

Joint Curatorial Collections Facility

Environmental Assessment



Prepared by
Great Smoky Mountains National Park
Gatlinburg, Tennessee
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SUMMARY

This environmental assessment examines two alternatives; the No Action Alternative and the National Park Service Preferred Alternative. The Preferred Alternative considers the construction of a Joint Curatorial Collections Facility in Townsend, Tennessee. This facility would serve as a curatorial and storage site for National Park Service museum collections from Andrew Johnson National Historic Site (ANJO), Big South Fork National River and Recreation Area (BISO), Cumberland Gap National Historical Park (CUGA), Great Smoky Mountains National Park (GRSM), and Obed Wild and Scenic River (OBED). The facility would also store and make available archival collections from GRSM.

The Preferred Alternative would have no or negligible impacts on air resources, geology, soils, water resources, vegetation and wildlife, floodplains, wetlands, threatened and endangered species, candidate species and species of special concern, surface water and groundwater, archeological resources, historic structures, cultural landscapes, ethnographic resources, wild and scenic rivers, environmental justice, economics and socioeconomics, transportation, visitor experience, Indian trust resources, lightscapes, soundscapes, prime and unique farmlands, and greenhouse gas emissions and climate change.

Two topics were identified which would be impacted by the construction of a Joint Curatorial Collections Facility. Long-term direct beneficial impacts would occur to museum collections and long-term minor adverse impacts would be anticipated to park operations and management.

Notes to Reviewers and Respondents

If you wish to comment on the environmental assessment, you may mail comments to the name and address below. Our practice is to make comments including names and home addresses of the respondents available for public review during regular business hours. Individual respondents may request that we withhold their home address from the public record, which we will honor to the extent allowable by law. If you want us to withhold your name and address, you must state this prominently at the beginning of your comment. We will make all submissions from organizations and businesses, and from individuals identifying themselves as official representatives of organizations and businesses, available for public inspection in their entirety.

Please address comments to:

Superintendent; Great Smoky Mountains National Park; Attn: Joint Curatorial Collections
Facility; 107 Park Headquarters Road; Gatlinburg, Tennessee, 37738 or via email

Comments may also be submitted via the National Park Service's Planning, Environment, and Public Comment website at <http://parkplanning.nps.gov>. This environmental assessment will be available for public review for 36 days. To access the project site, select Great Smoky Mountains National Park and click on the "Project Title" link. The public can provide comments directly on the project site by clicking on "Comment on document" from the menu on the left.

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1.0 INTRODUCTION

Great Smoky Mountains National Park (GRSM, the park) is considering the construction of permanent facilities to accommodate staff and museum, archival, and library collections from GRSM and several surrounding National Park Service (NPS) units in Tennessee. Currently, museum collections are stored at individual park offices and in leased office spaces. The proposed curatorial facility would allow museum collections from NPS units across Tennessee to be consolidated and properly processed, stored, and catalogued according to National Park Service standards. This Environmental Assessment (EA) will analyze the proposed project alternatives and their potential impacts on the environment. The EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, regulations of the Council on Environmental Quality (CEQ) [40 Code of Federal Regulations (CFR) 1508.9], NPS Director's Order (DO) 12 (Conservation, Planning, Environmental Impact Analysis, and Decision-making 2001), and the National Historic Preservation Act (NHPA) of 1996 (as amended).

1.1 Background

The Joint Curatorial Collections Facility (JCCF) is proposed to be built on land that will be donated to the federal government by the Great Smoky Mountain Heritage Center. The new facility would be located adjacent to the Heritage Center property, on land owned by the federal government and managed by the National Park Service.

Museum collections in National Parks are primary park resources, directly related to other resources, and are determined by the mission of the park as stated in legislation, proclamation, or executive order. As stated in NPS-28, “Cultural Resource Management Guideline,” Chapter 9, “Museum collections (objects, specimens, and archival and manuscript collections) are important park resources in their own right as well as being valuable for the information they provide about processes, events, and interactions among people and the environment. Natural and cultural objects and their associated records provide baseline data, serving as scientific and historical documentation of the park’s resources and purpose.”

The park’s museum collections are comprised of historic and archeological artifacts and objects, biological specimens, geologic samples, archival materials, and library collections. Archival and library collections at an individual network park would continue to be stored at that particular park.

Great Smoky Mountains National Park collections are not housed at one location. Biological and geological specimens are currently housed and permanently stored at the state-of-the-art Twin Creeks Science Center. Cultural museum collections, including historic and archeological artifacts and objects, archival records, and library holdings are housed at several different facilities, including the Sugarlands Visitor Center, the Office of Science and Technology (OSTI) at Oak Ridge, Tennessee, and at the Southeast Archeological Center in Tallahassee, Florida.

Annual fees are assessed for leasing space to house the majority of the park’s historic collections at OSTI. Visits to the facility are infrequent due to staffing and travel times (in excess of 3 hours round trip). Cataloging and the general care of the collections is limited.

To date, GRSM's cultural museum collections include more than 144,000 archeological and historic objects, and 450,000 archival records. The collections are representative of Native American use of park lands, as well as items associated with Euro-American settlement, industry, and the establishment of the park. Items include household objects, furnishings, and ceramic pottery sherds. Archival collections include, but are not limited to, land tenure records, oral histories, park resource management records, and historic photographs. Library materials include primary and secondary sources of park history, natural history, and other regional topics.

These collections will undoubtedly increase in size and importance through time, as new archeological survey materials are collected, archival collections are generated, and historic material is collected.

Andrew Johnson National Historic Site (ANJO), Big South Fork National River and Recreation Area (BISO), Cumberland Gap National Historical Park (CUGA), Great Smoky Mountains National Park, and Obed Wild and Scenic River (OBED) contain collections with a combined total of 278,700 cultural artifacts. Like GRSM, these collections are stored in a variety of locations, none of which meet or exceed current museum standards or requirements, placing them at risk of permanent loss.

1.2 Purpose and Need

The purpose of the project is to ensure that ANJO, BISO, CUGA, GRSM and OBED (i.e., the participating parks) collections are acquired, accessioned, catalogued, preserved, protected, and made available for access and use according to NPS standards and guidelines (NPS Handbook 2004 and Directors Order-24, Museum Collections Management 2000). These purposes can be achieved through the construction of a new and modern research and curatorial facility that would serve several NPS units in Tennessee.

Oftentimes, cultural museum collections have been stored in areas such as basements or unused offices. Specifically, GRSM historic object collections are housed in an office environment and the park is required to pay annual leasing fees that increase annually. These facilities generally do not have adequate climate controls and are not readily accessible to visitors and/or researchers. In addition, cultural museum collection duties are usually assigned as collateral duties to a park staff member. These individuals frequently do not have the education and/or experience to adequately address collections management issues.

In 2006, in response to an NPS directive, these and other curatorial problems were brought to light. The directive sought to create and enhance efficiencies in the NPS Museum Management Program through the consolidation of curatorial facilities and staffing. The idea was that several parks could form a collections management network. This would enable the parks to provide a centralized facility that meets the space, climate, and staffing required for the long-term care of the collections. The present effort is designed to examine the feasibility of providing a curatorial facility at GRSM that would serve as an NPS network curatorial facility for NPS units in Tennessee. These Parks include Andrew Johnson National Historic Site, Big South Fork National River and Recreation Area, Cumberland Gap National Historical Park, Great Smoky Mountains National Park, and Obed Wild and Scenic River. ANJO, BISO, CUGA, and OBED contain collections with a combined total of 278,700 cultural artifacts. Like those at GRSM, these collections are stored in a variety of locations such as offices, basements, etc., none of which meet or exceed current museum standards or requirements, placing them at risk of permanent loss.

1.3 Project and Objectives

Based on the purpose and need for the project and the internal scoping conducted, the following objectives have been identified for the implementation of the construction of a curatorial facility. The overall goal of the project is to improve the care and preservation of the collection. In addition, access to the collections by park staff, the visiting public, and researchers are to be enhanced. Specific objectives to meet these goals include:

- Provide appropriate, adequate, and consolidated storage of collections;
- Maintain the collection in one location to facilitate convenient supervision of artifact research, preservation, loaning, and curation by park staff;
- Provide a safe environment for park employees who handle the collection;
- Provide workspace for research, cleaning, preservation, restoration, and other curatorial duties.

1.4 Decision to be Made

The National Environmental Policy Act of 1969 (NEPA) requires consideration of the environmental impacts of proposed federal actions. This Environmental Assessment (EA) has been prepared to assist the NPS in developing solutions for the care and long-term preservation of cultural museum collections, as well as to provide opportunities for educators, park staff, researchers, and the interested public to research and interpret the collections.

1.5 Applicable Laws, Policies, and Regulations

1.5.1 The National Park Service Organic Act

In 1916, Congress created the National Park Service in the Department of the Interior with the Organic Act [16 United States Code (U.S.C.) 1, the National Park Service Organic Act]. The Organic Act states that NPS will “...conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

1.5.2 The National Environmental Policy Act of 1969, as amended

The National Environmental Policy Act of 1969, as amended, is “...a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.” It instructs all agencies of the federal government to, in part, utilize a systematic and interdisciplinary approach to ensure integration of natural and social sciences into planning and decision-making which may have an effect on the human environment. This document discloses the design, planning, decision-making process, and the environmental consequences of the proposed action as required by NEPA, and as prescribed in NPS Director’s Order (DO) 12 and associated handbook (2001).

1.5.3 Code of Federal Regulations, Title 36, Parks, Forests, and Public Property, Chapter 1 National Park Service, Department of the Interior, Part 79 Curation of Federally-owned and Administered Archeological Collections (CFR 36, Part 79)

“The regulations in this part establish definitions, standards, procedures and guidelines to be followed by federal agencies to preserve collections of prehistoric and historic material remains, and associated records, recovered under the authority of the Antiquities Act (16 U.S.C. 431–433), the Reservoir Salvage Act (16 U.S.C. 469–469 c), section 110 of the National Historic Preservation Act (16 U.S.C. 470 h –2) or the Archeological Resources Protection Act (16 U.S.C. 470 aa-mm). They establish:

- (1) Procedures and guidelines to manage and preserve collections;
- (2) Terms and conditions for federal agencies to include in contracts, memoranda, agreements or other written instruments with repositories for curatorial services;
- (3) Standards to determine when a repository has the capability to provide long-term curatorial services; and,
- (4) Guidelines to provide access to, loan and otherwise use collections.”

§ 79.5 Management and preservation of collections. “The Federal Agency Official is responsible for the long-term management and preservation of preexisting and new collections subject to this part. Such collections shall be placed in a repository with adequate long-term curatorial capabilities, as set forth in §79.9 of this part, appropriate to the nature and content of the collections.”

§ 79.9 Standards to determine when a repository possesses the capability to provide adequate long-term curatorial services. “The Federal Agency Official shall determine that a repository has the capability to provide adequate long-term curatorial services when the repository is able to: (in part) accession, label, catalog, clean, store, maintain, inventory and conserve the particular collection on a long-term basis using professional museum and archival practices; maintain complete and accurate records of the collection; dedicate the requisite facilities, equipment and space to properly store, study and conserve the collection; keep the collection under physically secure conditions within storage, laboratory, study and any exhibition areas; require qualified staff; inspect the collection; conduct inventories; provide access for scientific, educational and religious uses.”

1.5.4 NPS Management Policies (2006)

The National Park Service Management Policies, updated in 2006, “sets the framework and provides direction for all management decisions.” As a steward of many of the nation’s most important cultural resources, every unit of the national park system must carry out management of the unit as guided in the Management Policies and “in a manner consistent with legislative and regulatory provisions” and Secretary of the Interior policies and procedures.

1.6 Scoping

Scoping is an effort to involve agencies and the general public in determining issues to be addressed in an EA. Scoping is used to:

- Determine important issues to be given detailed analysis in the EA and eliminate issues not requiring detailed analysis;
- Allocate assignments among the interdisciplinary team members and/or other participating agencies;
- Identify related projects and associated documents; Identify permits, surveys, consultations, etc., required by other agencies; and
- Create a schedule that allows adequate time to prepare and distribute the EA for public review and comment before a final decision is made.

