (paving for parking)				\$238,000
4	Site Lighting				\$80,000
5	Sanitary Sewer connection				\$35,000
6	Storm Sewer connection				\$20,000
7	Water Supply System connection				\$35,000
8	Renovate Existing Building (Not Applicable)				
9	New Structure (assume 2,500 SF)	5,100	SF	\$204.30	\$1,041,930
Subtotal Direct Construction Costs					\$1,509,930
	Published Location Factor	-7%			(\$105,695)
	Remoteness Factor	12%			\$181,192
	Federal Wage Rate Factor	6%			\$36,238
	Design Contingency	30%			\$452,979
Total Direct Construction Costs					\$2,074,644
	Standard General Conditions	18%			\$373,436
	Government General Conditions	10%			\$207,464
	Historic Preservation Factor	0%			\$0
Subtotal NET Construction Cost					\$2,655,544
	Overhead	15%			\$398,332
	Profit	10%			\$265,554
Estimated NET Construction Cost					\$3,319,430
	Contracting Method Adjustment (Sole Source)	15%			\$497,915
	Inflation Escalation (14 Months @ 4%)	4%			\$154,907
Total Estimated NET Cost of Construction					\$3,972,251

REFERENCE DOCUMENTS

Original CBA
To Reduce the Site Options to 4 Primary Options

CHOOSING BY ADVANTAGES

February 2010

Overmountain Victory National Historic Trail

**Components Evaluated: Proposed Headquarters/Visitor Contact Station
Preliminary Site Selection**

PHASE I - INFORMATION

History

As a result of the public scoping process conducted during the fall of 2009, 18 site proposals/alternatives were submitted to the National Park Service by various public and private entities. On February 4, 2009 the National Park Service evaluated the 18 sites and identified 4 sites which will be further evaluated.

The 18 locations that are being considered for the location of the Overmountain Victory National Historic Trail (OVNHT) Proposed Headquarters/Visitor Contact Station are:

- Muster Ground Site, Abingdon, Virginia
- Abingdon Technical Park, Abingdon, Virginia
- Abingdon Artisan Center, Abingdon, Virginia
- Sycamore Shoals State Historic Area, Elizabethton, Tennessee
- Eastern Trailhead Recreational Center, Elkin, North Carolina
- Joseph McDowell House, Marion, North Carolina
- Lake James State Park, Burke County, North Carolina
- Quaker Meadows House, Morganton, North Carolina
- Catawba Meadows Park, Morganton, North Carolina
- Overmountain Vista, Morganton, North Carolina
- Rocky Ford Access, Morganton, North Carolina
- Bellevue Plantation, Morganton, North Carolina
- Pleasant Hill Baptist Church, Rutherford County, North Carolina
- Historic Ruth School, Rutherford County, North Carolina
- Old Mill Spring School, Polk County, North Carolina
- Land Tract - SR-11/I-85, Gaffney, South Carolina
- Textile Mill, Gaffney, South Carolina
- Cherokee Historical Society Museum, Gaffney, South Carolina

Choosing By Advantages

During the week of February 1, 2010, a Choosing by Advantages (CBA)/Value Analysis panel convened for two days at the National Park Service, Southeast Regional Office, Atlanta, Georgia. The purpose of this meeting was to evaluate the 18 proposals and to recommend four alternatives that will be evaluated in further detail for a proposed OVHNT Headquarters/Visitor Contact Station.

Choosing By Advantages Panel

Several individuals from the Southeast Regional Office and the OVNHT participated in the CBA process.

Alternatives

The 18 proposals were initially screened based on the Statement of Purpose and Need that was developed during the initiation of the National Environmental Policy Act (NEPA) process for this study. Specifically, the 18 proposals/alternatives were analyzed to determine whether they fell within the Purpose and Need requirement of a centrally located facility. For the purpose of this study, a centrally located facility was defined as a location that fell within a 25-mile radius from the geographic center of the OVNHT.

Of the 18 proposals received, seven proposals fell within the centrally location requirement. They are:

- Joseph McDowell House, Marion, North Carolina
- Lake James State Park, Burke County, North Carolina
- Quaker Meadows House, Morganton, North Carolina
- Catawba Meadows Park, Morganton, North Carolina
- Overmountain Vista, Morganton, North Carolina
- Rocky Ford Access, Morganton, North Carolina
- Bellevue Plantation, Morganton, North Carolina

Further analysis of the seven proposals was accomplished using the CBA method. The following criteria were used:

Factors and Attributes:

The following set of factors and attributes were developed prior to, and during, the meeting.

I. Access to Major Transportation Routes or Hubs

II. Provide for Visitor Enjoyment

- A. Trail access; walking distance, etc.?
- B. Quality of park like experience?

III. Protect Public & Employee Health, Safety & Welfare

- A. Emergency Response Times from Nearby Communities?

IV. Improve Operations and Sustainability

- A. Degree of site expandability?
- B. Free or fee land/facilities?
- C. Proximity to Metropolitan Centers?

V. Strengthen Partnerships & Community Relationships

- A. Partnership Opportunities?

PHASE II – EVALUATION

Alternative Selection Evaluation

The panel determined that the advantage of Alternative 6, under Factor IV (see attached CBA matrix), Free or Fee Land/Facilities, was the Paramount Advantage. This advantage was given the score of 100. All other advantages were weighed relative to its importance and the importance of all other advantages. The proposals were ranked as follows:

- Rocky Ford Access, Morganton, North Carolina: 385
- Catawba Meadows Park, Morganton, North Carolina: 325
- Quaker Meadows House, Morganton, North Carolina: 300
- Joseph McDowell House, Marion, North Carolina: 245
- Lake James State Park, Burk County, North Carolina: 240
- Overmountain Vista, Morganton, North Carolina: 240
- Bellevue Plantation, Morganton, North Carolina: 170

As a result, the following four alternatives have been forwarded for analysis:

- Rocky Ford Access, Morganton, North Carolina: 385
- Catawba Meadows Park, Morganton, North Carolina: 325
- Quaker Meadows House, Morganton, North Carolina: 300
- Joseph McDowell House, Marion, North Carolina: 245

APPENDIX B: VALUE ANALYSIS

Factors	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
	Joseph McDowell House Marion, NC	Lake James State Park Burke County, NC	Quaker Meadows House Morganton, NC	Catawba Meadows Park Morganton, NC	Overmountain Vista Morganton, NC	Rocky Ford Access Morganton, NC	Bellevue Plantation Morganton, NC
Access to major transportation routes or hubs							
Distance							
Attributes: - Approximate distance to major routes (e.g., interstate, major highway, etc.)	Approx. 300 Yards - State Route 221; Interstate 40 approx. 8 miles away.	Approx. 25 miles away from Interstate 40	Approx. 8 miles from Interstate 40; Approx. 2 miles to SR-64	200 yds. From SR-64; 6 miles from I-40	Adjacent to SR-64; Approx. 6.5 miles from I-40	Adjacent to SR-64; Approx. 7 miles from I-40	Approx. 5 miles from SR-64; Approx. 10 miles from I-40
Advantages:	20	0	15	40	35	30	25
Provide for Visitor Enjoyment							
Visitor Historic Trail Access							
Attributes: - Trail Access: walking distance, etc.	Certified site; approx. 15 miles to the certified trail; Commemorative Motor Route (CMR) 300 yards away	Adjacent to future certified trail segment; adjacent to the CMR	Certified site approx. 1 mile from established certified trail segment and CMR	Approx. 5 miles from established certified trail segment; approx. 300 yards from CMR	Approx. 25 miles from certified trail segment; adjacent to CMR	Adjacent to an established trail segment; adjacent to CMR	Approx. 4 miles from established trail segment and CMR
Advantages:	50	70	55	60	65	75	0
Visitor Experience							
Attributes: - Quality of park like experience	Fair	Excellent	Excellent	Very Good	Good	Excellent	Good
Advantages:	0	80	80	60	40	80	35

