



George Washington Carver National Monument Cultural Landscape Report Environmental Assessment

95% DRAFT CLR/EA
FEBRUARY 2015



George Washington Carver National Monument

Diamond, Missouri

Cultural Landscape Report Environmental Assessment

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Prepared by:

Bahr Vermeer & Haecker Architects, Ltd.
440 North 8th Street, Suite 100
Lincoln, Nebraska 68508

John Milner Associates, Inc.
300 West Main Street, Suite 201
Charlottesville, Virginia 22903

Wiss, Janney, Elstner Associates, Inc.
330 Pfingsten Road
Northbrook, Illinois 60062

Historic Resources Group
442 South 28th Street
Lincoln, Nebraska 68508

Prepared for:

National Park Service
Midwest Regional Office
601 Riverfront Drive
Omaha, Nebraska 68102

February 2015



**Cultural Resources Division
Midwest Regional Office
National Park Service
601 Riverfront Drive
Omaha, Nebraska 68102**

About the front cover: View of Landscape of George Washington Carver National Monument

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George Washington Carver National Monument

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Foreword

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National Park Service – Midwest Regional Office

Tonya Bradley, Contracting Officer
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Rachel Franklin Weekley, Historian/Cultural Resources
Ann Bauermeister, Archeologist

National Park Service – George Washington Carver National Monument

James R. Heaney, Superintendent,
Lana K. Henry, Management Assistant
Randall Becker, Supervisory Park Ranger and Supervisor of Interpretation and Education
Matt Henderson, Supervisor Facility Operations Specialist
Leslie Sadler, Administrative Officer

Bahr Vermeer & Haecker Architects, Ltd.

Dan Worth, IDIQ Manager and Historical Architect

John Milner Associates, Inc.

Laura Knott, Principal Landscape Architect
Jane Jacobs, Project Manager and Project Landscape Architect
Liz Sargent, Historical Landscape Architect
Christina Osborn, Landscape Designer

Wiss, Janney, Elstner Associates, Inc.

Deborah Slaton, Historian
Kenneth Itle, Historical Architect
Tim Penich, Graduate Historical Architect/Historian

Historic Resources Group

Melissa Dirr Gengler, Historian

Chapter 1: Introduction

1.0 Overview

The George Washington Carver National Monument, located near Diamond, Missouri, was authorized by Congress on July 14, 1943. It was formally dedicated on July 14, 1953, to memorialize and preserve the 240-acre birthplace home of George Washington Carver. Dr. Carver was one of the leading agricultural scientists, educators, and humanitarians in America during the late nineteenth and early twentieth centuries.

Planning for the national monument began in 1951 when the National Park Service (NPS) asked regional historian Merrill Mattes to take the lead in preparing a basic planning document or master plan development outline for the new unit. His initial description of the essential NPS goal of making the unit into a memorial site states:

Preservation of the George Washington Carver birthplace ensures the lasting memorialization of a humble man whose practical and momentous achievements in the field of scientific agriculture and chemistry led to his world-wide fame. Here was a signal triumph of the human spirit, for Carver rose to this eminence from a dubious beginning as sickly, penniless, orphan slave boy, endowed only with a thirst for learning and an abiding sense of kinship with the Creator. The flowering of his many-faceted genius, as botanist, soil scientist, chemist, educator, and artist reflects luster upon a race which has made remarkable

strides toward dignity and self-sufficiency since Abraham Lincoln signed the Emancipation Proclamation. The Monument is a tribute, not only to a man, but to an eloquent expression of the American faith.¹

Though Mattes was a historian, he went on to identify the basic planning problem for the new park unit, which was how to convey the significance of the site, given that the principal historic features associated with Carver's early life—the birthplace cabin and the original Carver farm house—were both gone. Restoration would be difficult because no plans or photographs of these buildings were known to exist. What the national monument did have was the land itself, with its mix of native woods, open meadows, and planted walnut grove; the birthplace cabin site; the Carver family cemetery; and the later Moses Carver house.² This same issue challenges the park today and is one of the primary goals for this study.

Thus NPS began the process of assessing and establishing core management direction for the George Washington Carver National Monument. Management issues included: purpose of the unit; visitor use and experience; research and planning priorities; and the interplay of cultural and natural resource protection. Master plans were developed in the 1950s and 1960s; statements for management in 1971, 1984, and 1994; and the general management plan in 1997. The General

1. Diane Krahe and Theodore Catton, *George Washington Carver National Monument Administrative History* (2014), 96, quoting Merrill Mattes, "Master Plan Development Outlines, George Washington Carver National Monument," April 1952, File D18, RDF, GWCA.

2. *Ibid.*, 96.

Management Plan (GMP) for the park established a new core management direction by identifying the commemoration of Dr. Carver as the key objective of park management and provided a sound planning base for future management decisions for the site. This GMP also laid out the need to improve the interpretive program, which eventually led to the Long-Range Interpretive Plan (LRIP) that was completed in 2007. This plan defined the park story in a set of themes, and sub-themes to assess how completely and effectively the park's cultural and natural resources were being used to convey the park story.³

Management of both natural and cultural resources at the national monument has been a part of the planning process since the 1980s, including the initiation of the prairie restoration program and management recommendations for the restoration and maintenance of prairie areas within the park boundaries. From 1994 to 2011, four scientific assessments of the progress of the prairie restoration found difficulties with the program but offered no suggestions for modifications.⁴ Prairie management continues to be an issue for the park and part of the directive for the development of this CLR/EA.

In the years after the GMP was completed, the park endeavored to find some sort of blend of natural and cultural resource management that would support the memorial emphasis and address the issues of prairie management and maintenance and preservation of cultural landscape features. In 1999, *Springs of Genius: An Integrated Management Plan for George Washington Carver National Monument* was completed as a pilot project for the integration of natural and cultural resource management. In 2010, the Cultural Landscape Inventory (CLI) was completed for George Washington Carver National Monument, which provided a comprehensive look at the historical development and significance of the landscape, placing it in context of the site's overall significance. In the CLI, the conceptual framework for George

Washington Carver National Monument was as a historic designed landscape:

... a composite of cultural and natural features dating back to Carver's boyhood, combined with post-1951 built features. Even the present-day vegetation and the Williams Pond were part of this cultural landscape inasmuch as the Park Service had manipulated the vegetation and modified the pond to serve the memorial's purpose.⁵

After this report was completed, the National Park Service submitted it to the State Historic Preservation Officer (SHPO) with the recommendation that the cultural landscape was eligible for listing on the National Register of Historic Places. The SHPO concurred.⁶

In 2013, the National Park Service engaged Bahr Vermeer Haecker Architects (BVH) of Lincoln, Nebraska, in association with John Milner Associates (JMA) of Charlottesville, Virginia; Wiss, Janney, Elstner Associates, Inc., (WJE) of Northbrook, Illinois; and Historic Resources Group, Inc. (HRG) of Lincoln, Nebraska, to prepare a Cultural Landscape Report (CLR) and Environmental Assessment (EA) to document and record the history and current conditions of George Washington Carver National Monument, and guide its future treatment and use. The goals and objectives of the report include:

- Follow GMP directives to determine the best approach to managing the park's cultural and natural resources in accordance with the park's legislative mandate
- Provide guidance for rehabilitating the landscape and its associated structures to enhance the memorial nature of the site
- Discuss overall management objectives for the park as documented in planning studies and other research documents

3. Ibid., 117, 120, 197.

4. Ibid., 239.

5. Ibid., 276.

6. Ibid., 276–277.

- 1 ■ Present a phased strategy for long-term
- 2 management based on the landscape's
- 3 significance, existing condition, and use
- 4 ■ Develop treatment recommendations that will
- 5 address the entire 240-acre cultural landscape,
- 6 balancing historic landscape protection with
- 7 natural resource efforts, and supporting and
- 8 enhancing interpretive programs
- 9 ■ Focus rehabilitation treatment on providing
- 10 opportunities for the public to experience the
- 11 peaceful environment and reflect on
- 12 Dr. Carver's life

13 The CLR/EA was developed within a framework
 14 of previously-prepared resource inventories and
 15 planning studies, in particular, those completed by
 16 Heartland Natural Resource Monitoring Program
 17 and Missouri Resource Assessment Partnership
 18 (MoRAP). Three documents in particular have
 19 served as a foundation for the CLR/EA: the GMP
 20 (1997); the LRIP (2007); and the 2007 CLI
 21 developed and written by NPS. The CLR/EA drew
 22 upon these studies in the documentation of the
 23 park's landscape, assessment of its integrity, and
 24 development of landscape treatment
 25 recommendations.