Scoping includes any interested agency or any agency with jurisdiction by law or expertise including the State Historic Preservation Office (SHPO) and associated Indian tribes to obtain early input. GRSM staff conducted internal scoping for the project. This interdisciplinary process defined the purpose and need, identified potential actions to address the need, determined the likely issues and impact topics, and identified the relationship of the proposed action to other planned projects at the park. The park interdisciplinary team review resulted in a determination that the proposed action would have negligible impacts on the human environment.

2.0 ALTERNATIVES

There are two alternatives for the Joint Collections Curatorial Facility project being carried forward in the Environmental Assessment; a "No Action Alternative" and a "Build Alternative". Two other alternatives were considered but rejected. The following details the alternatives taken forward and provide the justifications for why the other alternatives were not carried forward.

2.1 Alternative A (No Action Alternative)

Under alternative A there would be no changes made to the housing of the parks' cultural museum collections. Existing facilities would be used and there would be no change in staffing or in the care and preservation of cultural museum collections. The No Action Alternative is presented as a requirement of the National Environmental Policy Act, and is the baseline condition to which proposed activities are compared.

2.2 Alternative B (Build Alternative, Preferred Alternative)

Under Alternative B the park proposes to construct a permanent curatorial storage facility, research center and cultural resources offices for Great Smoky Mountains National Park and for four other Tennessee National Park Service units. GRSM has been in ongoing discussions with Andrew Johnson National Historic Site, Big South Fork National River and Recreation Area, Cumberland Gap National Historical Park, and Obed Wild and Scenic River in the development and consolidation of historical collections into a multi-park facility.

Space to house these collections and their anticipated 25-year growth is estimated to be around 13,000 sq. ft. Twenty-five year projections for collection growth were based on current collections, current collection growth, and each park's Scope of Collections Statement (SOCS). The facility will also be designed to accommodate current collections on exhibit that might require short-term or long-term storage.

The facility would contain laboratories, both wet and dry, and provide proper storage facilities for over 144,000 artifacts and 220,000 archival records. The curatorial facility would also provide office space for curatorial staff, and work space for park staff and the public (over 900 researchers annually) to conduct research using the museum and archival collections.

Current plans are to develop the facility on property outside of the present park boundaries, but within Great Smoky Mountain National Park's authorized legislative boundary. A 1.6 acre parcel adjacent to the Great Smoky Mountain Heritage Center (GSMHC) in Townsend, Tennessee is proposed to be donated to the park (Figure 1). Co-locating the proposed facility with the GSMHC, offers cost savings, is easily accessible, and would promote research access to multi-park collections. Appendix A (Figures 4-7) includes figures and photographs of the footprint, design, and area proposed for the facility.

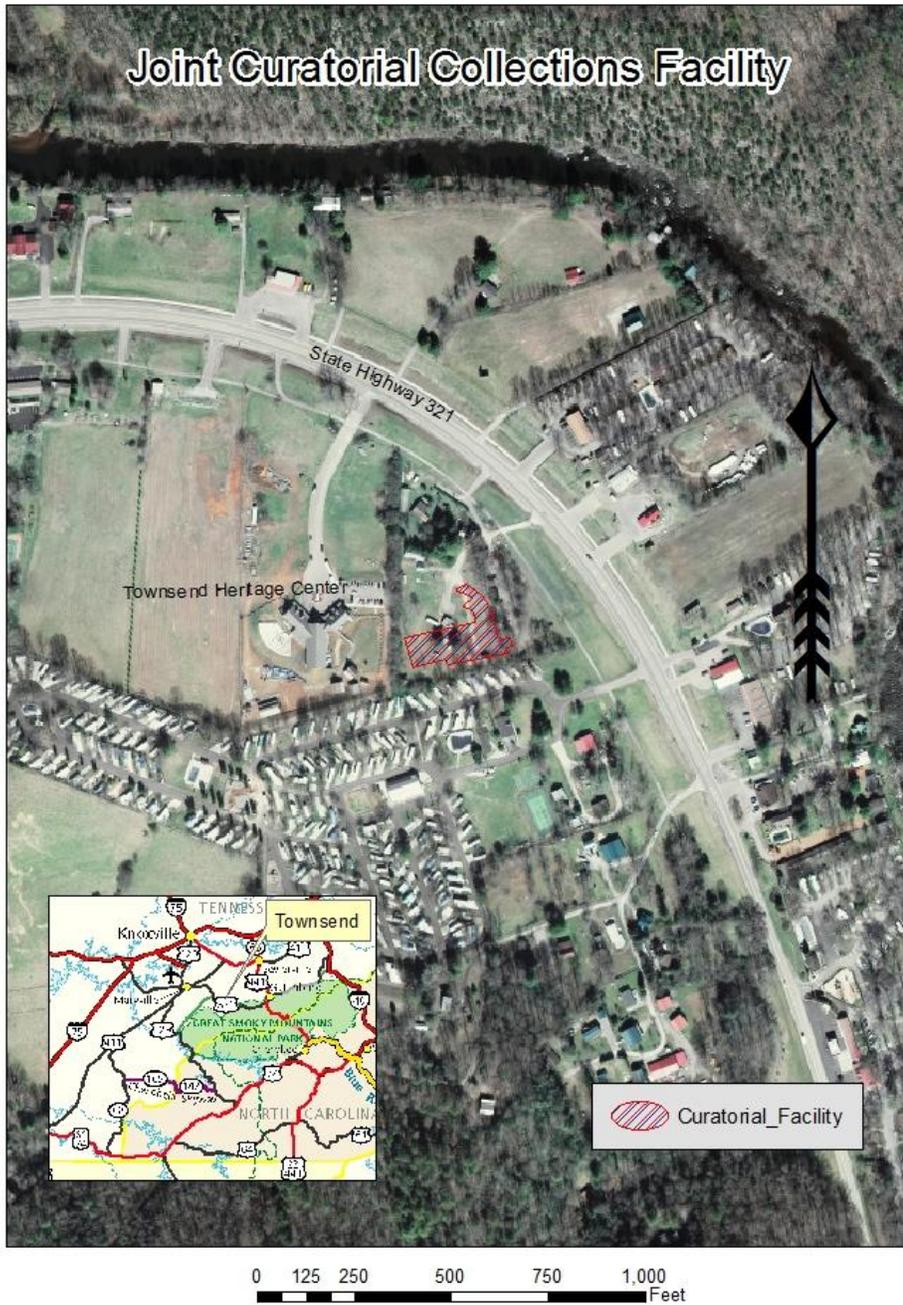


Figure 1: Location of proposed JCCF adjacent to Great Smoky Mountain Heritage Center.

2.3 Alternatives Considered but Eliminated from Detailed Analysis

2.3.1 Lease Off-site Buildings

GRSM has conducted a real estate review of the greater Gatlinburg/Townsend area to determine if buildings would be available that could meet the current needs of a curatorial facility. No existing structures or new developments were identified that would meet the specialized storage requirements necessary to properly care for the museum collections. Therefore, this alternative was removed from further analysis.

2.3.2 Alternative Facility Location

2.3.2.1 Build Facility Inside Park Boundaries

Alternative sites within the park were eliminated from further consideration because of the environmental disturbance, the infrastructure requirements, and the cost.

2.3.2.2 Build Facility at an Alternate Location Outside of Park Boundaries

GRSM considered construction of the Joint Curatorial Collections Facility at a location other than the Great Smoky Mountain Heritage Center (GSMHC) site. However, other sites would occur on lands that would require a purchase agreement or long-term lease agreement. The GSMHC lands would be donated to the park for this specified use. The location is already disturbed and would result in few, if any impacts to archeological resources, vegetative resources and wildlife habitat.

2.3.3 Alternative Facility Designs

GRSM has considered several alternative facility designs that have included different collections storage layouts, building features, orientations, and parking configurations. A design charette was held in May, 2010. Four preliminary designs were presented and examined that could meet the purpose of the network parks' collections storage needs. These designs varied in size and scope and included various building sizes, outlays, amenities, aesthetics, and costs associated with their construction and maintenance. The four design alternatives were evaluated in July 2010 which led to a composite design that was selected to move forward in the design and development process. This decision process weighted the care of the collections as paramount but also gave considerable weight to construction and maintenance costs.

2.4 Mitigation Measures

For the Preferred Alternative, best management practices and mitigation measures would be used to prevent or minimize potential adverse effects associated with the construction of the Joint Curatorial Collections Facility. These practices and measures would be incorporated into project construction documents and plans to reduce the occurrence and magnitude of the impacts and ensure major adverse impacts would not occur.

2.4.1 Practices to Minimize Effects on Natural and Cultural Resources

The facility footprint and construction equipment and material storage staging areas would be delineated on project maps and on the ground prior to the movement of equipment or materials. Areas for contractor activities would be clearly delineated (staked) on the ground to ensure that activities occur only in designated areas. Workers would be instructed to avoid conducting activities beyond the construction zone and their compliance would be monitored by the park's Contracting Officer's technical representative.

2.4.2 Practices Involving the Inadvertent Discovery of Archeological Resources and/or Human Remains

The discovery of human remains, funerary objects, and objects of cultural patrimony, would be treated in accordance with Native American Graves Protection and Repatriation Act (25 U.S.C. 3001). In the event that prehistoric Native American or Historic Cherokee human remains, or funerary objects of cultural patrimony are discovered during the excavations, work at that location would stop immediately and the area would be secured and the construction foreman would notify the Park Archeologist and Park Contracting Officer's technical representative immediately.

2.4.3 Practices to Minimize Effects on Soils and Vegetation

Standard erosion control best management practices including silt fencing, would be used at the downhill limits of construction and around soil stockpiles to control sediment transport. Construction activities would be contained within designated boundaries to reduce effects on vegetation. At the completion of the project, disturbed areas would be restored, which could include soil preparation and reseeding with a native grass seed.

2.5 Environmentally Preferred Alternative

The Council on Environmental Quality (CEQ) defines the Environmentally Preferred Alternative as "...the alternative that will promote the national environmental policy as expressed in the National Environmental Policy Act §101." Section 101 states that, "...it is the continuing responsibility of the federal government to:

- 1) Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- 2) Assure for all Americans safe, healthful, productive, and aesthetically and pleasing cultural surroundings,
- 3) Attain the widest range of beneficial uses of the environment without degradation, risk to health and safety, or other undesirable or unintended consequences;
- 4) Preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety and individual choice;
- 5) Achieve a balance between population and resource use, which will permit high standards of living and a wide sharing of life's amenities; and
- 6) Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources."

The identification of the Environmentally Preferred Alternative was based on an analysis that balances factors such as physical impacts on various aspects of the environment, mitigation measures to deal with the impacts, and other factors such as the statutory mission of the NPS and the purpose(s) of the project. The Environmentally preferred alternative is Alternative B (Build Alternative). Alternative B would help NPS Staff meet the responsibilities of the park for protecting park resources, particularly for the long-term care and curation of museum collections. Alternative B also improves the efficiency of park operations related to the management of cultural resources.

While the No Action Alternative would preserve existing conditions, it would not be considered the Environmentally Preferred Alternative because it would not improve the efficiency of park operations and would not meet the responsibilities of the park for the long-term care and curation of museum collections.

3.0 AFFECTED ENVIRONMENT

As described in the Council on Environmental Quality National Environmental Policy Act regulations for preparing an Environmental Assessment, the affected environment is “interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment” (Title 40 CFR Section 1508.14). This chapter describes the existing natural resources and the environmental, socioeconomic, and man-made conditions within and adjacent to the proposed site for the construction of the Joint Curatorial Collections Facility. Where appropriate, information is summarized or incorporated by reference from the resource-specific special reports. Some resource discussions are preceded by introductory text where it is useful or necessary to introduce background or explanatory information to facilitate the reader’s understanding of the broader context in which the resource material is presented and analyzed.