Protect Public & Employee Health, Safety & Welfare									
Emergency Response									
<i>Attributes:</i> Emergency Response Times from Nearby Communities									
<i>Advantages:</i>									
	High	Low	High	High	High	High	High	High	Medium
	40		0	40	40	40	40	40	30
Improve Operations and Sustainability									
Future Site Expandability									
<i>Attributes:</i> - Degree of site expandability/free or fee land									
<i>Advantages:</i>									
	3 acres available, free land and building, would like a joint use facility	5 acres, free land only	15 acres, fee land	2 acres, free land	Approx. 2 acres of buildable land, area is heavily sloped, free land	6 acres, fee land	10 acres, fee land		
	75	90	50	65	0	100			40
Opportunities for Efficiencies									
<i>Attributes:</i> - Proximity to Metropolitan Centers, etc.									
<i>Advantages:</i>									
	Excellent	Fair	Excellent	Excellent	Excellent	Excellent	Good		
	60	0	60	60	60	60			40

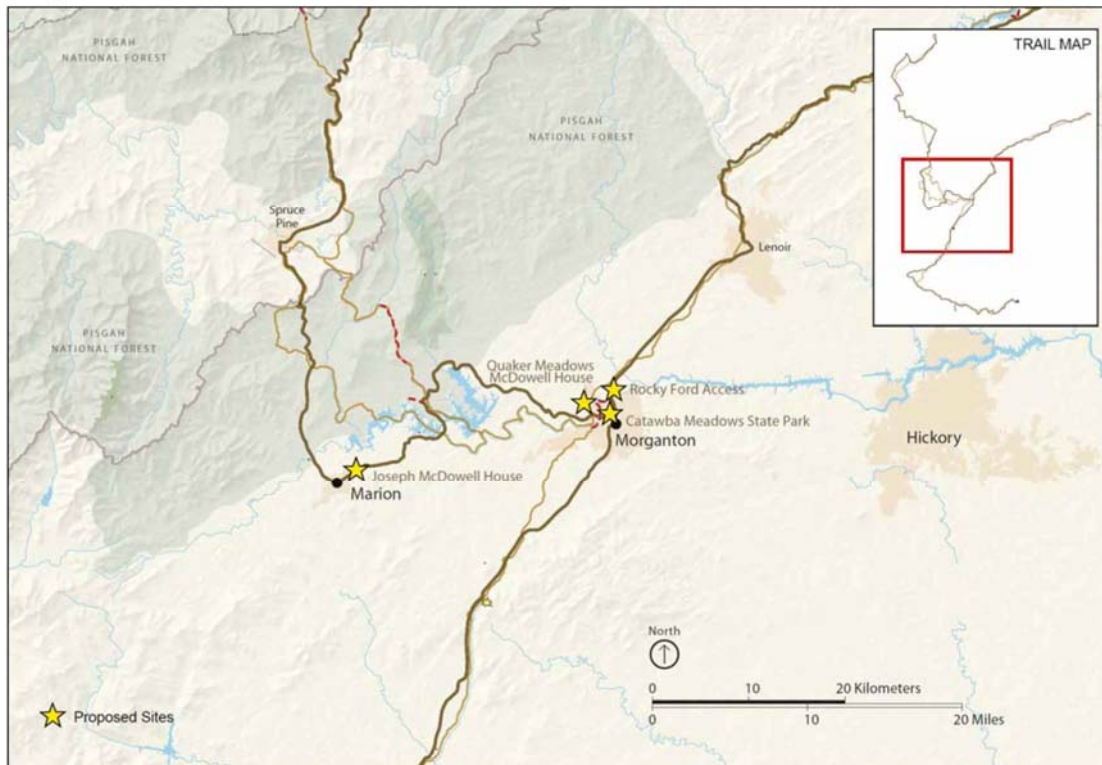
[illegible]

Site Information

Site Information

Overmountain Victory National Historic Trail Headquarters and Visitor Contact Station Feasibility Study and Environmental Assessment

Figure 1.0 – Four Alternative Sites



Overmountain HQ/VCS EA and Feasibility Study

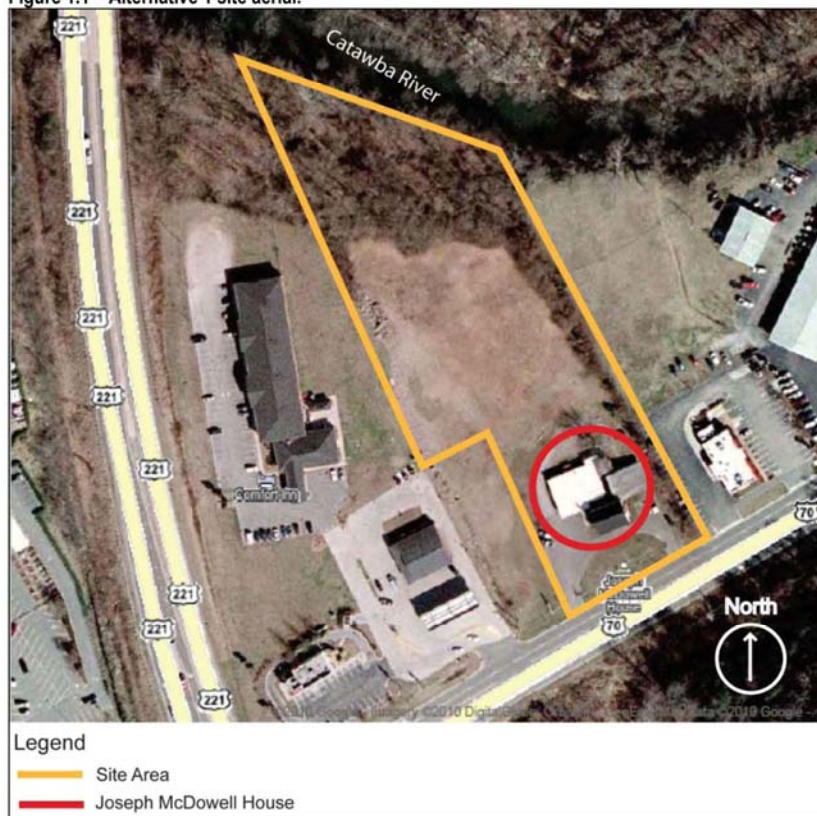
The following is a preliminary description of the natural and historic resources at each of the four identified sites for the Overmountain Victory National Historic Trail proposed headquarters (HQ) and visitor contact station (VCS). This data was gathered from readily available public sources and databases including state, county, and local websites; national soil, wetlands, and floodplains maps, and various other websites.

ALTERNATIVE 1: JOSEPH MCDOWELL HOUSE

The Joseph McDowell House sits on a 4.09-acre site located along the Catawba River and U.S. Highway 70 West approximately 0.1 miles from the intersection with Highway 221 in Marion, NC. The site is also located on the Commemorative Driving Route for the Overmountain Trail.

The Joseph McDowell House is currently owned and operated by McDowell County through an inter-local agreement between McDowell County Tourism Authority, the City of Marion, NC, and McDowell County, NC. At present, the house is under short term lease to a local business and a local nonprofit organization that uses the addition at the rear of the house (site visit, May 4, 2010). There are plans for extensive renovations seeking to return the house to its original conditions (McDowell County Tourism Development Authority 2009). The property is also the planned location for the trailhead of a greenway trail along the river, at the rear of the property, and there are plans to provide some parking for use by trail users. The trail is planned to run from this property, along the river, and connect to the historic Carson House and the Little Round Hill Cemetery, where McDowell family members are buried (McDowell Trails Association 2007).