26 **1.1 Purpose and Need for the**

27 **Project**

28 The purpose of this project is to assist the NPS in
 29 identifying the best approach to managing the
 30 cultural and natural resources comprising the
 31 historic landscape at George Washington Carver
 32 National Monument in accordance with the park's
 33 legislative mandates. The proposed action
 34 alternatives and associated treatment
 35 recommendations address the entire 240-acre
 36 landscape and will assist the NPS with managing
 37 the historic property, balancing cultural and
 38 natural resource stewardship, and supporting and
 39 enhancing interpretive programs as well as the
 40 overall visitor experience.

41 The proposed action alternatives and treatment
 42 recommendations were developed within the
 43 context of a CLR, which provides the park with a

44 guiding philosophy for management of both
 45 cultural and natural historic resources that can be
 46 directly tied to significant periods and themes in
 47 American history, namely the life of notable
 48 scientist, educator, and humanitarian Dr. George
 49 Washington Carver.

50 The CLR/EA presents an approach to long-term
 51 management of the George Washington Carver
 52 National Monument cultural landscape that
 53 addresses the treatment needs of specific areas
 54 identified by NPS. They include:

- 55 ■ the approximately 20-acre Development
- 56 Subzone, an area of the park requiring
- 57 intensive management, and including the
- 58 visitor center/maintenance building complex,
- 59 the area immediately adjacent to the memorial
- 60 entrance, the picnic area, and the 1-mile
- 61 Carver Trail;
- 62 ■ the 30-acre parcel of property acquired by the
- 63 park in 2006;
- 64 ■ the prairie units and the various vegetation
- 65 species that cover the site based on
- 66 recommendations from the Missouri
- 67 Resource Assessment, the Heartland
- 68 Inventory and Monitoring Program, and the
- 69 Heartland Network Invasive Plant
- 70 Management Plan/EA Assessment (IPMP/EA);
- 71 ■ the prairie units restoration and management
- 72 practices, including type of prairie and the
- 73 number of acres that should be maintained in
- 74 prairie;
- 75 ■ the prairie units management and relationship
- 76 to viewsheds;
- 77 ■ the woodlands and open space/savanna
- 78 management to address differences between
- 79 the contemporary landscape and the former
- 80 spatial patterns of the park;
- 81 ■ the vegetation management for the picnic area
- 82 grove; and

- the overall justified approach to land cover management and its connection to interpretation and the visitor experience.

In addition to treatment recommendations, other improvements to the site are needed. Examples include:

- universal access throughout the George Washington Carver National Monument including specifically identified trail sections that may need to be adjusted due to steep slopes or surfacing material;
- other accessibility issues, including those identified in the 2014 site assessment by the National Center on Accessibility;
- recommendations for treatment of Williams Pond and the contemplative trail that surrounds it;
- potential restoration of the stream banks currently covered with rip-rap in order to prevent future erosion and maintain water quality in the streams;
- accommodation of overflow parking on the site, including location, extent, access and surface treatment;
- cemetery wall repair, maintenance, and management; and
- potential expansion of the Carver Trail.

NPS has recognized the need to better integrate commemoration, interpretation/education, and the treatment and management of the landscape. NPS recommendations in a 1964 park master plan suggested restoration of the landscape that existed when George Washington Carver was a boy on the Moses Carver farm. This recommendation has never been implemented due to a lack of historical documentation of landscape features during the period circa 1865–1876. The master plan did, however, state that the principal asset of the national monument was the land itself, as it was an expression of those qualities which characterize Carver’s greatness—simplicity, naturalness, and

quiet beauty. With the development of the GMP in 1997, the park recognized how the site and its context had changed since 1964, requiring the formation of a new set of management objectives for the park, including managing resources to help interpret how the boyhood farm and surrounding area influenced Carver as an adult. This led to the further evaluation of the human, natural, and cultural resources and clarifying the utilization of these resources for interpretation, education, and commemoration.

Since 1997, a number of planning studies have been conducted to support appropriate treatment of the site’s cultural landscape and its natural features. None, however, has resulted in specific tangible documentation of the property’s character and composition during the targeted restoration period. There remains a need to further evaluate the feasibility of reconstruction of landscape features based on existing historical documentation and extant features, as well as the relationship between existing prairie and woodland features and historic agricultural cover types. There is also a need to address what these areas should look like and how they should be used to tell the story of George Washington Carver’s life. Questions also remain concerning the loss of agricultural and ethno-botanical features associated with nineteenth century use of the property, such as the persimmon grove and apple orchard, and the feasibility of restoring these cultural landscape features.

1.2 Scope of the Report

The CLR/EA is the primary document used to guide management and stewardship of the cultural landscape and its individual resources, and to inform treatment, management, and maintenance of the grounds and buildings at George Washington Carver National Monument. The intent of the combined CLR/EA is to provide a holistic and integrated plan that addresses operational needs, while also recognizing that the mission of the NPS is to provide a rich and authentic visitor experience. It is also the intent of the combined document to ensure that long-term

preservation and stewardship objectives are met to the maximum extent practicable.

The CLR portion of the document includes detailed documentation of the historical development of the national monument, evaluation of its existing conditions, analysis and evaluation of landscape characteristics, and preparation of treatment recommendations. The CLR builds upon the numerous studies and documents that exist for George Washington Carver National Monument.

The EA portion of the document evaluates potential impacts on environmental, socioeconomic, and cultural resources through the proposed treatment/action alternative (preferred alternative), additional action alternatives, and a no action alternative. The EA provides the decision-making framework that analyzes a reasonable range of alternatives to meet objectives of the proposed action and evaluates potential issues and impacts to the park's resources and values. The EA also identifies mitigation measures to lessen the degree or extent of any identified impacts.

The combined CLR/EA includes the following chapters:

- Introduction
- Site History and Evaluation of Significance
- Existing Conditions, Comparative Landscape Analysis, and FMSS Maintained Landscapes data
- Affected Environment
- Alternatives and Treatment
- Impact Analysis and Environmental Consequences
- Consultation and Coordination
- Implementation, Phasing, and Work Orders
- Bibliography

1.3 Methodology

The CLR/EA was conducted in phases. The first phase involved a pre-proposal meeting at the park to discuss the needs of the project. The second phase involved a second meeting at the park to discuss project organization, conduct background research and field investigation, and develop initial public scoping for the EA. The site visit also resulted in the identification of draft materials for entry into the Planning, Environment & Public Comment (PEPC) database and for NEPA compliance tracking, preparation of press releases, and to develop a list of stakeholders and a strategy for consultation.

The phase two site visit was followed by initial report production and preliminary consultation with agencies required as part of the EA compliance process to meet Section 7 of the Endangered Species Act (U.S. Fish and Wildlife Service, state natural resource management agencies, and state natural heritage inventories), Sections 106 and 110 of the National Historic Preservation Act (State Historic Preservation Office and Advisory Council for Historic Preservation), and other relevant regulations and reviews.

Following initial report preparation and park review of the document including draft alternatives/treatment recommendations, the team facilitated stakeholder meetings held at the park on May 14, 2014. Stakeholders included the State Historic Preservation Officer (SHPO), Tribal Historical Preservation Officers (THPO), other federal and state agencies, and friends of the park. The preferred alternative was developed based on the additional input from stakeholders and NPS review and comments.

The CLR/EA was then developed to 95 percent completion and reviewed by the park, Midwest Region staff, and the Missouri SHPO, and tribal THPOs. After review of the 95 percent draft, review comments were addressed and the 95 percent draft CLR/EA was made available for public and agency review by NPS on the PEPC site. After public review and response to

comments, the 100 percent document will be prepared for final review and circulated through the park and MWRO in order to get approval of the FONSI.