The affected environment descriptions presented in this chapter provide the context for understanding the environmental consequences described later in section 4.0. As such, they serve as a baseline against which any changes, positive or negative; resulting from implementation of the proposed action and alternatives can be identified and evaluated. For this EA, the baseline conditions are the existing or current conditions. In addition, these resources and conditions are described in accordance with a defined region of influence, which generally defines the geographic area in which the resources or conditions could be affected by or have an effect on the alternatives described in section 2.0 and evaluated in section 4.0.

3.1 Natural Resources

GRSM is part of the Appalachian Mountain system, which consists of a series of mountain ridges trending northeast to southwest from Maine to Georgia. The Unaka Range, a major unit of the Appalachians encompassing the mountains of the park, lies wholly within the Mississippi River drainage. The Unaka Range is cut into segments by northwesterly flowing tributaries of the Tennessee River. The Pigeon River cuts the main ridge of the Unakas on the northeast and the Little Tennessee cuts the main ridge of the Unakas on the southwest.

The proposed activity is located in a physiographic region designated by the USGS as the Cumberland Plateau, and the Valley and Ridge. Geologic resources within this region, which are

part of the Knox Group, are dominated by siliceous dolomite and magnesian limestone sequences with a thickness of 2,500 to 3,000 feet.

The mountain remnants seen today are principally the result of stream erosion. The dominant topographic feature of the park is the northeastward-trending ridgeline that forms the boundary between North Carolina and Tennessee. For 36 of its 71 miles, the main divide stands more than 5,000 feet above sea level. Lower ridges form radiating spurs from the central ridgeline. The moderately sharp-crested, steep-sided ridges are separated by deep valleys that occasionally widen along the sides of higher ridges. Many of the ridges branch and subdivide, creating complex drainage systems that abound with fast-flowing mountain streams.

Townsend lies within the northeastern portion of the Little Tennessee River watershed. According to the USGS, the Little Tennessee River watershed drains approximately 1,050 square miles and empties into the Fort Loudoun Lake watershed. The Little Tennessee River watershed contains 1,497 stream miles and 18,878 lake acres in Tennessee and North Carolina. The majority (74.5 percent) of the Little Tennessee River watershed lies in Tennessee.

The Tennessee portion of the Little Tennessee River watershed lies within the USEPA's designated ecoregions, the Blue Ridge Mountains and the Ridge and Valley. Townsend is located in the Limestone Valleys and Coves sub-ecoregion. The West Prong and the Middle Prong of Little River join several other tributaries at the Townsend entrance to Great Smoky Mountains National Park and flow west into the Little River watershed, which empties into the Tennessee River watershed.

GRSM is notable for having extreme variations in topography, with elevations ranging from 270 to 2,024 m, and >65% of the park having slopes >15°. Precipitation varies from 140 to 220 cm/year within GRSM (Stephens 1969), which is classified as a warm-temperate rain forest (Thornthwaite 1948). The park is home to a diverse array of life, including over 1,600 species of flowering plants (more than any other unit in the National Park System), dozens of species of native fish, more than 240 species of birds, and 65 species of mammals.

The forests of GRSM have been described as the most complex and diverse in North America. Due to its topographical relief, complex soils, and position on the continent, GRSM supports an enormous diversity of vegetation and is one of the largest blocks of temperate deciduous forest in North America. Almost 99% of the park is forested, with over 100 native tree species. Approximately 100,000 acres of old-growth forest are found in the Park (USDOJ NPS GRSM 2000). Additionally, the number of non-vascular plant species ranks among the highest of any area in North America north of Mexico (Rock and Langdon 1991). There are over 2,250 species of fungi and over 700 species of lichens, and about 10 plant taxa that are new to the park are discovered each year.

3.1.1 Air Resources

The Clean Air Act of 1973 (as amended) and associated NPS policies require the NPS to protect air quality in parks and other holdings. The intent of this topic is to assess actions that may improve and protect air quality for human health and ecosystem benefits, or that may have an adverse effect. In general, this topic analyzes far-reaching and local influences on air quality, many of which are out of the control of the NPS. GRSM is designated a Class I area per the Clean Air Act, which provides the highest level of air-quality protection.

3.1.2 Geology

The proposed activity is located in a physiographic region designated by the USGS as the Cumberland Plateau, and Valley and Ridge. Geologic resources within this region, which are part of the Knox Group, are dominated by siliceous dolomite and magnesian limestone sequences with a thickness of 2,500 to 3,000 feet.

No geological resources are present at the proposed site (USGS 2007). Therefore, geological resources were dismissed as an impact topic.

3.1.3 Soils, and Prime and Unique Farmland

In accordance with the federal Farmland Protection Policy Act (FPPA; 7 U.S.C. 4201 et seq.), the USDA Natural Resources Conservation Service (NRCS) has classified lands into three categories based on suitability for agricultural uses. These classifications incorporate soil type,

slope, and water capacity. Prime farmlands (PFL) are those lands with slopes between 0 and 8 percent in capability classes I and II, and some in capability class III. Unique farmlands are recognized for having a certain set of parameters necessary to produce certain high-value crops. The third category, farmland of statewide importance, includes those lands that do not quite qualify as PFL's. Factors include steepness of slope, susceptibility to erosion, and permeability. Figure 2 shows the soils mapped and areas characterized as prime and unique farmlands under the FPPA.

The soils mapped within the project site boundary are classified by the NRCS Soil Survey of Great Smoky Mountains National Park, Tennessee and North Carolina (2010) as Hayter silt loam. Hayter series soils are classified as excessively drained, non-hydric, and not flooded or ponded. In addition, Hayter series soils are not classified by the NRCS as prime farmland or farmland of state importance.

The JCCF site is located in an agricultural/suburban/commercial setting. Disturbance and manipulation results in physical, chemical, and biological properties of soils less favorable as a rooting medium when compared to soils in a natural landscape. The disturbance of soil at and adjacent to the site due to construction has permanently altered the topography of the land and natural soil regimes. For decades the lands surrounding the proposed site have either been developed, covered with impermeable surfaces (asphalt and concrete), or landscaped. Pursuant to the FPPA, and the implementing regulations (7 CFR 658), federal agencies are required to make FPPA evaluations part of the NEPA process and to take into account the adverse effects of federal programs as to the extent to which they contribute to the unnecessary conversion of important farmlands to nonagricultural uses. Important farmlands include prime farmland, unique farmland, or farmland of statewide or local importance, as defined in 7 CFR 657.5. However, qualifying farmland in or already committed to urban development, land acquired for a project on or prior to August 4, 1984, and lands acquired or used by a federal agency for national defense purposes, as stipulated in the FPPA's implementing regulations, are exempt from the Act's provisions (7 CFR 658.2–658.4).

According to the NRCS (2000), prime or unique farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses (the land could be cropland, pastureland, rangeland, forest land, or other land, but not urban built-up land or water). Unique farmland is land other than prime farmland that is used for the production of specific high value food and fiber crops. Examples of such crops are citrus, tree nuts, olives, cranberries, fruit, and vegetables. Unique farmland is defined as land that produces specialty crops such as fruits, vegetables, and nuts.

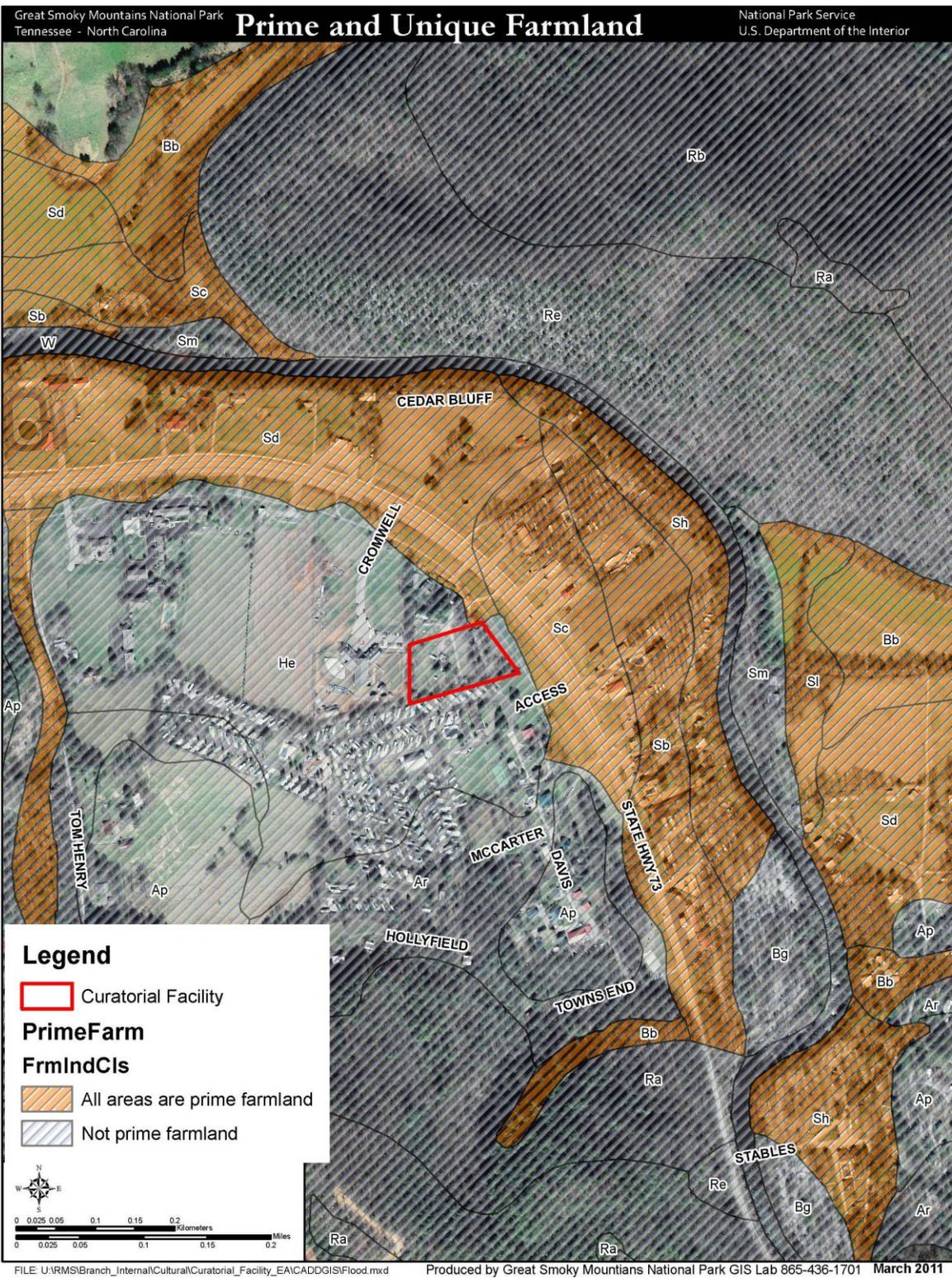


Figure 2: Prime and unique farmland.

3.1.4 Water Resources

NPS Management Policies (2001) require protection of water quality consistent with the Clean Water Act. Section 404 of the Clean Water Act authorizes the U.S. Army Corps of Engineers to prohibit or regulate, through a permitting process, discharge of dredged or fill material in waters of the U.S.

The proposed JCCF site is in the city of Townsend, TN. There are no natural, artificial, permanent, or intermittent water courses near the site, and groundwater does not occur near the surface of the proposed site. Additionally, there are no wetlands near proposed curatorial facility boundaries.

Domestic water needs of the JCCF would be provided by the Tuckaleechee Utility District on a fee for usage basis. This is expected to meet the present and predictable water needs of the facility for any potable and fire suppression water needs. Wherever possible, water conservation features would be used throughout the facility to reduce consumption.