Figure 1.1 – Alternative 1 site aerial.



Source: <http://maps.google.com/maps>, 2010

Overmountain HQ/VCS EA and Feasibility Study

WATER RESOURCES

The site is adjacent to the North Fork of the Catawba River. There is a deep drainage swale that runs between the east side of the property and the adjacent property. This swale directs stormwater from the road and also drains the two properties. The berm created when the property to the west was developed, and fill at the back of the Joseph McDowell House property causes water to drain to the center of the property, where it appears to tend to pond. (McDowell House Proposal and site visit observations)

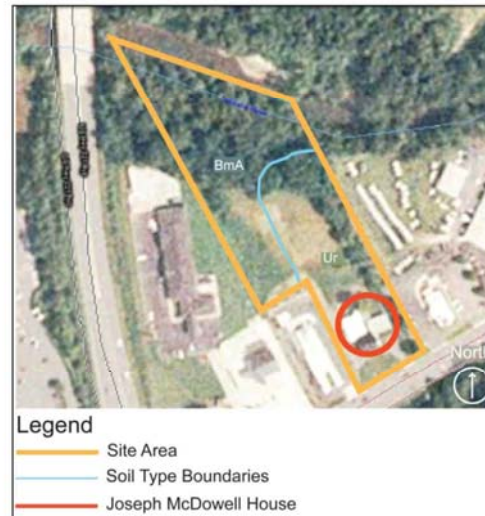
VEGETATION

There is a mixture of hardwoods and shrubs and groundcover in the riparian zone along the river. Grass and vines occupy the remaining portion of the site.

SOILS

According to the Soil Survey of McDowell County, Alternative Site 1 is composed primarily of soils classified in soil type #4, Lotla_Braddock-Rosman-Potomic soils, characterized as nearly level to strongly sloping somewhat poorly drained soils that have a predominantly loamy, clayey, or sandy subsoil or underlying material, formed in alluvium; on flood plains and stream terraces. The Lotla, Rosman, and Potomic soils are poorly suited for most urban development due to their flooding. The Braddock soils are suited for most urban uses. (McDowell House Proposal)

Figure 1.2—Soils for Alternative 1 site



Source: <http://websoilsurvey.nrcs.usda.gov>, 2010

GEOLOGY AND TOPOGRAPHY

The site is predominantly cleared and at road grade. An area approximately one acre in size located to the north of the developed portion of the site has been filled approximately three feet higher than the area located to the south. The remaining area to the north slopes toward the Catawba River. There is a drainage ditch located along the eastern property line which extends from the southern right-of-way of US Hwy. 70 West all the way to the Catawba River. (McDowell House Proposal)

FLOODPLAINS

The subject property is positioned within three separate flood areas according to FEMA Flood Map Number 3710170000J, dated September 28, 2006. An area approximately one acre in size is positioned within the floodway of the Catawba River. Approximately one acre, which has been filled, is positioned in Zone X, which is outside the 100 or 500-year floodplain. The remaining two +/- acres is located within Flood Zone AE, which is part of the 100-year floodplain. (McDowell House Proposal)

WETLANDS

According to the U.S. Geological Survey (USGS) U.S. Fish and Wildlife Service (USFWS) wetlands online map database (http://wetlandsfws.er.usgs.gov/imf/imf.jsp?site=NWI_CONUS), there are no wetlands at this site. Water seems to be pooling at the base of the berm, however, so there is concern that this area is developing hydric soils (site visit observations).

Overmountain HQ/VCS EA and Feasibility Study

THREATENED & ENDANGERED SPECIES

Several federally listed (threatened or endangered) plant and animal species are included on the McDowell County natural heritage inventory and could potentially be found in appropriate habitat at this site or in the North Fork of the Catawba River. The species on the McDowell County inventory are listed below:

Table 1.1 – McDowell County, North Carolina, Threatened and Endangered Species.

Common Name	Scientific name	Federal Status	Record Status
Vertebrate:			
Allegheny woodrat	<i>Neotoma magister</i>	FSC	Current
American eel	<i>Anguilla rostrata</i>	FSC	Current
Bald eagle	<i>Haliaeetus leucocephalus</i>	BGPA	Current
Bog turtle	<i>Clemmys muhlenbergii</i>	T (S/A)	Current
Carolina northern flying squirrel	<i>Glaucomys sabrinus coloratus</i>	E	Current
Cerulean warbler	<i>Dendroica cerulea</i>	FSC	Current
Olive-sided flycatcher	<i>Contopus cooperi</i>	FSC	Current
Pygmy salamander	<i>Desmognathus wrighti</i>	FSC	Historic
Red crossbill (Southern Appalachian)	<i>Loxia curvirostra</i>	FSC	Current
Southern Appalachian eastern woodrat	<i>Neotoma floridana haematorea</i>	FSC	Current
Southern rock vole	<i>Microtus chrotorrhinus carolinensis</i>	FSC	Historic
Invertebrate:			
Bennett's Mill Cave water slater	<i>Caecidotea carolinensis</i>	FSC	Current
Diana fritillary (butterfly)	<i>Speyeria diana</i>	FSC	Current
Vascular Plant:			
Blue Ridge Ragwort	<i>Packera millefolium</i>	FSC	Current
Butternut	<i>Juglans cinerea</i>	FSC	Current
Cuthbert turtlehead	<i>Chelone cuthbertii</i>	FSC	Current
Gray's lily	<i>Lilium grayi</i>	FSC	Current
Large-leaved Grass-of-Parnassus	<i>Parnassia grandifolia</i>	FSC	Current
Mountain golden heather	<i>Hudsonia montana</i>	T	Current
Short-styled Oconee-bells	<i>Shortia galacifolia</i> var. <i>brevistyla</i>	FSC	Current
Small whorled pogonia	<i>Isotria medeoloides</i>	T	Current
Sweet pinesap	<i>Monotropsis odorata</i>	FSC	Current
Tall larkspur	<i>Delphinium exaltatum</i>	FSC	Current
Nonvascular Plant:			
a liverwort	<i>Plagiochila sullivantii</i> var. <i>sullivantii</i>	FSC	Current
a liverwort	<i>Porella wataugensis</i>	FSC	Current

(<http://www.fws.gov/nc-es/es/countyfr.html>)

WILDLIFE OR WILDLIFE HABITAT

There does not appear to be any significant wildlife habitat at this site. However, there is a wide forested riparian buffer at the back of the property that could provide a corridor for wildlife passage.

Overmountain HQ/VCS EA and Feasibility Study

CULTURAL RESOURCES

Historically known as “Pleasant Gardens”, the house was built in sometime in the late 1780s or early 1790s, by Colonel Joseph McDowell, the founder and namesake of McDowell County and a prominent figure in the Battle of King’s Mountain (NPS 1982; McDowell County Tourism Development Authority 2009; McDowell House Project Committee 2010).

Although the home has historic significance, the Joseph McDowell House is not listed on the National Register of Historic Places, and is currently not eligible for listing, due to several unsympathetic twentieth century alterations to the structure, and site. In the Overmountain Victory National Historic Trail’s 1982 Comprehensive Management Plan (CMP), the house was identified as one of 34 non-federal historical resources which are directly or indirectly related to the Trail. The 1982 CMP also recommended the house as a potentially certifiable segment and/or site of the Trail (NPS 1982). In September, 2008, the Joseph McDowell House was dedicated as an official site of the National Park Service Overmountain Victory National Historic Trail (2009 McDowell County Tourism Development Authority).

COST CONSIDERATIONS

The site is located partially in a floodplain and would require the demolition of approximately 1,200 sf of additions and the full restoration of the interior of the existing structure for life safety, fire safety, and accessibility (need elevator).