The specific methodologies utilized to prepare the CLR and EA components of the report are outlined below.

1.3.1 Cultural Landscape Report

The CLR for George Washington Carver National Monument was prepared in accordance and compliance with the guidance offered in the most recent versions of relevant federal mandates, executive orders, policies and guidelines, as well as applicable state, local, and national building and life safety codes, including:

- A Guide to Cultural Landscape Reports: Contents, Process, and Techniques
- Cultural Landscapes and NPS Facility Management, Landscape Lines No. 17
- The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes
- NPS Director's Order 10A: Design and Construction Drawings
- NPS Director's Order 28: Cultural Resources Management Guidelines
- NPS Director's Order 77: Natural Resource Protection; Reference Manual 77: Natural Resource Management
- Architectural Barriers Act of 1969; Rehabilitation Act of 1973; Americans with Disabilities Act of 1990
- NPS Management Policies 2006
- NPS Guiding Principles of Sustainable Design
- National Register Bulletin: How to Apply the National Register Criteria for Evaluation

- National Register Bulletin: Guidelines for Documenting and Evaluating Rural Historic Landscapes

- National Register Bulletin: Telling the Stories: Planning Effective Interpretive Programs for Properties Listed in the National Register of Historic Places

- National Historic Preservation Act of 1966, as amended; Sec. 106 and 110

In addition, the methodology used by project team members in preparing each component of the CLR portion of this document is described in detail below.

Background Research and Data Collection.

Prior to visiting the site, CLR team members began to collect documents and other materials pertaining to the project and site. In addition to assembling available research materials from the Midwest Regional Office of the NPS, the team acquired the Cultural Landscape Inventory for the park and the NPS List of Classified Structures for park resources. The team also obtained secondary sources addressing the history of the site and region, and studies, maps, and plans available from the NPS Denver Service Center Technical Information Center. Also, all previously completed natural resource studies by Heartland Natural Resource Monitoring Program and MoRAP were provided to the team by park staff. In preparation for field investigations, project personnel requested Geographic Information Systems (GIS) files from the park and the Midwest Regional Office to use in developing base maps for field inventory.

Base Mapping. In anticipation of conducting fieldwork, the team prepared an AutoCAD base map of the park by compiling information available from GIS mapping, aerial photography, and historic site plans. The draft base map was later refined and updated using the information collected during field investigations and from consulted sources. GIS data and the AutoCAD map were also used to generate diagrams and other report graphics.

Start-up Meeting. On November 5 and 6, 2013, project team members from Bahr Vermeer Haecker Architects, John Milner Associates, Inc., Wiss, Janney, Elstner Associates, Inc., and Historic Resources Group, Inc., met with park and regional NPS personnel at the George Washington Carver National Monument visitor center to initiate work on the CLR as part of the phase two site visit. The meeting began with introductions of park, regional office, and contractor project staff. During the meeting, Marla McEnaney introduced the purpose, goals, and methodology of the CLR, and the park identified the issues of concern to be addressed in the report. Project administration procedures were established, materials needed by the CLR team were identified, and a process for transmission determined. The park also identified the resources available to the team and any special conditions unique to the project and site. NPS personnel subsequently provided the CLR team with a tour of the park. In addition to the start-up meeting, the project team met with park maintenance and interpretive personnel to solicit their input on park management issues, goals, and concerns.

Field Investigations. As part of the site visit conducted on November 5 and 6, 2013, CLR team members conducted preliminary field investigations to document landscape resources associated with the park. Team members photographed primary and representative landscape features, both cultural and natural, and annotated draft base maps with observations about materials, resource condition, and corrections to the mapping files. Where available mapping was lacking in detail, team members prepared sketch maps that were later used to enhance the electronic files.

Historical Landscape Documentation and Site Physical History. CLR team members also conducted research at the park archives following the start-up meeting. The focus was on historic records addressing physical park development such as maps, plans, and photographs. The site physical history was drafted based upon review of the materials collected during these various research efforts. The information was first

organized into a site history chronology of the physical events at George Washington Carver National Monument. The chronology was then used to identify a series of definable historic periods for the park's evolution. Each period was described through historical narrative, supplemented with historic maps, photographs, and plans.

Historic Period Plan Preparation. Historic period plans of the George Washington Carver cultural landscape were prepared to represent the farm during Dr. Carver's childhood (circa 1865–1876); the years of initial park planning through the official opening of the park (1943–1953); and the early park development period (1953–1960).

The CLR team developed the historic period plans through registration of historic mapping sources with existing conditions information; preparation of the existing conditions base map thus preceded work on the period plans. The project team used all available historic photographs and written descriptions of the landscape found in the research materials collected for the project to develop details of the period plans. Limited secondary sources were also used to corroborate information and to generate queries for primary sources. Secondary sources were typically evaluated for their credibility and utilized with caution.

Existing Conditions Documentation. The documentation of existing conditions was developed through preparation of cross-referenced narrative, graphic, and photographic materials, organized in accordance with the framework established in National Register Bulletins: *Guidelines for Documenting and Evaluating Rural Historic Landscapes* as well as the NPS's *A Guide to Cultural Landscape Reports*. Existing conditions resource information was organized into a series of landscape characteristics.

The CLR documentation includes information derived from existing conditions base mapping, field investigations, review of photographs taken in the field, and examination of park planning documents, park files, and other relevant cultural and natural resource documents received from the

NPS or acquired through research. The existing conditions documentation includes photographs of representative landscape features, which are referenced in the text.

Feature condition assessments were made using the categories suggested by the *Guide to Cultural Landscape Reports*: Good, Fair, Poor, and Unknown.⁷ Where relevant, specific condition-related observations made in the field are reflected in the report.

A table of resources was developed and is included at the end of Chapter 3. The table indicates the relationship between features identified on behalf of the CLR and those tracked by NPS as part of the Facility Management Software System (FMSS), a numbering and naming convention used within the park for everyday maintenance issues.

Evaluation of Significance. George Washington Carver National Monument was listed in the National Register of Historic Places in 1976. The nomination, currently being updated, indicates that the park is a historic district significant for its associations with George Washington Carver. The property is the first national park unit to honor an African American and a person other than an American president. The park is thus a significant commemorative site that marks, protects, and honors the inspirational work and career of George Washington Carver, who was born on the property into slavery. The significance evaluation provided in the National Register nomination was considered in conjunction with the guidance provided in the National Register Bulletin: *How to Apply the National Register Criteria for Evaluation*. The CLR considered the potential to update the nomination based on additional findings provided by the recent research and documentation.

As noted in the draft National Register nomination Additional Documentation, George Washington Carver National Monument is nationally significant under National Register Criterion A for its association with events that have made a significant contribution to the broad patterns of our history, and under Criterion B for its association with the life of Dr. George Washington Carver, a person significant in our past. It is also significant under Criteria Consideration C, a birthplace or grave, as the birthplace of Dr. George Washington Carver, and under Criteria Consideration F, as a commemorative property.⁸

As noted in the draft National Register nomination Additional Documentation, the national monument is significant in the areas of science, education, community planning and development (park), and conservation.⁹

Comparative Analysis of Historic and Existing Conditions. To better understand the relationship between the existing park landscape and the character of the landscape present during the period of significance identified, the CLR team prepared a comparative analysis of historic and existing conditions. The analysis focused on extant features, their dates of origin, and their evolution over time. The three primary goals of the comparative analysis were to:

- Understand which features survive from the period of significance
- Establish the basis for an integrity assessment
- Provide an understanding of the similarities and differences between historic and existing conditions to serve as the basis for the development of a well-grounded treatment plan for the cultural landscape.

7. Robert R. Page, Cathy A. Gilbert, and Susan A. Dolan, *A Guide to Cultural Landscape Reports: Contents, Processes, and Techniques* (Washington, D.C.: Department of the Interior, 1998), 67.

8. Jason H. Gart, National Register Additional Documentation, draft, January 31, 2014.
9. Ibid.

1 Identification of Contributing and Non-

contributing Resources. Based on the findings of the comparative analysis of historic and existing landscape conditions, the CLR identifies those resources that contribute to its National Register significance, those that are non-contributing, and those that are missing from the historic period of significance. Chapter 3 of the document details the existing resources, including those that are missing. Missing resources were ascertained from existing documents including archeological studies and located on the period plans. Missing resources are also discussed as part of restoration and interpretation in the range of alternatives.