Wastewater treatment services would be provided through the installation of an on-site septic system. Precipitation that falls on the building and other impervious surfaces, which could contain pollutants such as hydrocarbons and heavy metals from vehicles, would be diverted to existing sewer systems. All chemicals used in the facility would be properly stored or disposed of so as not to pose a threat to water quality.

3.1.5 Vegetation and Wildlife

NEPA mandates an examination of the impacts on all components of affected ecosystems. According to NPS Management Policies, the NPS strives to maintain all components and processes of naturally evolving park unit ecosystems, including the natural abundance, diversity, and ecological integrity of plants and animals.

The proposed site of the curatorial facility in the city of Townsend, TN, is not a natural ecosystem. The surface of the site is either covered with gravel or comprised of hardened soil. Vegetation at the site is small, mostly non-native herbaceous plants including white clover,

dandelion, plantain and violets. Several small trees (less than 50 ft. tall) are found on the site, including one white pine, one hickory, and a few smaller black cherry trees. Several non-native privet shrubs are found around the site perimeter. Past land use was as pasture, but more recently as a parking and building material storage site. These uses destroyed natural habitat available to wildlife near the site. The absence of natural habitat and surface water preclude the presence of any land mammals except those common to urban habitats throughout the area, e.g. rodents, squirrels, and rabbits. Construction of the curatorial facility would not affect resident birds, which include mockingbirds, blue jays, cardinals, chickadees, robins and sparrows.

3.1.6 Floodplains

Executive Order (EO) 11988, Floodplain Management (1977), requires all federal agencies to avoid construction within the 100-year floodplain unless no other practicable alternative exists. Certain construction within a 100-year floodplain requires preparation of a statement of findings. There are no natural, artificial, permanent, or intermittent water courses near the site.

The Federal Emergency Management Agency (FEMA)-issued Flood Insurance Rate Map (FIRM), panel 47009C0311C, with an effective date of September 19, 2007 was reviewed by [GRSM] staff in order to determine the proximity of the project site to areas designated by the federal government as Special Flood Hazard Areas (SFHA). The project site boundary occurs entirely outside of areas depicted on the FIRM as a SFHA (Figure 3). The proposed activity does not result in temporary or permanent impacts to areas designated as SFHA's. Therefore, floodplains were dismissed as an impact topic.

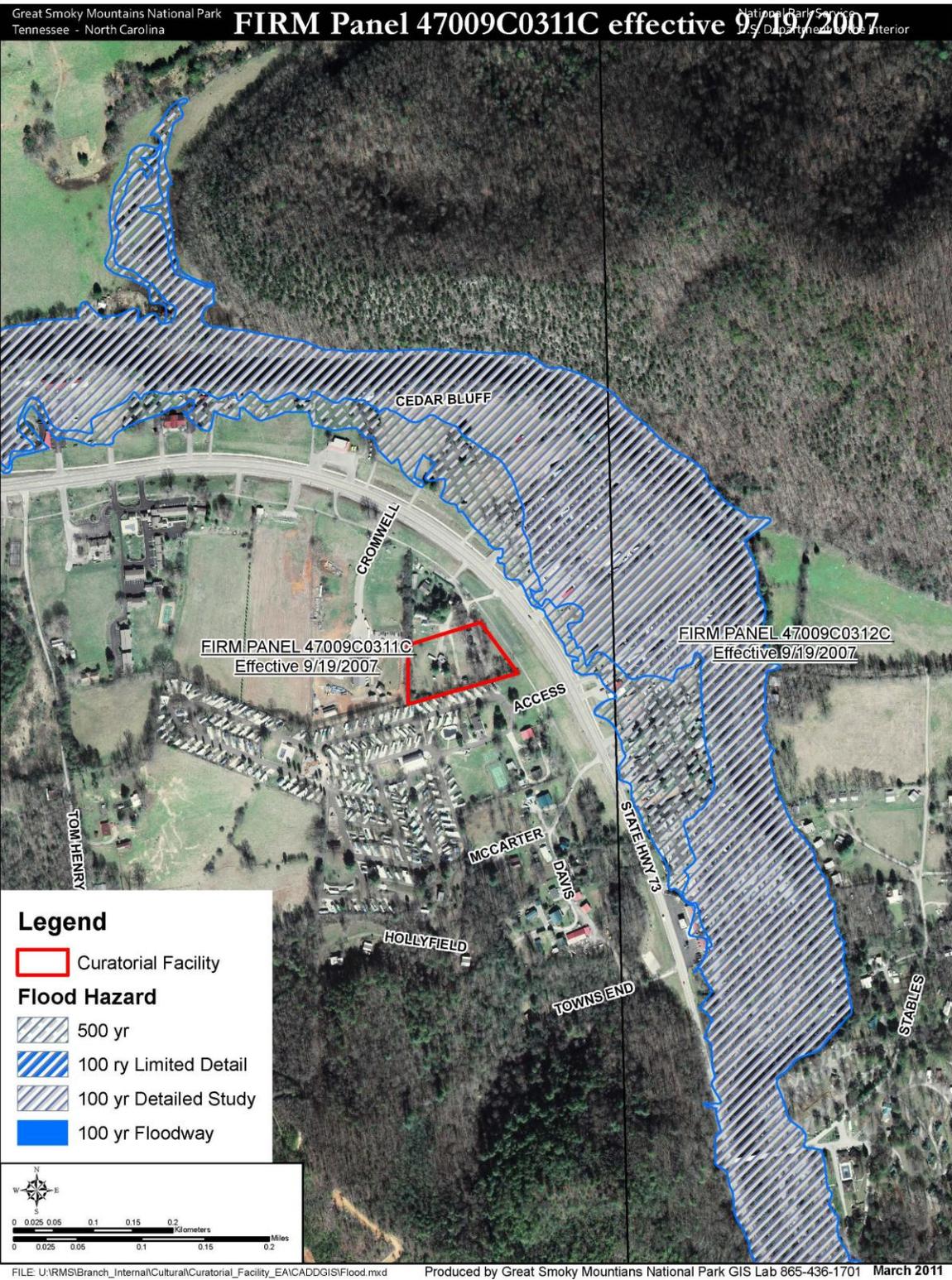


Figure 3: Floodplain map showing proposed location of the JCCF.

3.1.7 Wetlands

Executive Order 11990 (1977), Protection of Wetlands, requires federal agencies to avoid, where possible, adversely impacting wetlands. The goal of NPS wetlands management is to strive to achieve a no net loss of wetlands as defined by both acreage and function. Proposed actions that have the potential to adversely impact wetlands must be addressed in a statement of findings. There are no wetlands at or near the site of the proposed curatorial facility. There would be no impacts to wetlands and a statement of findings for wetlands will not be prepared.

3.1.8 Threatened, Endangered, and Candidate Species, and Species of Special Concern

The Endangered Species Act (ESA 1973) requires an examination of impacts on all federally-listed threatened or endangered species. NPS policy also requires examination of the impacts on all federal candidate species, as well as state-listed threatened, endangered, rare, declining, and sensitive species that are known collectively as species of concern.

There are no known threatened, endangered, and candidate species or species of special concern in the vicinity of the proposed curatorial facility. The site is a vacant lot, and there are no natural, artificial, permanent, or intermittent water courses at or near the site. There is no suitable habitat for wildlife at or near the site.

3.2 Cultural Resources

The area surrounding the Great Smoky Mountain Heritage Center has a long history of human occupation and lies within the Congressionally authorized boundary of the Great Smoky Mountains National Park. The National Historic Preservation Act of 1966 [16 U.S.C. 470-1 Section 2(3)], as amended, directs the federal government to "...administer federally owned, administered, or controlled prehistoric and historic resources in a spirit of stewardship for the inspiration and benefit of present and future generations."

Impacts to cultural resources are described in terms of type, context, duration, and intensity, as described above, which is consistent with the regulations of the Council on Environmental Quality (1978) which implements NEPA. Historic properties or cultural resources defined under the National Historic Preservation Act (NHPA) include archeological sites, historic structures, cultural landscapes, ethnography, and museum objects and collections. The process and documentation required for the preparation of the EA will be used to comply with Section 106 of the National Historic Preservation Act. Impacts on cultural resources were identified and evaluated by:

- Determining the area of potential effects;
- Identifying cultural resources present in the area of potential effects that are either listed in or eligible to be listed in the National Register of Historic Places;
- Applying the criteria of adverse effect to affected cultural resources either listed in or eligible to be listed in the National Register; and
- Considering ways to avoid, minimize, or mitigate adverse effects.

Under the Advisory Council's regulations, a determination of either adverse effect or no adverse effect must also be made for affected cultural resources. An adverse effect occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource that qualifies it for inclusion in the National Register. For example, this could include 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 alternative that would occur later in time, be farther removed in distance, or be cumulative (36 CFR Part 800.5, Assessment of Adverse Effects). A determination of no adverse effect means there is an effect, but the effect

would not diminish in any way the characteristics of the cultural resource that qualify it for inclusion in the National Register.

The Council on Environmental Quality (1978) regulations and DO 12 and Handbook: Conservation Planning, Environmental Impact Analysis, and Decision Making (NPS 2001a) 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, such as reducing the intensity of an impact from major to moderate or minor. Any resulting reduction in intensity of impact because of mitigation, however, is an estimate of the effectiveness of mitigation under the National Environmental Policy Act only. It does not suggest that the level of effect as defined by Section 106 is similarly reduced. Although adverse effects under Section 106 may be mitigated, the effect remains adverse. A Section 106 summary is included in the impact analysis for cultural resources. The summary is intended to meet the requirements of Section 106 of the National Historic Preservation Act and is an assessment of the effect of implementing the alternatives on cultural resources, based on the criteria of effect and criteria of adverse effect found in the Advisory Council's regulations. See Appendix B for consultation letters documenting compliance with Section 106 of the NHPA.

The Area of Potential Effect (APE) or the defined geographic area within the which the construction of the JCCF may affect cultural or historic properties extends beyond the proposed footprint of the facility and will include the visible effects the new facility will have on the immediate area: specifically, the Great Smoky Mountains Heritage Center and an interpretive village comprised of seven nineteenth- and early-twentieth century buildings and structure that were re-located to the property.

3.2.1 Archeological Resources

Humans have been a part of the Southern Appalachian ecosystem for the past 15,000 years (USDI NPS 1982). Archeological evidence of people utilizing the abundant natural resources of the Smokies begins 12,000 years ago and continues until the establishment of Great Smoky Mountains National Park in 1934 (E.S. Kreuzsch, GRSM Archeologist, personal communication). In the Smokies, archeological resources consist of prehistoric and aboriginal sites that represent

several southeastern cultural periods, as well as historic sites related to mountain culture and the park development period.

Cherokee Indians occupied the mountains and the adjoining lowlands before white European settlers forced them out in the 1800s. While over 500 archeological sites have been found within the park boundary, the total remains unknown (E.S. Kreusch, GRSM Archeologist, personal communication).

One archeological project led to the conception and development of the Great Smoky Mountain Heritage Center. This project involved the expansion of State Routes 73 (U.S. 321) and 337 from two lanes to four lanes. The route runs from Kinzel Springs to the Great Smoky Mountains in Townsend, Tennessee. Phase I and Phase II archeological excavations (Kim and Creswell 1999, in draft) were undertaken and the following were identified: two prehistoric sites (40BT94, 40BT95), one historic site (40BT93), three prehistoric and historic sites (40BT90, 40BT91 and 40BT92), and two historic sites that were not given site numbers. The prehistoric and historic Native American occupations that were identified span the Early Archaic to historic Cherokee periods. Historic materials were associated with the logging and milling operations of the Little River Lumber Company in the late 19th and early 20th century, and outbuildings were associated with Euro-American occupation.

The Great Smoky Mountain Heritage Center is located in closest proximity to archeological site 40BT95. The area was plowed and collected to determine if further archeological work might be necessary. The density of artifacts was very low and concentrations of material were not evidenced. Therefore, the site was not subjected to more intensive archeological investigation.