OTHER CONSIDERATIONS

A large berm/levee has been constructed at the rear of the property. Development on adjacent properties has also resulted in berms on either side of this property, causing water to drain and pool at the base of the berms. It is possible that hydric soils may be forming in this area as a result.

The archeological survey conducted on the property by the NPS indicates the presence of artifacts in various locations around the property.

The property to the Northeast (behind the fast food establishment and adjacent to the river, is available for sale.

DATA NEEDS

- Drainage and Stormwater management information
- Water and sewer hookups
- T & E species surveys, wildlife surveys.
- Joseph McDowell House Management Plans.
- McDowell County Plans, Township of Marion City Plans?
- Recreation Plan for McDowell County (greenway trail)
- NRHP nomination for National Landmark (1972?) and other correspondence with NC SHPO

SUMMARY

The property has historic significance, and is a certified site on the Overmountain Victory National Historic Trail. The lot is approximately 3 acres that contains an existing structure, portions of which were built in the eighteenth century. The eighteenth century structure has been altered significantly on the interior and exterior and large additions have been constructed in the twentieth century. The building is currently not listed on the National Register of Historic Places, and is not eligible for listing, given the alterations to the building. To make the structure useable for the HQ/VC, the NPS would need to demolish the additions to the “historic” main building and reconfigure the interior (gut and rebuild) to accommodate administrative functions and visitor contact space, and allow for ADA accessibility and ensure fire and life safety.

Overmountain HQ/VCS EA and Feasibility Study

ALTERNATIVE 2: PROPERTY ADJACENT TO QUAKER MEADOWS HOUSE

This is a vacant, 2.75-acre parcel adjacent to the historic Quaker Meadows House owned by Crescent Resources, Inc., on which the NPS would construct a new 5,000 gsf HQ/VCS and parking. The site includes a building pad and remnants of a parking area from a previous dairy distribution operation. The Quaker Meadows McDowell House is a historic structure listed on the National Register, adjacent to the vacant property a few hundred yards from the intersection on St. Marys Church Road with NC Highway 181 in Morganton, Burke County, NC. The structure was built in 1812 after the Overmountain Victory campaign, but was owned by a family prominent in that campaign.

The Quaker Meadows McDowell House on the property to the north is a certified location on the Overmountain Victory National Historic Trail, and is currently owned and operated by the Historic Burke Foundation, Inc. The house is open to the public on Sunday afternoons from 2:00 pm to 4:00 pm from April to November (HBF Inc. Website 2010).

Figure 1.3 – Alternative 2 site aerial.



Source: National Agricultural Imagery Program, 2009, and Morganton, NC GIS.

Overmountain HQ/VCS EA and Feasibility Study

WATER RESOURCES

There is a stream to the north of the Quaker Meadows property, There is evidence of a drainage swale or an intermittent stream in the trees along NC 181. County GIS shows the stream crossing the proposed site near the existing driveway as it turns east from the trees, but it was not visible at the site visit.

VEGETATION

The vegetation on the property is grass, with a stand of mixed hardwoods adjacent to NC 181. An additional line of trees is to the north just to the west of the property boundary and another line of trees along the northernmost property line along the driveway, where the property abuts the Quaker Meadows House property.

SOILS

Alternative Site 2 is composed of UnB (Unison fine sandy loam, 2 to 8 % slopes). (<http://soildatamart.nrcs.usda.gov/Manuscripts/NC023/0/Burke.pdf>)

FLOODPLAINS

This site is not within the Federal Emergency Management Agency (FEMA) designated 100-year or 500-year floodplain.

WETLANDS

According to the USGS, USFWS wetlands online map database, there are no wetlands at this site.

THREATENED & ENDANGERED SPECIES

Several federally listed (threatened or endangered) species are on the McDowell County natural heritage inventory and could potentially be found at this site if there is appropriate habitat for the species. The species on the Burke County inventory are listed below:

Table 1.2 – Burke County, North Carolina, Threatened and Endangered Species.

Common Name	Scientific name	Federal Status	Record Status
Vertebrate:			
Allegheny woodrat	<i>Neotoma magister</i>	FSC	Current
American eel	<i>Anguilla rostrata</i>	FSC	Current
<u>Bald eagle</u>	<i>Haliaeetus leucocephalus</i>	BGPA	Current
Bog turtle	<i>Clemmys muhlenbergii</i>	T (S/A)	Current
Rafinesque's big-eared bat	<i>Corynorhinus rafinesquii</i>	FSC	Current
Red crossbill (Southern Appalachian)	<i>Loxia curvirostra</i>	FSC	Current
Southern Appalachian eastern woodrat	<i>Neotoma floridana haematorea</i>	FSC	Current
Invertebrate:			
Brook floater	<i>Alasmodonta varicosa</i>	FSC	Current
Cherokee clubtail	<i>Gomphus consanguis</i>	FSC	Obscure
Diana fritillary (butterfly)	<i>Speyeria diana</i>	FSC	Current
Edmund's snaketail	<i>Ophiogomphus edmunds</i>	FSC	Current
Margarita River skimmer	<i>Macromia margarita</i>	FSC	Current
Midget snaketail	<i>Ophiogomphus howei</i>	FSC	Current
Vascular Plant:			
Butternut	<i>Juglans cinerea</i>	FSC	Current

Overmountain HQ/VCS EA and Feasibility Study

Cuthbert turtlehead	<i>Chelone cuthbertii</i>	FSC	Current
Dwarf-flowered heartleaf	<i>Hexastylis naniflora</i>	T	Current
Gray's saxifrage	<i>Saxifraga caroliniana</i>	FSC	Current
Heller's blazing star	<i>Liatris helleri</i>	T	Current
Mountain golden heather	<i>Hudsonia montana</i>	T	Current
Small whorled pogonia	<i>Isotria medeoloides</i>	T	Current
Spreading avens	<i>Geum radiatum</i>	E	Historic
Sweet pinesap	<i>Monotropsis odorata</i>	FSC	Current
White irisette	<i>Sisyrinchium dichotomum</i>	E	Current
Nonvascular Plant:			
a liverwort	<i>Plagiochila sullivantii</i> var. <i>sullivantii</i>	FSC	Current
a liverwort	<i>Porella wataugensis</i>	FSC	Current
a liverwort	<i>Cephaloziella obtusilobula</i>	FSC	Historic
a liverwort	<i>Plagiochila sullivantii</i> var. <i>spinigera</i>	FSC	Historic

WILDLIFE OR WILDLIFE HABITAT

There does not appear to be any significant wildlife habitat at this site.

CULTURAL RESOURCES

The house is listed on the National Register of National Historic Places, and was built in 1812 by Colonel Charles McDowell, Jr.

The property adjacent to the is historically significant because on September 30, 1780, Colonel Charles McDowell, Major Joseph McDowell, and other Overmountain Men convened on the McDowell property at the original home site prior to marching to the Battle of Kings Mountain, and the extant home was constructed by Charles McDowell. Although the existing house is not the original visited by the Overmountain men in 1780, it stands in the vicinity of the original homesite, which was closer to the river in the bottomlands (NPS 1982; Historic Burke Foundation and Overmountain Victory Trail Association 2004). A 2004 archeological assessment of the Quaker meadows property and some portions of surrounding property found some prehistoric era artifacts, but no historic era artifacts at the hilltop site that they tested, although but the assessment confirmed that Old Yellow Mountain Road had run alongside the west of the house where the driveway serving the Crescent Resources property sits now. It is thought that there has been a road or trail in this vicinity for several centuries and the entrance drive to the Quaker Meadows house appears to have been off this road (Historic Burke Foundation and Overmountain Victory Trail Association 2004). It is unknown if there are archeological resources on the site or where they are.

The Trail's 1982 CMP lists the house and site as a non-federal historical resource that directly relates to the Overmountain Victory National Historic Trail (NPS 1982). The house is a certified site on the Overmountain Trail.