Assessment of Integrity.

The CLR summarizes the site's overall integrity and then assesses its integrity in accordance with the seven aspects—location, design, setting, materials, workmanship, feeling, and association—identified in National Register Bulletin: *How to Apply the National Register Criteria for Evaluation*.

Treatment Plan. Work on the treatment plan proceeded from the overarching guidance of the General Management Plan (1997) and will correlate with the Long Range Interpretive Plan to provide guidance on how the landscape can support and enhance interpretive themes. Guidance for treatment was also afforded during the project start-up meeting held in November 2013, and subsequent consideration of a full range of alternatives. Work on the treatment plan was developed in coordination with the development of action alternatives required for the EA process. Treatment alternatives were prepared early on in the project in order to engage the park and stakeholders in an evaluation process that considered all positive and negative outcomes associated with a range of options, allowing for a vetting process intended to encourage consensus and informed decision making. The treatment plan addresses the goals, needs, and objectives for the project identified in meetings and consultation with stakeholders. The treatment plan is also based on the findings of the comparative analysis prepared as part of the CLR and the National Register-level significance evaluation.

1.3.2 Environmental Assessment

The EA methodology for this portion of the document follows the directives set forth in Director's Order 12 from the NPS. The methodology of the EA is summarized below.

Purpose and Need. The “purpose” of the project is a statement of goals and/or objectives that George Washington Carver National Monument intends to fulfill by taking action. The “need” describes the conditions prompting the NPS to consider action and explains why the monument is proposing the action at this time. Appropriate maps showing the project area and vicinity are included.

Background. This section includes a written narrative of the park purpose/significance, graphic descriptions of the study area, and documentation of the management and planning context for George Washington Carver National Monument. The process of developing the issues and impact topics for the EA portion of the document is articulated. Relevant impact topics were selected to help focus the affected environment and environmental consequences sections. Potential impact topics were evaluated and classified as either “Impact Topics Selected for Detailed Analysis” or “Impact Topics Dismissed from Detailed Analysis.”

Affected Environment. Chapter 4: Affected Environment describes the existing environment potentially affected by the project alternatives. Consistent with Council of Environmental Quality (CEQ) regulations (40 CFR 1502.15), this chapter presents a concise and focused description of the environment for George Washington Carver National Monument. Information focuses on sensitive or controversial resources and/or those resources anticipated to incur project-related impacts.

Alternatives. In this CLR/EA document the development of alternatives is combined within the treatment plan section in Chapter 5: Treatment Alternatives. A written description of the treatment alternatives, including a no action alternative and several action alternatives, is provided. The alternatives are also presented in graphic plans. The alternatives were developed with consideration of a reasonable range of actions. An NPS preferred alternative was identified before the document was made available for public comment. The alternatives discussion also includes identification of the “environmentally preferred alternative” per NPS *Director’s Order 12 Handbook*, Section 2-7 (D) and (E), for comment during the CLR/EA public review. A description of alternatives considered but dismissed is also provided. In the narrative discussion, these alternatives are identified and described, including justification for eliminating them from further analysis.

Environmental Consequences. Chapter 6: Impact Analysis and Environmental Consequences provides an analytic evaluation of the potential effects or impacts of each of the alternatives on the resources described in the affected environment section. The objective analysis and disclosure of potential environmental impacts of the proposed action and alternatives facilitates informed decision-making. This analysis and disclosure of impacts is provided in this section, presenting the effects of each alternative on the various components of the affected environment.

Impact Comparison Matrix. The impact matrix is in a table format that allows for easy comparison of the various project alternatives (including no action). The matrix presents a concise summary of each alternative’s potential effects by impact topic.

Consultation and Coordination. This section of the EA presents an overview of public involvement activities implemented as part of the environmental assessment process. Documentation of stakeholder participation is included as well as persons, organizations, and agencies contacted for information and assisting in

identifying important issues, developing the alternatives, or analyzing impacts.

Record of Decision/Finding of No Significant Impact. Based on internal and public review, the approved decisions document will be signed by the park superintendent and sent to the regional environmental coordinator, project manager/COTR and park contact for a seven-day review period. The decision document complies with the guidance found in *Director’s Order 12 Handbook*.

Compliance with Federal or State Regulations. The EA portion of this document including the alternatives is technically and legally defensible and in full compliance with federal mandates, Director’s Orders, policies and guidelines including:

- National Environmental Policy Act (NEPA) of 1969, as amended
- National Park Service Organic Act of 1916, 1 U.S.C. 1-4, et seq.
- Council of Environmental Quality (CEQ) (40 CFR 1508.9)
- NPS Director’s Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-Making
- Protection and Enhancement of Environmental Quality, Executive Order 11514, as amended by E.O. 11991
- Clean water Act of 1977, as amended, Sec. 401, 402 and 404(b)(1)
- Endangered Species Act of 1973, as amended 16 U.S. C. 1531-1543
- Fish and Wildlife Coordination Act of 1934, as amended (16 U.S. C. 661–667)
- Invasive Species, Executive Order 13112
- The Architectural Barriers Act (as amended)

In addition, the EA was prepared in compliance with the requirements of Section 106 of Historic Preservation Act (NHPA), in accordance with the Advisory Council on Historic Preservation's (ACHP) regulations implementing Section 106 (36 CFR Part 800.8, Coordination with the National Environmental Policy Act).

1.4 Historical Summary

George Washington Carver National Monument is significant as the birthplace and childhood home of George Washington Carver. The farm belonging to Moses and Susan Carver was young George's home until he was about eleven years old. It was on the farm that he had the opportunity to pursue his curiosity about the world around him.¹⁰ In addition to his farm-related tasks, George Washington Carver's interest in nature was developed during his time on the farm as he explored the property, collecting various flowers, rocks, and insects. He also taught himself to read during his early years on the farm.

In 1876, young George was permitted to attend the Neosho Colored School in nearby Neosho, Missouri. His enrollment at the school marked the end of his time on the Moses Carver farm.¹¹

After the death of Moses Carver in 1910, the property was sold to Samuel Warden. Warden owned the farm for two years and it was then purchased by C. M. Shartel in 1913. During the Shartel tenure on the property, various tenants and employees lived there. Mr. Shartel was actively engaged in the business of raising thoroughbred cattle, resulting in a series of changes to the landscape. There were many buildings and structures on the Shartel property associated with the agricultural and grazing land

uses prevalent over the site, as well as residential structures for the family and farm employees.

The early 1940s saw the beginning of interest in establishing a national monument at the birthplace of George Washington Carver. In 1941, the St. Louis branch of the National Association for the Advancement of Colored People (NAACP) submitted a proposal to establish a memorial to Carver at his birthplace. At the time they were informed that construction of a monument to a living man was a conflict with NPS policy. Dr. Richard Pilant, a social science professor at Washington University in St. Louis, also began to lobby actively for establishment of such a monument. The first federal legislation relating to the establishment of the George Washington Carver National Monument at the Moses Carver farm was introduced in 1942. No immediate action was taken until after George Washington Carver died on January 5, 1943. Following his death, new bills were introduced to Congress and on July 14, 1943, the monument was authorized. The legislation specifically authorized the Secretary of the Interior to build a museum, construct roads and monuments, and erect tablets within the boundaries of the park. Acquisition of the property was delayed by World War II and a dispute over the value of the farm. Ultimately, the federal government proceeded with condemnation of the property. During this interim, from 1949 to 1954, Sidney J. Philips and the George Washington Carver National Monument Foundation leased the farm and opened it to visitors. In 1950, Congress amended the 1943 act and authorized additional funds for land acquisition. This enabled the Secretary of the Interior to acquire 210 acres of the original 240-acre farm. On September 25, 1952, the first superintendent and historian arrived on the site.

10. *George Washington Carver National Monument: General Management Plan* (National Park Service, June 24, 1997).