Prior to construction of the existing Great Smoky Mountain Heritage Center, the Tennessee Division of Archeology in consultation with the University of Tennessee Archeological Research Laboratory deemed the area proposed for site construction to have a low potential for containing intact archeological deposits and/or features (Nick Fielder, former Tennessee State Archeologist, personal communication, 02/09/2011). A decision was made to monitor the construction. No

archeological deposits and/or features were identified. No formal report documenting the work was generated.

3.2.2 Historic Structures

The proposed JCCF construction site does not contain historic structures eligible for listing in the National Register of Historic Places (NRHP). A collection of nineteenth- and early-twentieth century buildings are located on property owned and operated by the Great Smoky Mountain Heritage Center (GSMHC) adjacent to the JCCF property. These include the Cardwell Log Cabin (circa 1890), the Montvale Stagecoach Station (circa 1830s), an outhouse from the 1930s, a small pole cantilever barn (circa 1930s), a set-off house associated with the Little River Lumber Company (circa 1930s), a storage shed from the 1930s, and an African Methodist Episcopal Church (AME) church from the 1910s. Modern structures on the property include the wheelwright house, the still house, and a sawmill. All of these buildings were moved and/or disassembled from several locations across the surrounding East Tennessee area and were placed and/or reconstructed on the GSMHC property after 2004.

For a property to qualify for listing in the NRHP, it must demonstrate both an association with an important historic context (e.g. significance) and retain historic integrity of those features which are necessary to convey its significance. Buildings and structures that have been moved from their original location generally are not considered eligible for the NRHP unless these resources satisfy Criteria Consideration B. Under this consideration, a property removed from its original or historically significant location can be eligible if it is significant primarily for architectural value or it is the surviving property most importantly associated with a historic person or event *and* it possess an orientation, setting and general environment that are comparable to those of the historic location and that are compatible with the property's significance.

The GSMHC buildings are representative of various time periods, illustrate different architectural styles and construction techniques, and are associated with different activities, events, and or people. The buildings as a whole represent a modern (post 2004) artificial grouping of buildings that have been created for the purposes of interpretation, protection, and/or maintenance. Together they do not form a cohesive district, but rather comprise an artificial

assemblage of vernacular buildings and structures whose setting is neither comparable to their varied historic locations or compatible with the potential significance of each of the individual buildings and structures. As moved properties, these resources do not satisfy Criteria Consideration B either individually or collectively, and are considered ineligible for listing in the NRHP. For this reason, no NRHP-eligible buildings or structures are located within the APE.

3.2.3 Cultural Landscapes

The National Park Service maintains a database of historically significant landscapes in the National Park Service known as the Cultural Landscape Inventory (CLI). The park contains 42 landscapes and component landscapes currently listed on the CLI. These include both landscapes that are documented or certified as cultural landscapes and those that have been identified for further study as cultural landscapes. The area proposed for the JCCF does not lie within a cultural landscape and would not qualify for consideration as a cultural landscape.

3.2.4 Library and Museum Objects and Collections

To date, GRSM's cultural museum collections include more than 144,000 archeological and historic objects and 450,000 archival records. The collections are representative of Native American use of park lands, as well as items associated with Euro-American settlement, industry, and the coming of the park. Items include household objects, furnishings, and ceramic pottery sherds. Archival collections include, but are not limited to, land tenure records, oral histories, park resource management records and historic photographs.

These collections are all stored in separate facilities. Archeological collections are split between storage facilities at the Southeast Archeological Center (SEAC) in Tallahassee, Florida and at the Office of Scientific and Technical Information (OSTI) in Oak Ridge, Tennessee. Natural history collections are currently being stored at a state-of-the-art curatorial facility at Twin Creeks near Gatlinburg, Tennessee. Historic objects, such as historic furnishings and tools, and some of the park's archives are also stored in rented office space at OSTI. Artwork, archives, and map collections are stored in the basement of the Sugarlands Visitor Center near Gatlinburg, Tennessee. A small collection of historic objects and library materials are stored in the Oconaluftee Visitor Center near Cherokee, North Carolina.

These collections will undoubtedly increase in size and importance through time, as new archeological survey materials are collected and archival collections are generated.

ANJO, BISO, CUGA, and OBED contain collections with a combined total of 278,700 cultural artifacts. Like GRSM, these collections are stored in a variety of locations, none of which meet or exceed current museum standards or requirements, placing them at risk of permanent loss.

3.2.5 Other Cultural Resources

Over 150 known cemeteries are located within the park's boundaries. Most of these cemeteries are bounded by forest cover. No known cemeteries are within the project study area.

Traditional cultural properties (TCPs) are defined as places that are associated with the cultural practices or beliefs of a living community. Such properties can be determined eligible for the NRHP if they are rooted in that community's history, and are important in maintaining the continuing cultural identity of the community. Cherokee use of the area has been documented archeologically, as well as through historic documents. However, the Overhill Cherokee were removed from this area beginning in the 19th century. Rivers are and have in the past been used for traditional purification ceremonies by the Cherokee, but this practice has not been documented on the Little River.

Euro-Americans can also attach significance to places that create and maintain a community's identity. Some cemeteries along the North Shore of Lake Fontana and the associated decoration day practices have been shown to play a critical role in identifying a "community's identity". No known cemeteries or traditional practices are evident or documented on the JCCF. Therefore, TCPs were dismissed from further analysis.

3.3 Wild and Scenic Rivers

Wild and scenic rivers are designated by federal mandate and are provided with advance protection at the federal, state, and local levels. GRSM has no resources that qualify under the Wild and Scenic River designation.

3.4 Environmental Justice

According to the United States Environmental Protection Agency (EPA), environmental justice is the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the adverse environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies. Presidential Executive Order 12898, "General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.

3.5 Surrounding Community

Eight counties encompass or lie close to the boundaries of GRSM: Blount, Sevier, Cocke and Monroe counties in Tennessee are situated on the northern end, and Graham, Jackson, Swain and Haywood counties in North Carolina occupy the southern vicinity of the park. The area surrounding the park is comprised of two national parkways, three national forests, the Qualla Boundary of the Eastern Band of Cherokee Indians (EBCI), an extensive system of lakes developed by the Tennessee Valley Authority (TVA) and the Aluminum Company of America (ALCOA), and land belonging to private individuals and organizations. Land surrounding the park is mostly rural, consisting primarily of forested foothills and mountains. Approximately 84 percent of the land within a six-mile radius of the GRSM boundary is forested. The remaining areas consist mostly of agricultural land (10 percent) and urban development (2 percent). Small towns and communities, some adjacent to the park, are scattered throughout the region. The mean human population density of the eight county region is +/- 80 individuals/square mile. The

majority of people in the eight county region are employed in retail trade, manufacturing, and personal services. Much of the economy is tourism-related and land traditionally used for forests and agriculture is increasingly being replaced by resort communities, vacation homes, and retail businesses.

GRSM has an annual budget of \$17 million (2006) and provides an economic hub generating over \$652 million a year for surrounding tourist communities. An estimated 14,000 local jobs are supported by park spending.

Townsend, Tennessee is located in Blount County, Tennessee and is often referred to as “The Peaceful Side of the Smokies.” In 2009, the population of Blount County totaled 122,784, of which less than 6% were minority populations. Townsend, Tennessee had a population of 275 in 2009. Median income in Blount County (\$45,516) is higher than the State of Tennessee’s median income (\$41,725).

3.6 Visitor Use and Experience

The broad management goals of the park are to preserve the park's diverse resources while providing for public benefit and enjoyment. GRSM is the most heavily visited park of the national park system, averaging between 9 and 10 million visitors annually (9,192,477 for 2005).

Most visitors to the region travel in private automobiles. In addition to roads providing access to and within the park, numerous foot and horse trails provide access to the park’s backcountry. The principal use of GRSM is recreational activities, which include viewing wildlife and scenery from motor vehicles, hiking, biking, camping, horseback riding, kayaking, and fishing. Hunting is not allowed within GRSM, but bear, deer, and smaller game species are hunted outside its boundaries on both national forest and private land.

Park visitation rates vary seasonally, peaking between June and October. Visitation tends to be heavier during weekends and holidays, and backcountry use is high during college breaks. The park’s natural features are the main attraction for visitors, with most activities restricted to driving through the park, or picnicking, rather than backcountry camping and hiking (USDI NPS

1982). The park's backcountry contains approximately 850 miles of trail with 102 campsites and 18 shelters. Camper nights numbered 275,038 at the 10 developed campgrounds in 2005 (GRSM data 2005). The park had 69,985 camper nights at backcountry campsites in 2005 (GRSM data 2005).

3.7 Indian Trust Resources

Indian trust resources include those resources not on Native American owned property, but rather on DOI administered lands that are held in trust on behalf of Native American tribes. Secretarial Order 3175 requires that any anticipated impacts to Native American trust resources from a proposed project or action by DOI agencies be explicitly addressed in environmental documents. The federal Indian Trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and it represents a duty to carry out the mandates of federal law with respect to Native American and Alaska Native tribes. GRSM as a public holding is not considered a Native American trust resource and there are not any such designated resources at the park.

3.8 Lightscapes

In accordance with NPS Management Policies, 2001 (2001), the NPS strives to preserve natural ambient lightscapes, which are resources and values that exist in the absence of human caused light. Landscape lighting bollards along walkways are present at the Great Smoky Mountain Heritage Center. No overhead street lighting is present. Ambient light from traffic and local businesses is prevalent in the Townsend area.

3.9 Soundscape Management

In accordance with NPS Management Policies, 2001 (2000) and NPS Director's Order 47: Sound Preservation and Noise Management (2001c), an important part of the NPS mission is preservation of natural soundscapes associated with parks. Natural soundscapes exist in the absence of human-caused sound. The natural ambient soundscape is the aggregate of all the natural sounds that occur in park units, together with the physical capacity for transmitting natural sounds. The frequencies, magnitudes, and durations of human-caused sound considered acceptable varies among NPS units, as well as potentially throughout each park unit. Ambient

sound from traffic in the Townsend area and localized sound from vehicular traffic and visitors at the Great Smoky Mountain Heritage Center is present.

3.10 Park Management and Operations

Great Smoky Mountains National Park has 312 onsite park staff that provide the full scope of functions and activities to accomplish management objectives in law enforcement, emergency services, public health and safety, science, resource protection and management, visitor services, interpretation and education, community services, utilities, and housing.

No park staff is currently operating out of the Great Smoky Mountain Heritage Center. Currently, museum collections are stored at individual park offices and in leased office spaces. These collections are all stored in separate facilities. Archeological collections are split between storage facilities at the Southeast Archeological Center (SEAC) in Tallahassee, Florida and at the Office of Scientific and Technical Information (OSTI) in Oak Ridge, Tennessee. Travel time between the various facilities can take between 2 and 10 hours. Natural history collections are currently being stored at a state-of-the-art curatorial facility at Twin Creeks near Gatlinburg, TN. Historic objects, such as historic furnishings and tools, and some of the park's archives are also stored in rented office space at OSTI. Artwork, archives, and map collections are stored in the basement of the Sugarlands Visitor Center near Gatlinburg, TN. A small collection of historic objects and library materials are stored in the Oconaluftee Visitor Center near Cherokee, NC. GRSM has two permanent staff to manage the collections.

ANJO, BISO, CUGA, and OBED contain collections with a combined total of 278,700 cultural artifacts. Like GRSM, these collections are stored in a variety of locations, none of which meet or exceed current museum standards or requirements, placing them at risk of permanent loss. Individual parks in the network vary in staffing and curatorial expertise.

4.0 ENVIRONMENTAL CONSEQUENCES

NEPA requires that a range of reasonable alternatives and the unavoidable environmental consequences associated with implementation of the alternatives be revealed prior to undertaking proposed federal actions. This chapter provides a summary of the analysis of the environmental consequences associated with implementation of the No Action Alternative and the Build Alternative.