COST CONSIDERATIONS

The NPS would need to purchase the 2.72 acres. For the purposes of the Class C Cost estimate, assume fair market value for commercial/industrial property in Morganton, NC. New utility connections would also be required, although the area is served by public water and sewer.

DATA NEEDS

- Impacts to water resources? Drainage? Stormwater management? Are County streams mapped?
- T&E species surveys, wildlife surveys.
- Quaker Meadows McDowell House Management Plans, as applicable.

Overmountain HQ/VCS EA and Feasibility Study

- Burke County Plans, Morganton City Plans?

Overmountain HQ/VCS EA and Feasibility Study

ALTERNATIVE 3: CATAWBA MEADOWS PARK

The proposed site in Catawba Meadows Park is an approximately 4-acre site located adjacent to the main entrance of the park and offers good visitor access and visibility (Morganton 2009). There is an existing softball field [the aerial is out of date] on the site offered by the County. That area is shown on the park's facilities map as a general use field, with rental cabins and cabin facilities around the edges of that site (Catawba Meadows Park 2008). During the visit, workmen were constructing a zip line course where the cabin facilities are shown on the map. The acreage available to NPS would be provided by the City of Morganton at no cost. Catawba Meadows Park is located in Morganton, NC along the banks of the Catawba River. At 200+ acres, the park is the largest municipal park in western NC, offering abundant recreational and historic heritage opportunities for visitors. The Catawba River Greenway trail runs through the park along the Catawba River. The Greenway offers an extensive bike and pedestrian path network with nearly four miles of paved, accessible trails, 2.5 miles of which is a certified segment of the non-motorized Overmountain Trail (City of Morganton government website 2010). US 64, which is adjacent to the park, is part of the Overmountain Commemorative Motor Route.

Figure 1.4 – Alternative 3 site aerial.



Source: National Agricultural Imagery Program, 2009, and Morganton, NC GIS.

Overmountain HQ/VCS EA and Feasibility Study

WATER RESOURCES

Alternative 3 is in the Catawba River Basin, and the site is located approximately four hundred yards from the banks of the river. There is a stream to the west of the entrance road into the park.

VEGETATION

This site is dominated by landscaped areas and turf-covered sports fields mixed with some stands of mixed hardwoods and pines and rows of trees along the roads within the park and in the parking lots.

SOILS

Approximately 40.5 % UnB (Unison fine sandy loam, 2 to 8 % slopes), 16 % UnC (Unison fine sandy loam, 8 to 15 % slopes), 14.8% FaC2 (Fairview sandy clay loam, 15 to 25 % slopes, moderately eroded), 13.5% CvA (Colvard sandy loam, 0 to 3 % slopes, occasionally flooded), 13.1% FaD2 (Fairview sandy clay loam, 15 to 25 % slopes, moderately eroded), 2.0% RhE (Rhodhiss sandy loam, 25 to 45 % slopes).

FLOODPLAINS

This site is not within the FEMA designated 100-year or 500-year floodplain.

WETLANDS

According to the USGS, USFWS wetlands online map database, there are no wetlands at this site.

T&E SPECIES

Several federally listed (threatened or endangered) species are on the McDowell County natural heritage inventory and could potentially be found at or near this site be found in habitat appropriate for these species. These species are listed e listed in table 1.2.

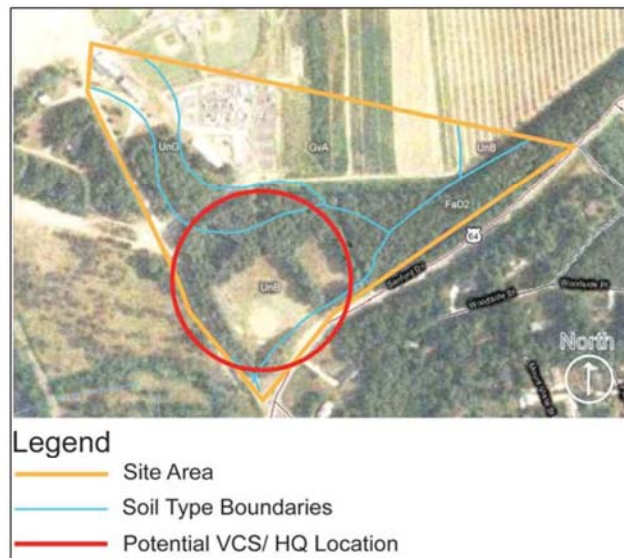
WILDLIFE OR WILDLIFE HABITAT

There does not appear to be any significant wildlife habitat at this site, as it is surrounded by land that is managed for sports activities. There is a 250-foot riparian buffer noted in the conceptual plan for the park, as well as a stream restoration project that could provide a wildlife passage corridor. These areas are at least several hundred feet from the proffered site, however (Catawba Meadows Park Amenities Map 2008).

CULTURAL RESOURCES

There are no known cultural resources at this site. Before the construction of the park, the site and surrounding area was agricultural fields with several stands of hardwood trees interspersed within the fields.

Figure 1.5—Soils for Alternative Site 3



Source: <http://websoilsurvey.nrcs.usda.gov>. 2010

Overmountain HQ/VCS EA and Feasibility Study

DATA NEEDS

- Impacts to water resources? Drainage? Stormwater management?
- T& E species surveys, wildlife surveys.
- Catawba Park Management Plans? Current maintenance and willingness to share maintenance duties with NPS?
- Burke County Plans, Township of Morganton City Plans?
- Master Plan for Catawba Meadows Park
- Any cultural significance of site?
- Geology and topography?
- Availability of Water and Sewer hookups

COST CONSIDERATIONS

Catawba Meadows Park (City of Morganton) maintenance department would be responsible for the upkeep of the grounds. Utility connection required, but would likely not be difficult.

Overmountain HQ/VCS EA and Feasibility Study

ALTERNATIVE 4: ROCKY FORD ACCESS

The Rocky Ford Access is a 6- acre site on a bluff above the banks of the Catawba River in Morganton, NC along US 64/NC18 that would be provided by the City of Morgantown at no cost. The site is also adjacent to the Catawba River Greenway, as established Overmountain non-motorized trail segment, and the Commemorative Motor Route.

Owned by the City of Morganton, NC, the site is currently undeveloped and heavily vegetated with kudzu and some mixed hardwoods. There is a roughly-graded gravel parking area to serve the trailhead of the Greenway. There is relatively steep topography on the site in the area offered for development. Also in this area is a drainage channel running from the road toward the river, and possibly a second channel under the kudzu. The bluff is about 20 feet above the river, and the site drops approximately 30 feet in elevation from the road to the top of the bluff at the greenway trail.

The City has suggested that the site can be developed in various ways, either jointly, with other compatible uses, or as an independent NPS facility, and that the area south of the entrance drive, between the greenway and the road is best for siting the facility. The City has also suggested that common grounds maintenance is possible given the site's close proximity to other City facilities such as Catawba Meadows Park, located approximately one-half mile away (Morganton 2009).

Figure 1.6– Alternative 4 site aerial.



Source: National Agricultural Imagery Program, 2009, and Morganton, NC GIS.

Overmountain HQ/VCS EA and Feasibility Study

WATER RESOURCES

Alternative 3 is part of the Catawba River Basin, and is immediately adjacent to the river.

VEGETATION

The site has one large stand of mixed hardwoods on the northern portion and southern portion of the site. A single row of hardwoods line the eastern boundary of the site with Lenoir Rd. There is woody vegetation along the river banks at the bottom of the bluff.

SOILS

Approximately 44.4% BoB (Biltmore loamy sand, 0 to 5 % slopes, occasionally flooded), 42.4% UnC (Unison fine sandy loam, 8 to 15 % slopes), 10.2% FaD2 (Fairview sandy clay loam, 15 to 25 % slopes, moderately eroded).