11. Jason H. Gart, *He Shall Direct Thy Paths: The Early Life of George W. Carver, Historic Resource Study* (Washington, D.C.: National Park Service, Department of the Interior, 2014),

citing Paul L. Beaubien and Merrill J. Mattes, "George Washington Carver National Monument: The Archeological Search for George Washington Carver's Birthplace," *Negro History Bulletin* 18, no. 2 (November 1954), 81–86.

Dedication of the George Washington Carver National Monument took place on July 14, 1953. NPS efforts at the site through the 1950s, including removal of deteriorated agricultural outbuildings, archeological research, presentation to the park of the cast concrete bust of George Washington Carver, the reconstruction of the wall around the Carver family cemetery, and the development of the Carver Trail.

In the summer of 1958, the park's Mission 66 prospectus was approved. Included in the document were plans to construct a visitor center and museum building. In addition, plans were made to modify the route of the Carver Trail that took visitors to the site of the birthplace cabin, the open fields once farmed by the Carver family, the 1881 farmhouse, and the Carver family cemetery.

In the spring of 1960, buildings comprising the former Shartel farm were removed; the main house was moved to another property nearby, where it remains today, while many other buildings were demolished. The new visitor center was dedicated in July 1960 and a cast bronze statue of George Washington Carver as a boy was also unveiled.

The final 30 acres of land that were part of the Moses Carver farm were donated by a private land owner to the Carver Birthplace Association in 2003. The Carver Birthplace Association subsequently transferred the deed for this land to the NPS on June 22, 2005. Mitigation of tailings and other potentially hazardous deposits associated with lead and zinc mining of the parcel was completed in 2006. In August 2007, the expanded and renovated visitor center was dedicated. The renovation included a 6,700 square foot addition to the 1960 building, with new interactive and extended museum space, classrooms, an expanded theater, terrarium, archives, and library, as well as a tornado shelter.

Today, the site contains a visitor center, museum, maintenance facilities, administrative offices, storage structures (former staff residences and seasonal housing), a system of restored prairies, three streams, two springs, the Carver family cemetery, the Carver Trail, the 1881 Moses Carver

house, and extensive interpretation of site features and the life of Dr. George Washington Carver.

1.5 Park Purpose/Significance

On July 14, 1943, the bill authorizing the establishment of the national monument passed and became Public Law 148 of the 78th Congress. Congress directed the NPS to maintain and preserve George Washington Carver's birthplace as a suitable and enduring public memorial in his honor. This was the first time in United States history that a birthplace site was designated as a national monument to someone other than a United States President and the first time a unit of the National Park System was established to honor the contributions of an African American.

The George Washington Carver National Monument derives its significance primarily from its association with Dr. George Washington Carver as his birthplace and boyhood home, where he spent his formative years that set him on the road to becoming one of this nation's most distinguished scientists, educators, and humanitarians. It preserves a place known to have been influential in shaping the personality of a man who played an important role in the social and agricultural history of twentieth century America.

The national monument was established to preserve the birthplace and commemorate the rise from slavery of Dr. George Washington Carver. His life demonstrates the opportunities afforded in the United States to men of ability and energy, regardless of their origins. His accomplishments are today a living part of America's heritage. The national monument memorializes the life, accomplishments and contributions of Dr. Carver, and preserves the landscape setting of the Moses Carver farm where George was born into enslavement and spent his early years. The landscape captures the ambiance in which Dr. Carver began his earliest scientific observations of the natural world around him. The focus of park management has traditionally been on interpreting the landscape setting that influenced the young and impressionable child

who became a highly recognized research scientist, and how that setting contributed to his life's achievements (Figure 1 and Figure 2).¹²

In the LRIP (2007) the park significance is summarized below.

- The national monument preserves Dr. Carver's birthplace and childhood home, where the experiences of his formative years influenced his journey to becoming one of this nation's most distinguished scientists and humanitarians.
- The national monument is the nation's first memorial and unit of the National Park System to commemorate the achievements of an African American.
- The national monument is the first birthplace national monument of an individual other than a United States President.



FIGURE 1. Interpretation at George Washington Carver National Monument of the young Carver's early relationship to the natural world around him.



FIGURE 2. Landscape setting of the Moses Carver farm and current interpretation.

1.6 Description of the Study Area

George Washington Carver National Monument is located in Section 7 of Township 26 North, Range 31 West of the Fifth Principal Meridian, near the community of Diamond in Newton County, Missouri (Figure 3 and Figure 4). Joplin, Missouri, is the closest city, located approximately 16 miles to the northwest. The region is situated along the western edge of the Ozarks, part of the Springfield Plain, a vibrant and ecologically diverse subsection of the Ozark Highlands ecoregion.¹³ The park is accessed via Carver Road from County Highway V (Figure 5). Visitors generally travel to the site from Exit 11A off Interstate 44 (primary east-west route through southwest Missouri), or Exit 35 off Interstate 49 (primary north-south route through southwest Missouri). Interstate 44 and Interstate 49 each pass within 5 to 8 miles of the park.

12. George Washington Carver National Monument Cultural Landscape Inventory (NPS, 2010), 19.

13. Gart, *He Shall Direct Thy Paths*.

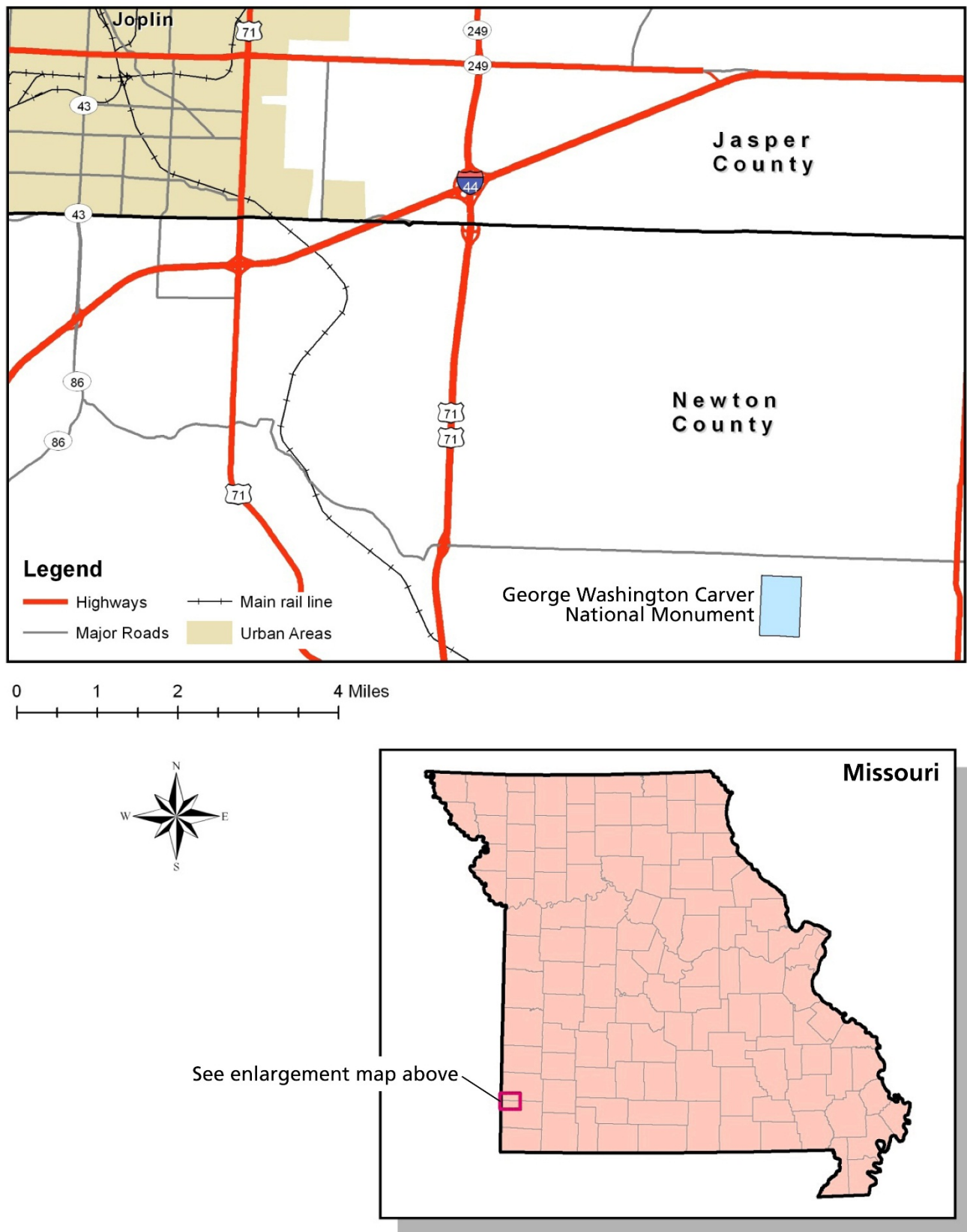


FIGURE 3. Location of George Washington Carver National Monument.