The goals of NPS management for all resources are achieved through consideration of the potential resource impacts associated with each alternative and identification of an alternative that balances unavoidable impacts with the goals and objectives for the project. Resource impacts associated with each alternative differ greatly in their context, intensity and duration and this balanced approach considers the merit of all resources equally.

Impact topics are the resources of concern that could be affected by the range of alternatives. Specific impact topics were developed to ensure that alternatives were compared on the basis of the most relevant topics. The following impact topics were evaluated: natural resources, cultural resources, surrounding community, public use and experience, and park management and operations. Other impact categories were dismissed due to the nature of the project and the lack of direct relevance to the project, yet are briefly discussed in Section 4.1.

4.1 Draft Impact Topics Considered but Dismissed from Further Analysis

The following is a discussion of several impact topics that have been analyzed and considered with regard to potential effects resulting from either of the alternative actions. These topics are summarized as part of the impacts analysis based on a factual, objective review of potential effects that alternatives might have, or the lack thereof. The impact topics are discussed below, but will not be carried forward into the detailed analysis in this Draft EA. There would not be any changes to these effect topics resulting from the opening of a new curatorial facility.

4.1.1 Air Resources

The Clean Air Act of 1973 (as amended) and associated NPS policies require the NPS to protect air quality in parks and other holdings. The intent of this effect topic is to assess actions that may improve and protect air quality for human health and ecosystem benefits, or that may have an adverse effect. In general, this topic analyzes far-reaching and local influences on air quality, many of which are out of the control of the NPS. For example, GRSM is downwind from large urban and industrial areas in states to the north and west, and prevailing winds often carry potential pollutants that are deposited in the area. Acid precipitation is a major influence on stream water quality in the park, and could cause excessive nutrient enrichment in soils, and affect sensitive vegetation. GRSM is designated a Class I area per the Clean Air Act, which provides the highest level of air-quality protection. The JCCF would not generate any pollution that would adversely affect human health and environmental resources. The alternatives being examined do not have an effect, either beneficial or adverse, on air quality and will not be carried forward into the detailed analysis.

4.1.2 Geology

GRSM is host to a variety of outstanding geologic features with unusual intrinsic value. Many of these geologic features are regularly viewed and studied by a wide range of visitors, educators, and scientists and are considered a valuable natural resource. None of the alternatives being considered alter geologic features and resources at the park. No unusual geologic resources are present at the proposed site (USGS 2007). Therefore, geologic resources will not be carried forward into the detailed analysis portion of this EA.

4.1.3 Soils and Prime and Unique Farmlands

Because soils at the proposed site have been extensively disturbed by construction, any short or long-term adverse impacts to soils associated with excavation, grading, and resurfacing with concrete or asphalt would be negligible. Existing topography and elevations would not be altered during construction, and the potential for soil erosion would be minimal because much of the surrounding area is developed, covered with impermeable surfaces or used as pasture.

The proposed activity would result in soil disturbance. At this time, a grading plan is not available. During grading, soil would be moved. In some areas, it would be removed, while in other areas it would be replaced. Thus, the location of soil types may change. During clearing and grading, some soils would be eroded, but the impacts from this would be minimized by following appropriate soil erosion control measures for excavated or exposed soils.

During construction, fuel or other chemicals (paints, solvents) could be spilled. A spill response plan would be developed and followed. All fueling would be done in upland areas in designated areas. By following proper construction techniques, the risk of contamination of soils is negligible. Therefore, soil was dismissed as an impact topic.

The soil types in the GRSM area provide limited support for prime and unique farmland based on the definitions under the FPPA. Areas of agricultural use in GRSM include individual hay leases and are largely used for the maintenance of fields within GRSM's administrative boundaries. The site proposed for the JCCF occurs outside of the park's administrative boundary and is currently fallow land. Therefore, prime or unique farmland will not be carried forward as an impact topic.

4.1.4 Water Resources

Wastewater treatment services would be provided through the installation of an onsite septic system. Precipitation that falls on the building and other impervious surfaces, which could contain pollutants such as hydrocarbons and heavy metals from vehicles, would be diverted to existing sewer systems. All chemicals used in the facility would be properly stored or disposed of so as not to pose a threat to water quality.

4.1.5 Vegetation and Wildlife

The project site is an urban property in Townsend, Tennessee. The absence of natural habitat and surface water preclude the presence of any land mammals except those common to urban habitats throughout the area, e.g. rodents, squirrels, and rabbits. Construction of the curatorial facility would not affect resident birds, which include mockingbirds, blue jays, cardinals, chickadees, robins and sparrows. Due to the agricultural/commercial character of the site and its

adjacent environs as well as the lack of suitable habitat, vegetation and wildlife was dismissed as an impact topic.

4.1.6 Floodplains

The project site boundary occurs entirely outside of areas depicted on the FIRM as a SFHA. The proposed activity does not result in temporary or permanent impacts to areas designated as SFHA's. Therefore, floodplains were dismissed as an impact topic.

4.1.7 Wetlands

There are no wetlands at or near the site of the proposed curatorial facility. There would be no impacts to wetlands and a statement of findings for wetlands will not be prepared. Therefore, wetlands were dismissed as an impact topic.

4.1.8 Threatened and Endangered and Candidate Species and Species of Special Concern

There are no known threatened, endangered, and candidate species or species of special concern in the vicinity of the proposed curatorial facility. The site is a vacant lot, and there are no natural, artificial, permanent, or intermittent water courses at or near the site. There is no suitable habitat for wildlife at or near the site. Because implementation of the Preferred Alternative would have no effect on threatened or endangered species, candidate species, and species of special concern, the topic was dismissed as an impact topic.

4.1.9 Surface Water and Groundwater

The proposed location of the museum storage facility is located on a flat parcel of compacted soils. Current conditions contribute minimally to surface runoff from rainfall events. Surface runoff from the proposed structure and gravel parking lot would be minimized by integrating rain gardens, which are small-scale bio-retention basins comprised of shallow depressions (4 to 8 inches deep) that are filled with native plantings. Rain gardens collect rainwater and allow it to be utilized by the plantings or slowly absorb into the ground. Runoff from the gravel parking lot will be minimal because water will easily infiltrate into the soil matrix. Because the building would be constructed on already compacted soils, rainwater from the roof would only negligibly increase potential for runoff, and would likely be less than from current conditions. Because any

impact to surface water and groundwater due to the proposed project would be negligible, this topic was dismissed from further analysis.

4.1.10 Cultural Resources

Cultural resources or historic properties include any historic or prehistoric district, site, building, structure, or object included in or eligible for the National Register of Historic Places [36 CFR 800.16(1)]. Historic properties can include archeological sites, historic structures, cultural landscapes, library and museum objects and collections, and other cultural resources including cemeteries and ethnographic resources.

If historic properties are identified in the area proposed for construction of the JCCF and considered eligible for listing in the NRHP, in consultation with the SHPO's, the Tribal Historic Preservation Office (THPO), and other consulting parties, then effects on these properties must be considered and evaluated. Actions having an *adverse effect* on historic properties "...alter, directly or indirectly, any of the characteristics...that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association." [36 CFR800.5 (a)(1)]. Assessments of effects on historic properties are considered below.

4.1.10.1 Archeological Resources

Previous archeological site monitoring was done by Tennessee State Archeologist Nick Fielder during construction of the Great Smoky Mountain Heritage Center (personal communication 02/09/2011). No formal report was generated; however, Mr. Fielder indicated the area was not conducive to the presence of intact archeological deposits and/or site features. The depositional environment over the proposed JCCF site is immediately adjacent to and similar to that identified for the Great Smoky Mountain Heritage Center and it is likely that no intact archeological deposits and/or features are present. Therefore, archeological resources were not carried forward in the EA and *no historic properties would be affected* by the construction of the JCCF.

4.1.10.2 Historic Structures

The proposed construction site does not contain historic structures eligible for listing in the National Register of Historic Places. The GSMHC buildings are representative of various time periods, illustrate different architectural styles and construction techniques, and are associated with different activities, events, and or people. The buildings as a whole represent a modern (post 2004) artificial grouping of buildings that have been created for the purposes of interpretation, protection, and/or maintenance. Together they do not form a cohesive district, but rather comprise an artificial assemblage of vernacular buildings and structures whose setting is neither comparable to their varied historic locations nor compatible with the potential significance of each of the individual buildings and structures. As moved properties, these resources do not satisfy Criteria Consideration B either individually or collectively, and are considered ineligible for listing in the NRHP. For this reason, no NRHP-eligible buildings or structures are located within the APE, and thus *no historic properties would be affected* by the construction of the JCCF.

4.1.10.3 Cultural Landscapes

No NRHP eligible cultural landscapes are identified in this area. The topography, vegetation, circulation features, spatial organization, or land use patterns of the site's adjacent landscape are common urban elements and not significant. Therefore, cultural landscapes were not carried forward in the EA and *no historic properties would be affected* by the construction of the JCCF.

4.1.10.4 Other Cultural Resources

No cemeteries or other areas of commemoration occur on the proposed site location. Therefore this topic was not carried forward in the EA and *no historic properties would be affected* by the construction of the JCCF.

4.1.11 Wild and Scenic Rivers

Wild and scenic rivers have not been designated within GRSM boundaries; therefore, this topic will not be carried forward into the detailed analysis.

4.1.12 Environmental Justice

Actions related to the proposed alternative would not be expected to have health or environmental effects on minorities, low-income populations or communities as defined in the 1994 Executive Order 12898 or Title VI of the Civil Rights Act of 1964. Therefore, this topic will not be carried forward into the detailed analysis.

4.1.13 Economics and Socioeconomics

None of the alternatives described in this environmental assessment would have notable effects on local or regional economic activities. Construction activities would not contribute measurably to the local or regional economy.

4.1.14 Transportation

GRSM does not have a public transportation system, and the construction of the JCCF does not require or include any transportation services. Townsend does not have a public transportation system and requires visitors and researchers to utilize their own vehicles and park in designated areas. The proposed alternatives will not affect transportation, and as such will not be carried forward into the detailed analysis.

4.1.15 Visitor Experience

The project site is an NPS administrative site, not a visitor use site. It is located away from the visitor use areas of the park. The JCCF would be utilized exclusively by researchers and occasionally by education and interpretive tours. The general visitor's experience is not likely to improve, but educators and researchers would benefit from the proximity of the collections to the park.

4.1.16 Indian Trust Resources

GRSM as a public holding is not considered a Native American trust resource and there are not any such designated resources at the park. The proposed alternatives do not conflict with any American Indian interests. Therefore, this topic will not be carried forward into the detailed analysis.

4.1.17 Lightscape

Any actions related to development of the JCCF would not be expected to result in any changes to the existing lightscape conditions. Minimal outside lighting would utilize night sky friendly fixtures. Parking facilities would not be lit. Therefore, this topic will not be carried forward into the detailed analysis.

4.1.18 Soundscape Management

The alternatives under consideration would not create additional noise other than during the construction phase of the project. Therefore, this topic will not be carried forward into the detailed analysis.

4.1.19 Non-Federal Lands Within GRSM

The JCCF is proposed to be constructed on lands donated to the GRSM. These lands are located within the authorized boundary of the park, but outside of the administrative boundary of the park. The proposed alternatives would not hinder or alter in an adverse or beneficial way public and private access to any areas in the park; therefore, this topic will not be advanced into the detailed analysis.

4.1.20 Greenhouse Gas Emissions and Climate Change

There is strong evidence linking global climate change to human activities, especially greenhouse gas emissions associated with the burning of fossil fuels (IPCC 2007). Some of the activities associated with use of the JCCF may result in fossil fuel consumption, such as vehicular trips by NPS staff working at the facility. The JCCF would be on the local utility grid and consume electricity for lighting, heating, cooling, and powering electronic equipment. Power is supplied to the local electric utility from Tennessee Valley Authority (TVA). TVA generates power from hydroelectric plants and nuclear plants as well as from coal-fired plants. Hydroelectric generating plants and nuclear plants produce fewer greenhouse gas emissions than the coal-fired generating plants.