FLOODPLAINS

A small percentage of the site may be in the 0.2% annual chance flood hazard zone, and a somewhat larger portion of the site may be in the AE flood zone, which is the 100-year flood zone for which Base Flood Elevations have been determined. A 100 year flood is a flood that has a 1 percent annual chance of occurring. Mandatory flood insurance purchase requirements and floodplain management standards apply.

Figure 1.7—Soils at Alternative Site 4.



Source: <http://websoilsurvey.nrcs.usda.gov>, 2010

WETLANDS

Wetlands are classified in taxonomically by system, subsystem, class, subclass and special modifiers. A small percentage of the western side of the site, at the bottom of the bluff is an L1UBHh wetland, defined as follows:

- *System*- The Lacustrine System includes wetlands and deepwater habitats with all of the following characteristics: 1. situated in a topographic depression or a dammed river channel; 2. lacking trees, shrubs, persistent emergents, emergent mosses or lichens with greater than 30% areal coverage; 3. total area exceeds 8 hectares (20 acres).
- *Subsystem*- The Limnetic subsystem includes all deep-water habitats within the Lacustrine System.
- *Class*- Unconsolidated Bottom includes wetlands and deepwater habitats with at least 25% cover of particles smaller than stones (less than 6-7 cm), and a vegetative cover less than 30%.
- *Subclass/ Modifiers*- This area is permanently flooded with water covering the land surface throughout the year. In addition, these wetlands are diked/impounded wetlands, created or modified by a man-made barrier or dam which obstructs the inflow or outflow of water.

Lacustrine wetlands provide many ecological benefits including habitat for invertebrates, anadromous and resident fish, wetlands associated bird and mammal species. Lacustrine wetlands also help increase native plant richness, provide shoreline stabilization, and have the potential to remove sediments, toxic metals, and toxic organic compounds from the watershed.

Overmountain HQ/VCS EA and Feasibility Study

THREATENED & ENDANGERED SPECIES

Several federally listed (threatened or endangered) plants and animal species are on the Burke County natural heritage inventory and could potentially be found at this site in habitat appropriate for these species. The species on the Burke County inventory are listed in table 1.2.

WILDLIFE OR WILDLIFE HABITAT

There does not appear to be any significant wildlife habitat at this site.

CULTURAL RESOURCES

There are no known cultural resources at this site. The site is currently undeveloped and partially wooded.

COST CONSIDERATIONS

Catawba Meadows Park (City of Morganton) maintenance department would be responsible for the upkeep of the grounds. There is an existing gravel parking lot adjacent to the property that the NPS can use, but should be upgraded (it is currently muddy and rutted) so parking lot costs would be lower than at other sites. Utility connections required, extensive site prep would be required.

OTHER CONSIDERATIONS

The entrance to the property off NC 18-US 64 could be dangerous, as traffic travels at relatively high speed, and the entrance is difficult to see. Turning lanes would need to be installed.

DATA NEEDS

- Impacts to water resources? Drainage? Stormwater management? Local requirements for riparian buffers?
- T& E species surveys, wildlife surveys.
- Burke County Plans, Township of Morganton City Plans?
- Master Plan for Catawba Meadows Park
- Any cultural significance of site?
- Geology and topography?

Overmountain HQ/VCS EA and Feasibility Study

IMPACT TOPICS COMMON TO ALL ACTION ALTERNATIVES

VISITOR USE AND EXPERIENCE

The proposed action alternatives would result in impacts on visitor use and experience, providing interpretive and educational opportunities and an increase in visitor amenities and respite facilities.

PUBLIC SAFETY

The proposed action alternatives would result in potential impacts to public safety.

PARK MANAGEMENT AND OPERATIONS

All action alternatives would require increased maintenance and operational costs including an increase in staffing and facilities, which would result in long term impacts to park management and operations.

AESTHETICS AND VISUAL RESOURCES

The addition of a VC/HQ to any of the proposed site would add a new visual element and potentially impact the aesthetic and visual resources. This impact topic may be folded into Visitor Use and Experience.

SOCIOECONOMICS

There are potential short term impacts to socioeconomics resulting from increased employment opportunities and business during construction. There are also potential long term impacts to socioeconomics resulting from an overall increase in tourism and visitors related to the VC/HQ.

TRANSPORTATION

There are potential short term impacts to transportation during the construction period as well as potential long term impacts from increased visitor traffic resulting from the new VC/HQ.

AIR QUALITY

There are potential negligible short term impacts to air quality during the construction period.

SOUNDSCAPES

There are potential short term impacts to soundscapes during the construction period. This impact topic may be folded into Visitor Use and Experience.

DATA NEEDS

- Approximate increase in NPS staff and maintenance requirements.
- Potential road closures resulting from construction at the proposed locations.
- Potential visitor increases for both transportation and visitor use.

[This page was intentionally left blank.]

APPENDIX C: IMPAIRMENT DETERMINATION

[This page intentionally left blank.]

The National Park Service (NPS) has determined that the implementation of the NPS preferred alternative *will not* constitute an impairment to the resources or values of **Overmountain Victory Historic Trail (the Trail)**. This conclusion is based on consideration of the thorough analysis of the environmental impacts described in the environmental assessment (EA), relevant scientific studies, the comments provided by the public and others, and the professional judgment of the decision-maker guided by the direction in NPS *Management Policies 2006*. As described in the EA, implementation of the NPS selected alternative *will not* result in impairment of park resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's management plan or other relevant NPS planning documents as being of significance.

Alternative D, Rocky Ford Access Site (NPS Preferred Alternative) will result in short-term and long-term negligible to moderate adverse impacts on some of the Trail's resources, which include floodplains, soils, water resources, wildlife habitat, archeological resources, and historic structures and sites. This site is currently not under NPS ownership, although it is the location of a certified walk-able Trail segment, and is adjacent to the Trail's Commemorative Motor Route.

Floodplains. The candidate site is located along the banks of the Catawba River in Morganton and contains both 100-year and 500-year floodplain. Although the floodplain is not necessary to fulfill the purposes for which the park was established, it is an important physical resource that allows for continued ecological and geomorphological integrity of the river. The floodplain at the site has been left relatively undisturbed. The floodplain is key to the natural integrity of the site, and has some historic significance, in that the Overmountain Men likely marched through the area, possibly at this site crossed through the floodplain, and forded the river less than a mile upstream.

The resource is not identified as significant in the park's planning documents.

Construction of a Headquarters/Visitor Contact Station (HQ/VCS) at Rocky Ford Access would not result in impairment of the resource, as all structures would be located out of the floodplain. A small amount of disturbance would be necessary in the floodplain to incorporate the existing greenway into the site design, but there would be no noticeable effects on floodplain function or values. Floodplain functions and values would not be affected, and there also would be no risk of harm to life or property from placement of a structure in a floodplain.

Soils. The soils on the Rocky Ford Access site are typical of the area and topography and are in good condition. Implementation of this alternative would result in construction of a new HQ/VCS, necessitating soil disturbance and some compaction. This will result in short- and long-term minor impacts that would be mitigated with sediment and erosion control measures, and would not result in impairment of the resource.

Although soils are an important resource, they are not identified as a critical to the historic purposes of the park.

Siting an HQ/VCS at the Rocky Ford Access site would not result in impairment of soils because adverse impacts would be minimal (minor) and would be mitigated with sediment and erosion control measures and stabilized post-construction.

Water Resources. The reach of the Catawba River that flows through Morganton is in good condition, not listed as having any water quality problems, and serves as the city's source for drinking water. The Overmountain Men followed the Catawba and forded it during their march. It is therefore an important resource to the mission of the Trail, although it is not called out specifically.