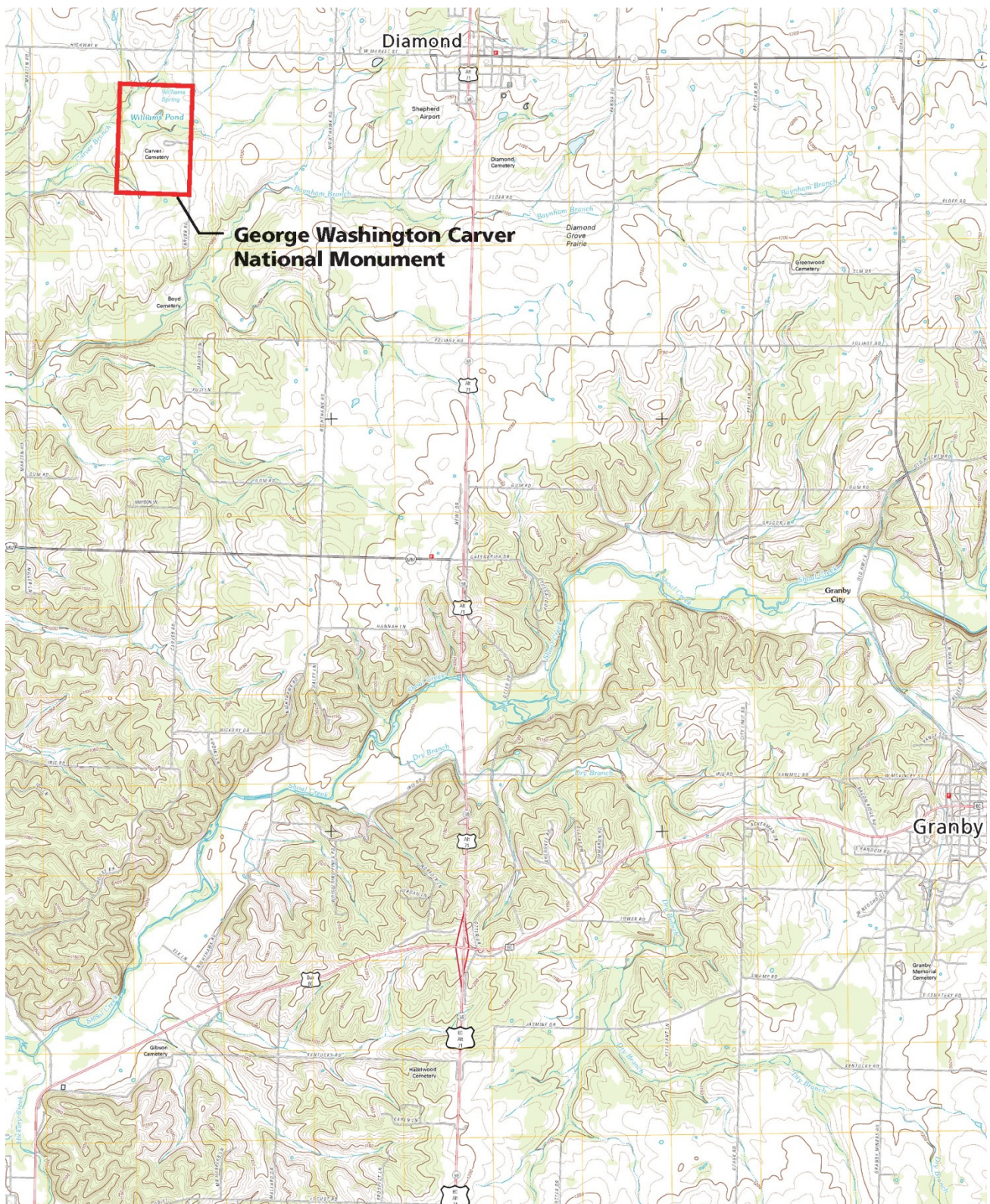


FIGURE 4. USGS map of the national monument, showing its location in relation to Granby and Diamond, Missouri.



FIGURE 5. Entrance to George Washington Carver National Monument from Carver Road.



FIGURE 6. Visitor center in the landscape of the national monument.

The national monument encompasses 240 acres of land between Carver Road to the east and Elder Road to the south. Privately held farmland edges the park to the north and east. The primary features of the park include a visitor center located at the end of a 1/4-mile entrance drive, and a mile-long interpretive trail that provides access to several features of importance to George Washington Carver's boyhood (Figure 6 and Figure 7). Much of the park is maintained in restored prairie, affording long views across the landscape (Figure 8). Three small streams pass through the park: Carver, Harkins, and Williams branches (Figure 9). Carver Spring feeds Carver Branch, while Williams Spring, not currently visible, is the source for Williams Branch and the man-made Williams Pond. These small spring-fed streams flow across the central portion of the park from east to west, and through the northwestern corner of the park. The stream corridors that pass through the center of the property, as well as the uplands to the north, are generally wooded and divide the park into quadrants. Buildings constructed during the late 1950s and early 1960s for park housing and administration needs are clustered along Carver Road, out of sight of most park activity areas.



FIGURE 7. This grove of large deciduous trees is the setting for the picnic area and views to the visitor center.



FIGURE 8. Landscape of restored prairie and woodlands at George Washington Carver National Monument.



1 **FIGURE 9.** Carver Branch runs east/west through the
2 landscape of the national monument.

3 **1.7 Related Planning** 4 **Documents**

5 Many plans and studies contributed to developing
6 the current treatment plan/alternatives for George
7 Washington Carver National Monument. These
8 include NPS research, management, policy, and
9 other documents as discussed below.

10 **Management Policies 2006.** NPS *Management*
11 *Policies 2006* provides guidance for all
12 management decisions, including those related to
13 cultural resources. Cultural resources, including
14 cultural landscapes and historic structures, are
15 addressed in Section 5.0, which states that the NPS
16 cultural resources management program involves
17 “. . . stewardship to ensure that cultural resources
18 are preserved and protected, receive appropriate
19 treatments (including maintenance) to achieve
20 desired conditions, and are made available for
21 public understanding and enjoyment.”¹⁴

22 In addition to NPS management policies, the
23 following park-specific documents provided
24 information on park resources and management
25 strategies and priorities.

26 **Master Plan for the Preservation and Use**
27 **of George Washington Carver National**
28 **Monument (NPS 1961–1964).** This study called
29 for the principal goal of recreating the historic
30 scene of the 1860s and 1870s through continued
31 research. As part of this study, the NPS
32 recommended that the site’s landscape be restored
33 to the setting present when Carver was a boy. This
34 recommendation has never been carried out due
35 to lack of detailed information for an accurate
36 restoration of structures and landscape features
37 and the associated management and maintenance
38 of a farm restoration.

39 **Historic Resource Study and Administrative**
40 **History (NPS 1973).** This study by Anna Coxe
41 Toogood discusses the physical features of the
42 Moses Carver farm, land purchase and patents,
43 farm production, and unimproved land filled with
44 wild fruits, grasses and game. The report
45 recommends that additional consideration might
46 be given to the historic scene, stating, “While the
47 visitor center obviously could not be moved from
48 its dominating position on the farm grounds, it
49 would be advisable to replant some of the crops,
50 orchards, and native growth in the area during the
51 historic period.”¹⁵

52 **Historic Resources Management Plan (NPS**
53 **1978, revised 1980).** This study noted that the
54 park’s vegetation is a historical resource and
55 suggested it be managed as such in order to restore
56 the historic scene to that of the Moses Carver farm
57 of the 1860s and 1870s wherever practical and
58 desirable. This plan advised the park to utilize
59 twentieth-century conservation and agricultural
60 techniques to grow crops, so that the site would
61 closely resemble the Carver farm.