Greenhouse gas emissions associated with the JCCF would be negligible in comparison to local and regional greenhouse gas emissions. Therefore, the issue of the contribution of JCCF activities to climate change through greenhouse gas emissions was dismissed from further analysis.

4.2 Impact Topics Analyzed

4.2.1 NPS Operations and Management

Construction of the museum storage facility would consolidate the museum collections of the participating parks into one facility rather than several dispersed locations across East Tennessee. Consolidating the collections would be an impact on curatorial staff. Other changes associated with the proposed action include additional maintenance that is required for a new building, and relocation of the collections to the new facility following construction. Because these changes would have a measurable impact on the curator and the maintenance crew, the topic of park operations has been carried forward for further analysis.

4.2.2 Cultural Resources - Museum Collections

According to Director's Order #24 Museum Collections, the NPS requires the consideration of impacts on museum collections (historic objects, natural specimens, and archival and manuscript material), and provides further policy guidance, standards, and requirements for preserving, protecting, documenting, and providing access to, and use of, NPS museum collections.

Currently, the museum collections of the network parks are dispersed in facilities that have no climate control or security, which is contributing to artifact deterioration and preventing proper curation of the objects. The proposed project is expected to have a measurable, long-term impact on the collections, particularly in terms of artifact preservation. Therefore, the topic of museum collections has been carried forward for further analysis. Under the implementing regulations of the NHPA, the construction of the JCCF would pose *no adverse effect* on NPS museum collections.

4.3 Environmental Impact Definitions

4.3.1 Type of Impact: Impacts are categorized in two different and contrasting types: adverse and beneficial. Adverse impacts are considered contrary to the goals, objectives, management policies, and practices of the NPS and the public interest or welfare. These impacts are of a kind likely to be damaging, harmful, or unfavorable to one or more of the various impact topics. Beneficial impacts are believed to promote favorable conditions for the impact topics.

4.3.2 Levels of Intensity: Levels of intensity refers to severity of the impact, whether it is negligible or major, or somewhere in between. The gradient of this grading system can be general or very detailed, but ultimately the assumptions and subjectivity of the system affect its sensitivity. A simple and subjective rating system is used in this EA, which includes a rating scale of “no effect, negligible, minor, moderate, and major effects.” The authors of this EA based the rating system score on studies completed, data and information obtained from scientific and administrative sources, discussions with relevant individuals, public comments, common sense, and professional opinion. For example, consideration was given as to whether or not an action affects any natural resource parameters. The definition of “no effect” would be the same for each of the general impact topics, natural resources, cultural resources etc. No effect would mean that no measurable effects could be recorded or surmised. Each of these gradient levels are further defined below.

4.3.2.1 For NPS Management and Operations

(Consistent with park and NPS legislative mandates, goals, plans, policies, guidelines, and mandates.)

Negligible: Impacts would be barely detectable; any alterations or conflicts with legislative mandates, goals, policies, etc. could be alleviated through a brief administrative process.

Minor: A waiver or other administrative process for two management policies would be required or the NPS would deviate from two policies or guidelines

Moderate: A waiver from more than two management policies would be required or the NPS would deviate from one or two policies or guidelines. The NPS would deviate from any legislative mandate.

Major: Adverse impacts include deviation from NPS policies and/or guidelines which would require extensive administrative change.

4.3.2.2 For Cultural Resources - Museum Collections:

Negligible: Impact to the resource is barely perceptible and not measurable and is confined to a very small local area.

Minor: Adverse impacts would not affect a character-defining pattern, behavior of individuals, or features of the local heritage.

Moderate: Adverse impacts would alter a character-defining pattern or features of the local heritage, but would not diminish the integrity of the local heritage.

Major: Adverse impacts would alter a character-defining pattern or features of the local heritage and diminish the integrity of the local heritage.

4.3.3 Duration

Duration describes how long an impact would be expected to last. In this EA, impacts are described as either being short-term or long-term. Short-term is an impact that would last no more than two years. Long-term would be an impact that would last for more than two years.

4.3.4 Context

Context is the setting within which an impact is analyzed, such as the affected region or locality and the affected interests. In this EA, the intensity of impacts is evaluated within a local context, primarily considering effects to the park area itself. The intensity of effects on cumulative impacts is evaluated in a regional context, and considers effects further in time and from other projects.

4.3.5 Direct and Indirect Impacts

Direct impacts include effects on the resource actually caused by the proposed action, generally at the immediate site of the action and at the time of the action. Direct impacts can extend into the future and are often permanent, but can be temporary. A direct effect is an effect that is caused by an action and occurs at the same time and place. An example of a direct impact would be the filling of a portion of a stream, which immediately causes habitat loss at that location.

Indirect impacts generally occur as a result of a “side-effect” of a direct impact, but occur later in time or further in distance than the action. An indirect impact could result from silt flowing downstream, creating turbid conditions, and adversely affecting water quality.

4.3.6 Cumulative Impacts

The Council on Environmental Quality regulations, which implement NEPA , require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as "the impact on the environment which 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 non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts are considered for all alternatives and focus on a regional area well beyond the park boundary.

Cumulative impacts were determined by combining the impacts of each alternative with other past, present, and reasonably foreseeable future actions within the park and the vicinity. These impacts are assessed on a regional basis. These projects include development within the region, long-term population trends, cultural and social changes.

4.5 Environmental Consequences

4.5.1 NPS Operations and Management

Great Smoky Mountains National Park has 312 onsite park staff that provide the full scope of functions and activities to accomplish management objectives in law enforcement, emergency services, public health and safety, science, resource protection and management, visitor services, interpretation and education, community services, utilities, and housing.

No park staff is currently operating out of the Great Smoky Mountain Heritage Center. The new facility would provide office space for up to three park employees and would require minimal staff to provide for building maintenance.

4.5.1.1 Alternative A (No Action Alternative)

Direct and Indirect Impacts of the Alternative

GRSM currently leases space at the Office of Scientific and Technical Information (OSTI) in Oak Ridge, Tennessee for the storage of archival, archeological, and historic objects. Facility maintenance costs and utilities are covered under a lease agreement. These costs total \$44,005 per year in 2011. These costs will continue to rise annually at a rate of 3% per year. In addition, no research space or curatorial work space is available at OSTI. No park staff is dedicated to the maintenance of OSTI. Curatorial staff from GRSM requires a 4 hour round trip visiting and working at the collections.

The No Action Alternative calls for continued use of existing facilities for the storage of museum collections. No new facilities would be constructed; therefore, population, work force, and utilities would not be affected.

Cumulative

Rates for the lease of office space for the housing will continue to rise at a rate of 3% per year. In addition, museum collections would continue to degrade through time as storage conditions do not meet climatic conditions necessary for their long-term preservation. As additional collections are added through time, the current facilities would become crowded and inadequate for proper storage of collections.

Conclusion

Under the No Action Alternative, existing facilities would continue to be used. No new park staff or operational costs would be associated with this alternative. However, the No Action Alternative is not cost effective or fiscally conservative, as costs to lease the office space at OSTI continue to rise and the cost of staff time and travel costs to the facility continue to increase. The OSTI facility does not meet all of the current museum standards, and historic and archival collections are subjected to climatic conditions focused on the comforts of office personnel as opposed to museum objects. The No Action Alternative continues to pose a minor adverse effect on park operations and maintenance, particularly in the care and management of the collections by park curatorial staff.

4.5.1.2 Alternative B (Build Alternative, Preferred Alternative) - Construct Joint Curatorial Collections Facility (JCCF)

Direct and Indirect Impacts of the Alternative

With the construction of a JCCF outside of the present park boundary, most of the museum and archival collections management and operations would be conducted at a new facility. The JCCF would provide research space and access to the collections and administrative offices for library and collections staff. Approximately 1 full-time employee for .20 of the year would provide custodial services for the new facility. The costs associated with the lease of office space at OSTI could be re-allocated to support the operations and management of the JCCF. The cost to operate and maintain the JCCF would be shared by the participating parks.

Cumulative

Comparisons on cumulative costs for the proposed new facility are projected using data from the Twins Creeks Science Center (Brad Roberts, GRSM Buildings and Utilities, personal communication). Approximately 1 full-time employee for .20 of the year would provide custodial services for the 25-year life cycle of the new facility. Custodial costs are estimated at \$1800/year with an initial purchase of supplies estimated at \$2000.

Utilities to run the facility are estimated at \$20,000. These estimated costs for the upkeep and maintenance of a new facility are less than those allocated for GRSM's leased space at OSTI. The costs associated with the current museum storage space lease at OSTI could be allocated to support the operations and management of the JCCF.

Conclusion

Custodial and maintenance staff would be required at the JCCF. No change in curatorial staffing levels is anticipated. The JCCF would provide office space for up to three employees and various researchers. The JCCF would be located outside of the present park boundaries and would require a 30 minute drive to reach from the Cades Cove Maintenance area. The facility could be maintained through a government contract or agreement but would require costs to administer the contract/agreement. The construction of the JCCF would have a minor adverse impact on park Operations and Maintenance.

4.5.2 Cultural Resources - Museum Collections

NPS museum collections within the eastern Tennessee region (ANJO, BISO, CUGA, OBED, and GRSM) are comprised of historic and archeological artifacts and objects, and archival materials associated with the life and home of President Andrew Johnson, Native American and Euro-American settlement and subsistence, park development and operations, and documents associated with environmental, cultural, and natural history of the Cumberland Plateau and the Southern Appalachian highlands. The diversity and abundance of historic objects and furnishings, as well as the research value they add, make these museum collections a reference collection for the study of the Cumberland Plateau and the Southern Appalachian highlands.

4.5.2.1 No Action Alternative

Direct and Indirect Impacts of the Alternative

Implementation of Alternative A, the No Action Alternative, states that the museum collections would continue to be stored in various facilities throughout each respective National Park unit. Currently, these collections are stored in facilities which were not designed for the long-term care and consideration of museum collections. Although well intended, many of these collections are stored in basements or previous office spaces that

do not have climatic controls necessary for the long-term preservation of objects. Collections are subjected to inadequate climate controls necessary for the control of mold, insects, and other harmful elements of decay. At OSTI, fire suppression is controlled by water sprinklers which, if used, would harm paper, metal, and wooden collections. Carpet covers the floors at OSTI and makes the movement of large objects difficult and unsafe. Carpet also harbors insects and water; both destructive elements in fragile museum collections.

Access to the collections is limited, and in the case of the GRSM historic object collections, are not regularly staffed and require a three hour round trip commute just to visit and care for the collection. The general lack of space and organization of these diverse collections also compromises the accessibility and management of the collections. Theft of museum collections can occur when collections are not properly staffed with on-site collection managers.

Several of these collections do not have staff directly responsible and trained for curatorial duties. These duties are considered ancillary to their main staff assignments. No change in management responsibility for collections care and curation is proposed under Alternative A. Alternative A would not meet the goals and purpose of the project.

Cumulative

The museum collections would continue to degrade at a rapid pace without providing an organized and controlled space. Water, mold, and insects would continue to thrive in an environment better suited for humans than for museum collections. Cumulatively, these forces of decay would be accelerated without proper climatic controls and collection care and management.

Conclusion

Under Alternative A, these collections would not be managed as a cohesive unit. The leveraging of limited dollars for trained and qualified museum staff and responsibility,

leveraging the ability to adequately prioritize conservation treatment and provide timely responses to researcher requests would be absent.

4.5.2.2 Build Alternative, Preferred Alternative - Construct Joint Curatorial Collections Facility

Direct and Indirect Impacts of the Alternative

Implementation of Alternative B, the Build Alternative would provide for the proper storage and care of museum and archival collections in a facility that would meet or exceed the museum management standards. The consolidation of museum collections from several East Tennessee NPS units would provide for the improved care and efficiency in the management of museum collections.