Siting an HQ/VCS at the Rocky Ford Access site would not result in impairment of water resources because adverse impacts would be minimal (negligible to minor), and would be mitigated with sediment and erosion control measures during construction, stormwater management measures to treat for water quality and water quantity, and there would be additional protective measures such as establishment of riparian buffers and the use of pervious pavement that would further attenuate volume of stormwater runoff.

Vegetation. Vegetation at this site is in average condition. There are some large, healthy trees at the edges of the parking area, but a large area of kudzu (*Pueraria lobata*), which is an exotic and invasive vine, has established itself in an area that was cleared previously. Healthy native vegetation reminiscent of the plant communities found in the area in the late 18th century are helpful in interpreting the march for which the Trail was created, but are not necessary to do so. Although vegetation is a very useful feature for the Trail that can help convey the landscape through which the Overmountain Men marched, it is not key to the natural or cultural integrity of the Trail or its enjoyment. Vegetation is not identified as a significant resource in the park's planning documents.

There would be no impairment to vegetation related to the development of this site as the Trail's HQ/VCS; a large area has already been cleared, so vegetation disturbance would be limited and additional vegetation would be planted to replace removed vegetation and augment vegetation on the site. The large area of kudzu (*Pueraria lobata*) would be replaced with native vegetation outside the limits of the site improvements.

Wildlife and Habitat. Habitat at the Rocky Ford Access site is in average to less than average condition. Lenoir Road limits passage of wildlife through the area, and the site has been disturbed in the past. Although there is a relatively undisturbed and relatively large tract of forest to the south of the site, there is a parking lot in a cleared area at the site, and a large area of kudzu has taken over a previously cleared area before transitioning to a healthier stand of mostly deciduous forest.

Wildlife and its habitat, is an important resource, but is not key to the natural or cultural integrity of the Trail or its enjoyment, and is not necessary to fulfill the purposes related to interpretation and appreciation of an important campaign in the Revolutionary War for which the Trail was established, although maintenance of a natural environment would allow visitors to more easily imagine the landscape during the time of the campaign.

Wildlife habitat would not be impaired by the construction of an HQ/VCS at Rocky Ford Access, because there would be only negligible to minor adverse impacts to the site caused by development of the HQ/VCS, and these impacts would be mitigated with the

removal of the kudzu, new landscaping that would enhance habitat, and the establishment of a riparian buffer that would also enhance both terrestrial and aquatic habitat.

Archeological Resources. Although there is a moderate likelihood that archeological resources (probably prehistoric) could be found at the site, there are currently no known or documented archeological resources on the site. Although prehistoric archeological resources are not necessary to fulfill the purposes for which the Trail was created, they are nevertheless important. Archeological resources relating to the time of the Overmountain campaign, however, would greatly enhance park purposes, and interpretation of such resources would enhance visitor experience and enjoyment.

Although disturbance of archeological resources constitutes adverse effects, consultation with the NC SHPO and mitigation would ensure that there is no impairment, and that any resources discovered on the site would be protected, managed, and interpreted, resulting in long term beneficial impacts.

Historic Structures and Sites. There are no Historic structures at the Rocky Ford Access site, or in the Area of Potential Effect for the site. Therefore, there would be no impact to historic structures or site related to this alternative, and no impairment.

[This page was intentionally left blank.]

APPENDIX D: ADDITIONAL SOCIOECONOMIC DATA

[This page intentionally left blank.]

Appendix E

Additional Socioeconomic Data

Employment by Industry

Table E-1: Burke County, North Carolina Employment by Industry, 2001 and 2008

Industry	Burke County					North Carolina				
	2001		2008		% Change (2001-2008)	2001		2008		% Change (2001-2008)
	Number	Percent	Number	Percent		Number	Percent	Number	Percent	
Farm	748	1.5%	626	1.2%	-16.3%	82,789	1.7%	64,922	1.2%	-21.6%
Agriculture and Forestry Services	(D)	N/A	(D)	N/A	N/A	22,378	0.5%	23,657	0.4%	5.7%
Mining	(D)	N/A	(D)	N/A	N/A	6,408	0.1%	7,463	0.1%	16.5%
Utilities	57	0.1%	66	0.1%	15.8%	(D)	N/A	13,651	0.2%	N/A
Construction	2,944	5.8%	3,433	6.6%	16.6%	341,507	7.1%	392,796	7.1%	15.0%
Manufacturing	12,982	25.8%	9,134	17.6%	-29.6%	717,087	14.8%	537,037	9.8%	-25.1%
Wholesale Trade	1,373	2.7%	962	1.9%	-29.9%	174,932	3.6%	199,740	3.6%	14.2%
Retail Trade	5,003	9.9%	4,716	9.1%	-5.7%	536,129	11.1%	566,572	10.3%	5.7%
Transportation and Warehousing	1,024	2.0%	1,520	2.9%	48.4%	149,363	3.1%	153,626	2.8%	2.9%
Information	310	0.6%	290	0.6%	-6.5%	(D)	N/A	86,063	1.6%	N/A
FIRE*	2,471	4.9%	3,981	7.7%	61.1%	322,630	6.7%	465,175	8.5%	44.2%
Professional, Scientific and Technical Services	1,511	3.0%	1,931	3.7%	27.8%	226,802	4.7%	302,767	5.5%	33.5%
Management of Companies and Enterprises	393	0.8%	280	0.5%	-28.8%	62,898	1.3%	77,351	1.4%	23.0%
Administrative and Waste Services	1,793	3.6%	2,568	5.0%	43.2%	271,322	5.6%	346,184	6.3%	27.6%
Educational Services	334	0.7%	449	0.9%	34.4%	64,741	1.3%	102,663	1.9%	58.6%
Health Care and Social Assistance	4,903	9.7%	5,990	11.6%	22.2%	384,349	7.9%	527,888	9.6%	37.3%
Arts, Entertainment, and Recreation	558	1.1%	763	1.5%	36.7%	76,292	1.6%	100,545	1.8%	31.8%
Accommodation and Food Services	2,394	4.8%	2,426	4.7%	1.3%	296,128	6.1%	370,176	6.7%	25.0%
Other Services, except Public Administration	2,951	5.9%	3,552	6.9%	20.4%	251,735	5.2%	308,378	5.6%	22.5%
Government and Government Enterprises	8,398	16.7%	8,791	17.0%	4.7%	745,987	15.4%	851,154	15.5%	14.1%
TOTAL	50,386		51,763			4,840,564		5,497,808		13.6%

Source: U.S. Department of Commerce, Bureau of Economic Analysis, 2010c.