14. *Management Policies 2006* (Washington, D.C.: National Park Service, 2006), 60.

15. Anna Coxe Toogood, *George Washington Carver National Monument, Diamond, Missouri, Historic Resource Study and Administrative History*, July 1973.

**Historic and Vegetation Survey of the Five
Prairie Management Units at George
Washington Carver National Monument**

(NPS 1982). This study focused on land use patterns over the history of the Moses Carver farm. The Carvers managed a fairly diverse agricultural operation, raising horses, cattle, swine, sheep, goats, and poultry, as well as small-scale cropping and an apple orchard. Moses Carver raised Indian corn, wheat, oats, Irish potatoes, and hay crops. The plan indicated that very little data exists to offer clues as to the real extent and species composition of the historic scene.

Resources Management Plan (NPS 1984).

This study included five management objectives. The plan identified the primary resource management objective as defined in the master plan and reaffirmed in the 1978 Statement for Management: “to restore the historic scene to that of the Moses Carver farm of the 1860s and 1870s wherever practical and desirable.”¹⁶ The plan has received several revisions, with the most current version approved in 1999.

Prairie Restoration Action Plan (NPS 1995).

This plan provided detailed descriptions of current vegetation and planned management actions. The purpose of this action plan was to guide the continuing restoration of a representation of the prairie scene appropriate to the 1860–1870 period of young George Washington Carver. This management approach retains the openness of the prairie areas and emphasizes the natural setting that was a strong part of Carver’s early life. The plan updates and incorporates methods in the 1984 Resources Management Plan, and includes an analysis of the current status of the prairie units, a set of qualitative and quantitative goals for restoration,

and methods for monitoring to collect baseline data and measure restoration success.

General Management Plan (NPS 1997). The NPS prepared this GMP for George Washington Carver National Monument to serve as a guide for the management and care of the monument for a period of ten to fifteen years. The plan provides a vision for the future of the national monument and a practical framework for decision-making. The plan helps identify the strategies, programs, actions, and support facilities necessary to manage visitation and best protect the monument’s resources.

Springs of Genius: An Integrated Management Plan for George Washington Carver National Monument (University of Wisconsin-Madison 1999). This integrated landscape restoration study was underway during the GMP process. The GMP anticipated that *Springs of Genius* would “help guide the planning team in the management and treatment of the site’s cultural landscape and its natural features.”¹⁷ The 1999 report provides extensive research on the history and evolution of the park’s landscape and features, and provides recommendations for woodland restorations, wetlands management, exotic species control, and prairie restoration. Recommended planting lists were provided, as well as treatments such as planting, seed drills, broadcast methods, and recommended planting procedures. The report suggested the reorganization of management units into natural zones based on existing soils and topography, but these recommendations have not been adopted. Three master plan options were presented for future management of the landscape; none was ever approved by the NPS.

16. *Resources Management Plan* (National Park Service, 1981, revised 1982, revised 1984), 26.

17. John Harrington, Susan Haswell, and Evelyn Howell, with Arnold Alanen, *Springs of Genius: An Integrated Management Plan for George Washington Carver National Monument* (University of Wisconsin-Madison, February 1999).

Vascular Plant Inventory (NPS 2004). A vascular plant inventory was conducted at George Washington Carver National Monument in autumn 2002 in an effort to update the plant taxa originally collected in the late 1950s by Ernest J. Palmer. This study, combined with previous work conducted in the 1990s, resulted in reclassification of 79 percent of Palmer's taxa, and the addition of 178 species not documented by Palmer. The national monument is represented by 645 distinct taxa. Of the 645 taxa, 114 are introduced and represent 35 families. Five taxa of special concern that were found are tracked by the Missouri Department of Conservation. The study involved the verification of the identity of all of Palmer's specimens, field collection of plant specimens, quantitative analysis of habitats at the national monument, and spatial documentation of all plant species recorded.

Fire Management Plan and Environmental Assessment (NPS 2004). This study acknowledged that approximately 90 percent of the park's acreage is burnable and would benefit from periodic prescribed, controlled fire. Land that can sustain fire is comprised of restored prairie, agricultural fields, lawns, wetlands, and mixed oak forests. The plan recommends that use of prescribed fire as a tool for controlling or eradicating invasive exotic species. The plan notes, "The park is in the process of re-evaluating the existing cultural landscape, and through an upcoming GMP revision, may begin planning to change the management of some areas of the park to a more Carver period agrarian setting. In the event that a new cultural agrarian setting plan is adopted, the Fire Management Plan will be revisited to address changes in vegetation types and fuel loads."¹⁸

Environmental Assessment for Visitor Center Renovation and Addition (NPS 2004). This EA was conducted in order to assess impacts from the proposed renovation of the existing visitor center, as well as the construction

of a new addition to the visitor center that would expand and improve visitor and administrative facilities. The proposed visitor center renovation and addition was driven by a need to provide adequate museum collections storage, and to expand and better organize the educational functions, visitor facilities, and staff office space at the park.

Environmental Assessment Phase I and Pre-Acquisition Environmental Assessment (NPS 2004–2005). In 2005, the park acquired the final 30-acre parcel of land to complete ownership of Moses Carver's 240-acre farm. A Phase I EA was completed in 2004, followed by mine tailings clean-up remediation, and a subsequent Pre-Acquisition EA completed in 2005.

Special History Study, George Washington Carver: For His Time and Ours (NPS 2005). The study explores Carver's work with plant disease and mycology, wild plants as food and medicine, herbal medicines, chemurgy, and land use practices.

Long-Range Interpretive Plan (NPS 2007). This plan is based on the national monument's enabling legislation and mission. Using the national monument's mission, purpose and significance statements, primary interpretive themes, and visitor experience goals, this plan articulates the vision for the park's interpretive and educational future and recommends the interpretive media and programs best suited for meeting visitor needs, achieving management goals, and telling the story of George Washington Carver.

Cultural Landscape Inventory (NPS 2010). The CLI describes the character-defining features of the national monument landscape and identifies the resources that contribute to its historic significance. The CLI also discusses the significance of the park as a commemorative

18. *Wildland Fire Management Plan George Washington Carver National Monument* (National Park Service, May 2004).

1 landscape that is listed in the National Register of
2 Historic Places.

3 **Natural Resource Condition Assessment**
4 **(NPS 2011).** The intention of this study,
5 conducted by MoRAP, was to provide a
6 synthesized assessment of current conditions in
7 the park. The Natural Resources Condition
8 Assessment builds on methods developed for a
9 similar effort for Effigy Mounds National
10 Monument in Harpers Ferry, Iowa. Elements of
11 the methodology include 1) reliance on a
12 framework of essential ecological attributes
13 provided by the Environmental Protection
14 Agency; 2) development of a list of resource types,
15 indicators, and attributes for assessment; and
16 3) application of assessments by reporting unit,
17 including park wide, major terrestrial landscapes
18 types, and major streams and tributaries.

19 **Prairie Restoration Management Review**
20 **and Integrated Cultural/Natural Resource**
21 **Management Recommendations**
22 **(Department of Fisheries and Wildlife**
23 **Sciences, University of Missouri, 2009–**
24 **2011).** This study provides an assessment of past
25 prairie management practices and guidance for
26 future management. The study evaluated several
27 alternatives, including 1) restoration of historical
28 vegetation (approximately the boyhood scene
29 1860s–1890s); 2) utilizing the *Springs of Genius*
30 data; 3) management emphasis on the current
31 vegetation described in the Natural Resources
32 Conditions Assessment; and 4) an integrated
33 cultural/natural vegetation management of the
34 landscape. Recommendations included a
35 realignment of management zones throughout the
36 landscape. The report addressed key landscape
37 issues, including native prairie restoration, riparian
38 woodlands and savanna, row crops, old fields,
39 prairie pasture, prairie, orchards, persimmon
40 grove, walnut grove, wetlands, and intensive
41 management of the visitor viewshed along the
42 Carver Trail to restore communities with which
43 George Washington Carver would have been
44 familiar. The report identifies goals and
45 recommended landscape treatments for each
46 management zone. This document was

47 instrumental in bringing much needed
48 information together for the CLR/EA document.