Currently, museum collections are stored in various facilities with varying degrees of compliance with museum management standards. In some cases, climate controls are inadequate for the long-term preservation of these irreplaceable objects and documents. The construction of a facility that is designed and constructed for the sole purpose of the care and management of museum collections would meet or exceed current museum management and climatic standards. This facility would assure that museum collections are kept under the proper storage and environmental conditions for their long-term preservation.

Work efficiencies would be created by the consolidation of these collections into one facility. Currently, museum collections are stored in various facilities throughout East Tennessee and within each park. The JCCF would house these collections in one facility, leveraging limited staffing and funding. Access to the collections would improve as the JCCF is designed to accommodate and facilitate research.

Cumulative

The cumulative impacts to the museum collections would result in the long-term care and preservation of museum collections.

Conclusion

The museum collections in the East Tennessee NPS units are valuable scientifically, educationally, and financially. These collections require proper curation, cataloguing, and storage so that they can be preserved and utilized to their fullest extent. Selection of Alternative B would result in a positive long-term, direct impact on the NPS' museum collection.

5.0 CONSULTATION AND COORDINATION

5.1 Introduction

NEPA requires federal agencies preparing an EA to consult with stakeholders, including the general public and regulatory agencies, early in the planning process. This process, known as scoping, helps to determine important issues and eliminate those that are not; allocate assignments among the interdisciplinary team members and/or other participating agencies; identify related projects and associated documents; identify other permits, surveys, consultations, etc. required by the agencies; and create a schedule that allows adequate time to prepare and distribute the environmental document for public review and comment before a final decision is made. This chapter documents the scoping process for this project and the official list of recipients for the document.

5.2 Compliance with Federal and State Regulations

This EA has been drafted in accordance with applicable state and federal regulations, including the National Environmental Policy Act of 1969, Council on Environmental Quality 40 CFR 1508.9, and the NPS DO 12 (2001).

The process and documentation required for the preparation of the EA will be used to comply with §106 of the National Historic Preservation Act. In accordance, with section 800.8 (c) of the Advisory Council on Historic Preservation's regulations (36 CFR Part 800), the park intends to use the EA to meet its obligations under §106. No archeological sites, historic structures, cultural landscapes, or ethnographic resources are present on the proposed site of the JCCF.

Museum collections would benefit from the construction of a facility by providing a curatorial facility that meets and exceeds the current museum standards. This facility would provide for the proper care and curation of museum collections from several parks. Therefore, the construction of the JCCF would pose *no adverse effect* on museum collections. A letter documenting this finding, requesting concurrence, and receiving a response is included in Appendix B.

The site was assessed for the presence of any state or federally listed threatened or endangered species in accordance with the Endangered Species Act (ESA, 1973). The area was analyzed to

determine the presence of waters of the U.S. in compliance with Sections 404 and 303 of the Clean Water Act. No Threatened and Endangered species are present and no waters of the United States are on or adjacent to the property. A letter documenting this finding, requesting concurrence, and receiving a response is included in Appendix B.

6.0 REFERENCES

6.1 Acronyms

ALCOA	Aluminum Company of America
ANJO	Andrew Johnson National Historic Site
BISO	Big South Fork National River and Recreation Area
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CLI	Cultural Landscape Inventory
CUGA	Cumberland Gap National Historical Park
DO	Director's Order
EA	Environmental Assessment
EBCI	Eastern Band of Cherokee Indians
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FPPA	Farmland Protection Policy Act
GRSM	Great Smoky Mountains National Park
GSMHC	Great Smoky Mountain Heritage Center
JCCF	Joint Curatorial Collections Facility
LEED	Leadership in Energy and Environmental Design
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPS	National Park Service
NRCS	National Resources Conservation Service
OBED	Obed Wild and Scenic River
OSTI	Office of Scientific and Technical Information, Department of Energy
SEAC	Southeast Archeological Center
SHPO	State Historic Preservation Office
TCP	Traditional Cultural Property
TVA	Tennessee Valley Authority
U.S.C.	United States Code
USDA	United States Department of Agriculture
USDI	United States Department of Interior

6.2 List of Preparers

This document was prepared by:

Erik Kreusch, GRSM Supervisory Archeologist

John McDade, GRSM Museum Curator

Kristine Johnson, GRSM Vegetation Management Specialist

Thomas Colson, GRSM Geographic Information Specialist

Becky Nichols, GRSM Biologist

Kevin Fitzgerald, GRSM Deputy Superintendent

Jeff Troutman, GRSM Resource Management and Science Division Chief

Design and technical assistance was provided by the NPS Denver Service Center.

Architectural design was completed by Smith Dalia Architects, LLC.

6.3 Selected Bibliography

National Park Service

2001 Management Policies. Available on the Internet at <http://www.nps.gov/refdesk/mp/>

2001. Director's Order 12-Conservation Planning, Conservation Impact Analysis and Decision Making. http://www.nature.nps.gov/protectingrestoring/DO12Site/01_intro/011_intro.htm

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United States Federal Government

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U.S. Green Building Council

2005. Leadership in Energy and Environmental Design (LEED). <http://www.usgbc.org/DisplayPage.aspx?CategoryID=19>.

APPENDIX A: SITE PHOTOGRAPHS AND CONCEPTUAL DESIGN DRAWINGS

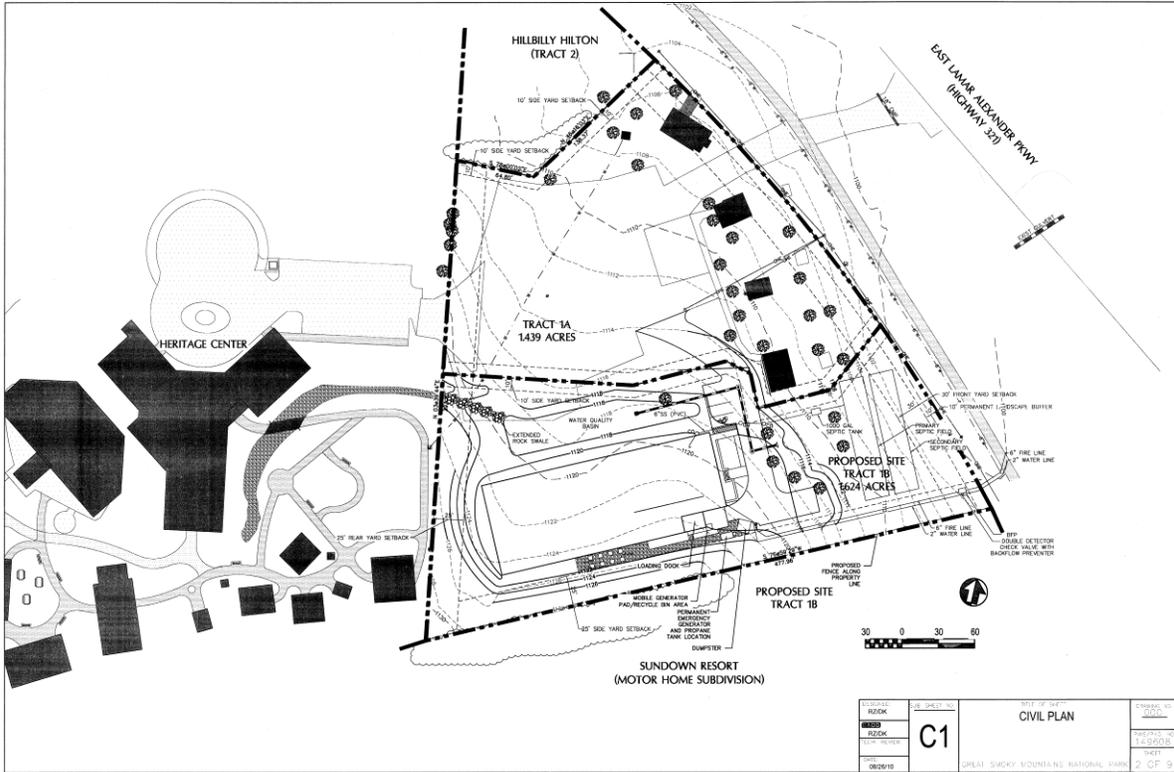


Figure 4: JCCF site plan.



Figure 5: Proposed JCCF site location looking west.



Figure 6: Proposed JCCF site location looking east.



Figure 7: Floorplan.

APPENDIX B: SECTION 7 & AND SECTION 106 COMPLIANCE DOCUMENTATION



TENNESSEE HISTORICAL COMMISSION
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
2941 LEBANON ROAD
NASHVILLE, TN 37243-0442
(615) 532-1550

January 25, 2011

Mr. Dale A. Ditmanson
Great Smoky Mountains National Park
107 Park Headquarters Road
Gatlinburg, Tennessee, 37738

RE: NPS, CURATORIAL STORAGE FACILITY, UNINCORPORATED, SEVIER COUNTY

Dear Mr. Ditmanson:

In response to your request, received on Thursday, January 20, 2011, we have reviewed the documents you submitted regarding your proposed undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicant for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800. You may wish to familiarize yourself with these procedures (Federal Register, December 12, 2000, pages 77698-77739) if you are unsure about the Section 106 process.

Considering available information, we find that the project as currently proposed MAY ADVERSELY AFFECT PROPERTIES THAT ARE ELIGIBLE FOR LISTING IN THE NATIONAL REGISTER OF HISTORIC PLACES. You should now begin immediate consultation with our office. Please direct questions and comments to Joe Garrison (615) 532-1550-103. We appreciate your cooperation.

Sincerely,

E. Patrick McIntyre, Jr.
Executive Director and
State Historic Preservation Officer

EPM/jyg

H30

January 14, 2011

Mr. Herbert L. Harper, Executive Director and
Deputy State Historic Preservation Officer
Tennessee Historical Commission
Department of Environment and Conservation
2941 Lebanon Road
Nashville, Tennessee 37243

Dear Mr. Harper:

Great Smoky Mountains National Park (GRSM, the Park) is proposing the construction of a permanent curatorial storage facility, library, research center and cultural resources offices for Great Smoky Mountains National Park and collections from several Tennessee National Park Service units. GRSM has been in ongoing discussion with Andrew Johnson National Historic Site (ANJO), Big South Fork National River and Recreation Area (BISO), Cumberland Gap National Historical Park (CUGA), and Obed Wild and Scenic River (OBED) in the development and consolidation of historical collections into a multi-park facility.

Space to house these collections and their anticipated 25 year growth is estimated to be around 13,000 sq. ft. The facility would provide proper storage for over 144,000 artifacts, 220,000 archival records, and 275 lineal feet of library materials. The curatorial facility will also provide office space for Cultural Resource Management Staff, and work space for park staff, public, and over 900 researchers annually to conduct research using the library and archival collections.

Current plans are to develop the facility on property outside of the present Park boundaries, but within Great Smoky Mountain National Park's authorized legislative boundary for the Park. A 1.6 acre parcel adjacent to the Great Smoky Mountain Heritage Center (GSMHC) in Townsend, Tennessee is proposed to be donated to the Park. Co-locating the proposed facility with the GSMHC offers cost savings, is easily accessible, and will promote research access to multi park collections.

The Park intends to prepare an environmental assessment (EA) for the proposed project. Preparation of an EA is necessary to meet the requirements of the National Environmental Policy Act. In addition, the process and documentation required for the preparation of the EA will be used to comply with §106 of the National Historic Preservation Act. In accordance, with section 800.8 (c) of the Advisory Council on Historic Preservation's regulations (36 CFR Part 800), I am notifying your office in advance of the park's intention to use the EA to meet its obligations under §106.

Should you have any questions, feel free to contact Erik Kreusch, Archeologist at (865) 430-0339

Sincerely,

8/14/11
DATE

SIGNED: *K. Fitzgerald*

Dale A. Ditmanson
Superintendent

Cc:

Russell Townsend, EBCI, THPO
Jeffrey J. Crow, NCSHPO

bc:

GenFile(RMS)

Blue/green

Cultural, RMS

Chief:Compliance/Correspondence/Cultural(102_TnSHPO_CurotorialFacility_142011)