Table E-2: McDowell County, North Carolina Employment by Industry, 2001 and 2008

Industry	McDowell County					North Carolina				
	2001		2008		% Change (2001-2008)	2001		2008		% Change (2001-2008)
	Number	Percent	Number	Percent		Number	Percent	Number	Percent	
Farm	404	2.0%	432	2.1%	6.9%	82,789	1.7%	64,922	1.2%	-21.6%
Agriculture and Forestry Services	(D)	N/A	73	0.4%	N/A	22,378	0.5%	23,657	0.4%	5.7%
Mining	(D)	N/A	152	0.7%	N/A	6,408	0.1%	7,463	0.1%	16.5%
Utilities	(D)	N/A	(D)	N/A	N/A	(D)	N/A	13,651	0.2%	N/A
Construction	1,302	6.3%	1,366	6.6%	4.9%	341,507	7.1%	392,796	7.1%	15.0%
Manufacturing	8,064	39.3%	6,153	29.5%	-23.7%	717,087	14.8%	537,037	9.8%	-25.1%
Wholesale Trade	384	1.9%	373	1.8%	-2.9%	174,932	3.6%	199,740	3.6%	14.2%
Retail Trade	1,952	9.5%	2,198	10.6%	12.6%	536,129	11.1%	566,572	10.3%	5.7%
Transportation and Warehousing	(D)	N/A	(D)	N/A	N/A	149,363	3.1%	153,626	2.8%	2.9%
Information	130	0.6%	70	0.3%	-46.2%	(D)	N/A	86,063	1.6%	N/A
FIRE*	605	3.0%	987	4.7%	63.1%	322,630	6.7%	465,175	8.5%	44.2%
Professional, Scientific and Technical Services	(D)	N/A	(D)	N/A	N/A	226,802	4.7%	302,767	5.5%	33.5%
Management of Companies and Enterprises	(D)	N/A	(D)	N/A	N/A	62,898	1.3%	77,351	1.4%	23.0%
Administrative and Waste Services	452	2.2%	776	3.7%	71.7%	271,322	5.6%	346,184	6.3%	27.6%
Educational Services	(D)	N/A	(D)	N/A	N/A	64,741	1.3%	102,663	1.9%	58.6%
Health Care and Social Assistance	(D)	N/A	(D)	N/A	N/A	384,349	7.9%	527,888	9.6%	37.3%
Arts, Entertainment, and Recreation	154	0.8%	288	1.4%	87.0%	76,292	1.6%	100,545	1.8%	31.8%
Accommodation and Food Services	1,124	5.5%	1,373	6.6%	22.2%	296,128	6.1%	370,176	6.7%	25.0%
Other Services, except Public Administration	885	4.3%	1,137	5.5%	28.5%	251,735	5.2%	308,378	5.6%	22.5%
Government and Government Enterprises	2,797	13.6%	2,950	14.2%	5.5%	745,987	15.4%	851,154	15.5%	14.1%
TOTAL	20,508		20,823			4,840,564		5,497,808		13.6%

Source: U.S. Department of Commerce, Bureau of Economic Analysis, 2010c.

Table E-3: Cherokee County, South Carolina Employment by Industry, 2001 and 2008

Industry	Cherokee County					South Carolina				
	2001		2008		% Change (2001-2008)	2001		2008		% Change (2001-2008)
	Number	Percent	Number	Percent		Number	Percent	Number	Percent	
Farm	521	2.1%	408	1.6%	-21.7%	32,461	1.4%	29,578	1.1%	-8.9%
Agriculture and Forestry Services	(D)	N/A	(D)	N/A	N/A	10,452	0.5%	10,391	0.4%	-0.6%
Mining	(D)	N/A	(D)	N/A	N/A	2,375	0.1%	2,944	0.1%	24.0%
Utilities	100	0.4%	125	0.5%	N/A	12,488	0.6%	13,066	0.5%	4.6%
Construction	2,293	9.2%	1,895	7.4%	-17.4%	152,634	6.8%	173,633	6.7%	13.8%
Manufacturing	8,063	32.2%	6,351	24.8%	-21.2%	318,781	14.2%	249,986	9.7%	-21.6%
Wholesale Trade	744	3.0%	729	2.8%	-2.0%	68,655	3.1%	78,383	3.0%	14.2%
Retail Trade	2,426	9.7%	2,691	10.5%	10.9%	264,979	11.8%	286,112	11.1%	8.0%
Transportation and Warehousing	1,192	4.8%	1,411	5.5%	N/A	60,513	2.7%	69,542	2.7%	14.9%
Information	182	0.7%	101	0.4%	-44.5%	33,057	1.5%	34,113	1.3%	3.2%
FIRE	845	3.4%	1,161	4.5%	37.4%	143,320	6.4%	222,350	8.6%	55.1%
Professional, Scientific and Technical Services	314	1.3%	(D)	N/A	N/A	88,263	3.9%	121,512	4.7%	37.7%
Management of Companies and Enterprises	0	0.0%	(D)	N/A	N/A	11,194	0.5%	16,674	0.6%	49.0%
Administrative and Waste Services	645	2.6%	1,269	5.0%	96.7%	138,671	6.2%	175,468	6.8%	26.5%
Educational Services	472	1.9%	735	2.9%	N/A	25,916	1.2%	35,080	1.4%	35.4%
Health Care and Social Assistance	1,240	5.0%	1,568	6.1%	N/A	147,815	6.6%	190,256	7.4%	28.7%
Arts, Entertainment, and Recreation	102	0.4%	205	0.8%	101.0%	34,540	1.5%	46,868	1.8%	35.7%
Accommodation and Food Services	1,577	6.3%	1,835	7.2%	16.4%	169,311	7.5%	202,094	7.8%	19.4%
Other Services, except Public Administration	1,557	6.2%	1,967	7.7%	26.3%	150,407	6.7%	219,198	8.5%	45.7%
Government and Government Enterprises	2,639	10.5%	2,658	10.4%	0.7%	377,827	16.8%	402,032	15.6%	6.4%
TOTAL	25,026		25,603			2,243,659		2,579,280		

Source: U.S. Department of Commerce, Bureau of Economic Analysis, 2010c.

Table E-4: Fire Departments by County

County	Fire Department	Type	Personnel	Number Of Stations
Burke	Brendletown Fire & Rescue	Volunteer	41	2
	Chesterfield Fire Rescue	Volunteer	20	1
	Drexel Fire Department	Volunteer	23	1
	Enola Volunteer Fire Department	Volunteer	35	1
	George Hildebran Fire/Rescue	Volunteer	30	1
	Glen Alpine Volunteer Fire Department	Volunteer	31	1
	Icard Township Fire & Rescue Inc.	Mostly Volunteer	41	1
	Jonas Ridge Fire & Rescue	Volunteer	44	2
	Lovelady Volunteer Fire Department Inc.	Volunteer	31	1
	Morganton Public Safety	Mostly Career	106	3
	Oak Hill Fire & Rescue	Mostly Volunteer	34	2
	Salem Fire and Rescue Protection Association Inc.	Mostly Volunteer	34	2
	South Mountains Volunteer Fire Department	Mostly Volunteer	66	1
	Triple Community Fire Department Inc.	Mostly Volunteer	31	1
	Valdesse Fire Department	Mostly Volunteer	27	1
Cherokee	Antioch Volunteer Fire Department	Volunteer	32	1
	Asbury Rehoboth Volunteer Fire Department	Volunteer	26	1
	Blacksburg Volunteer Fire Department	Volunteer	50	1
	Buffalo Volunteer Fire Department of Cherokee County	Volunteer	26	2
	Cherokee Creek Volunteer Fire Department	Volunteer	42	2
	CKC Volunteer Fire Department	Volunteer	42	1
	Corinth Volunteer Fire Department Inc.	Volunteer	34	1
	Draytonville- McKown Mountain- Wilksville Volunteer Fire Department	Volunteer	40	1
	Gaffney Fire Department	Career	36	3
	Goucher-White Plains Volunteer Fire Department	Volunteer	25	1
	Grassy Pond Fire Department	Mostly Volunteer	46	1
	Twin Rivers Volunteer Fire Department	Volunteer	18	1
McDowell	Ashford North Cove Volunteer Fire Department	Volunteer	20	1
	Glenwood Volunteer Fire Department	Volunteer	36	1
	Marion Fire Department	Mostly Volunteer	34	1
	Nebo Volunteer Fire Department Inc.	Volunteer	33	1
	P.G. Volunteer Fire Department Inc.	Volunteer	38	1
	Sugar Hill - Montford Cove Volunteer Fire Department	Volunteer	30	1
	The Crooked Creek Township Volunteer Fire Department	Volunteer	40	1

Source: National Fire Department Census, U.S. Fire Administration, 2010.

[This page intentionally left blank.]



As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering wise use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historic places, and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people. The department also promotes the goals of the Take Pride in America campaign by encouraging stewardship and citizen responsibility for the public lands and promoting citizen participation in their care. The department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.