49 **Vegetation Management Alternatives for**
50 **George Washington Carver National**
51 **Monument (Heartland Natural Resource**
52 **Monitoring Program 2010).** This study
53 describes vegetation management alternatives for
54 the woodlands and restored prairies, including no
55 action, grass management, native plant
56 management, wildlife habitat management, hay
57 management, grazing management, and crop or
58 orchard management.

59 **Scope of Collection Statement (NPS 2011).**
60 This statement includes the legislation that relates
61 to NPS Museum Collections; park history,
62 significance, purpose, theme, and goals; laws,
63 regulations, and conventions related to museum
64 collections; and structures, landmarks, and other
65 park resources listed on national or international
66 registries.

67 **Vegetation Classification and Mapping of**
68 **George Washington Carver National**
69 **Monument (MoRAP 2013).** This vegetation
70 classification and mapping project was initiated in
71 2010 and completed in 2013. Protocols and
72 products were produced following NPS
73 Vegetation Mapping Program guidelines.
74 Classification was based on sixteen quantitative
75 field plots, which were placed across the park in a
76 stratified random manner based on qualitative
77 field observation points and viewing of air photos.
78 Mapping was based on photo-interpretation of
79 both leaf-on and leaf-off air photos. Accuracy
80 assessment points obtained during 2012 verified
81 that the map is nearly 100 percent accurate.

82 **George Washington Carver National**
83 **Monument: Accessibility Assessment**
84 **Debriefing Report and Final Report (NPS**
85 **2013).** This study was conducted by the National
86 Center on Accessibility in coordination with the
87 NPS. The Center's assessment process was
88 designed to identify barriers to participation for
89 people with disabilities, make recommendations
90 for barrier removal and improved access, and
91 develop associated work orders and cost estimates

to assist park personnel in long-term planning. At George Washington Carver National Monument, the assessment team from the National Center on Accessibility conducted an accessibility assessment of the physical and programmatic elements managed within the park and throughout the grounds. The team also interviewed park personnel, collecting information to provide a broad range of recommendations for improving access for visitors with disabilities.

Historic Resource Study (NPS 2014). This study emphasizes Carver's childhood years on the Moses Carver farm and his quest for schooling. It fills an important gap in the scholarship by placing George Washington Carver's life experiences within a broader regional and national context. One key research finding concerns Carver's spirituality, which can be traced to a personal conversion on the Moses Carver farm.

George Washington Carver National Monument Administrative History (NPS, 2014). This study presents a chronological history of the park, emphasizing the influences and political processes that brought about the formation of the park unit and the history of the core management directives and their changes over time. It presents a comprehensive history of the site and the park administration.

Heritage Tourism at George Washington Carver National Monument (NPS, 2014). This study presents the results of a qualitative study of heritage tourism behaviors and preferences of five cultural, racial, and ethnic groups in southwest Missouri. The objective was to learn about the preferred attributes of historical and cultural sites across demographic groups, the types of barriers faced in regard to visiting historical and cultural sites such as George Washington Carver National Monument, and how to increase the diversity of visitors to the park. Results of the study showed that through expanded outreach, more direct engagement with community representatives, advertisement designed for and targeted to reach specific populations, enhanced institutional image, and additional services, facilities, events and activities,

the goals of increasing diversity in the park can be accomplished.

1.8 Environmental Assessment Impact Topics

1.8.0 Scoping

Environmental assessment scoping is an early and open process to determine the breadth of issues and alternatives to be addressed. The park staff and resource professionals of the NPS Midwest Regional Office conducted internal scoping for the CLR project at George Washington Carver National Monument. 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 preferred alternative to other planning efforts at the park. Typically, both internal and public scoping are held to address these elements. From previous planning efforts and development of resource documents, the park has a well-established list of stakeholders, interested in the alternatives being proposed for the park. For this CLR/EA, the superintendent initiated public scoping on March 1, 2014.

The NHPA (16 United States Code [U.S.C.] 470 et seq.); NEPA; NPS Organic Act; NPS *Management Policies* 2006; *Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-making* (2001); and *Director's Order 28: Cultural Resources Management Guideline* require the consideration of impacts on cultural resources, either listed in or eligible to be listed in, the National Register of Historic Places. The park notified the Missouri State Historic Preservation Office (SHPO) of the project by e-mail correspondence on February 20, 2014, and a SHPO site visit was conducted April 2, 2014. The park provided the SHPO with a 75 percent draft copy of this CLR/EA. The SHPO was also sent a follow up invitational letter on April 8, 2014, for the stakeholder meeting to be held at the park on May 14, 2014. The NPS will provide the SHPO a copy of the 95 percent draft of the CLR/EA for review and comment.

The park sent the U.S. Fish and Wildlife Service (USFWS) a scoping notice on April 8, 2014, to solicit input on threatened and endangered species concerns for the 240 acres of the park included in the CLR/EA treatment alternatives and to invite agency participation in the scoping meeting on May 14, 2014. The NPS will provide the USFWS a copy of the 95 percent draft CLR/EA for review and comment.

George Washington Carver National Monument conducted initial consultation with THPOs for the United Osage Nation, the United Keetoowah Band of Cherokee Indians in Oklahoma, the Caddo Nation, and the Eastern Shawnee Tribe of Oklahoma for the purpose of developing a Programmatic Agreement between the tribes and the park. Letters were issued by the NPS to the THPOs along with a draft of the agreement, inviting them to review the document and attend a follow-up consultation meeting on April 3, 2014. In the same letter, THPOs were invited to the larger stakeholder meetings at the park on May 14, 2014. A follow-up letter with notice of the stakeholder meeting date and time was sent to the THPOs on April 8, 2014, to solicit input and participation in the CLR/EA meeting. The NPS will provide the THPOs a copy of the 95 percent draft CLR/EA for review and comment.

The detailed list of stakeholders and responses from the internal and external scoping process are identified and discussed in Chapter 7: Consultation and Coordination.

1.8.1 Planning/Management Issues and Concerns Management Overview

The management of George Washington Carver National Monument is generally guided by the 1997 GMP, with interpretation guidance provided by the 2007 Long-Range Interpretive Plan (LRIP) and the 2010 CLI. The GMP was developed to supersede the then 30-year-old master plan and establish new management goals based on more recent resource planning documents. The

philosophy of the plan centers around the management of the natural and cultural resources and the visitor services program to support the commemoration of Dr. George Washington Carver in a dignified manner and adhere to the legislation that created the park. Natural and cultural resources will serve as symbols of significant events and influences on the character and life of Dr. George Washington Carver.¹⁹ The following “desired futures” management objectives identified in the GMP (1997) include:

- Preserve the agrarian setting;
- Manage cultural and natural resources to memorialize George Washington Carver’s life in a dignified and inspirational setting;
- Encourage the public to develop a deep understanding of George Washington Carver’s achievements and services to humanity;
- Explain the historical context in which George Washington Carver grew up and his efforts to get an education; and
- Evaluate the human/natural/cultural resources and utilize them to a greater extent.

The LRIP was designed to complement and expound on the interpretive and educational functions outlined in the GMP. The interpretive and educational programs at George Washington Carver National Monument are designed to provide opportunities for people to forge intellectual and emotional connections to the ideas and meanings inherent in the life and accomplishments of George Washington Carver. The plan establishes an effort to connect all visitors with the legacy of Carver so that they can understand the significance of his contributions to

19. *General Management Plan* (1997), 15.

mankind and realize their vital role in ensuring the future of the national monument.²⁰

The CLI, developed three years after the LRIP, describes current NPS goals and challenges in the efforts for interpretation and management of the national monument:

With few historic structures and little documentation to work with, the NPS decided early on to focus on the vegetative surroundings that would have been present during Carver's boyhood period given how influential the environment, both natural and agricultural, was to him. This setting also had to be co-sympathetic with any constructed amenities that would be added to the landscape for interpretive or commemorative purposes. This presented a challenge of how to appropriately represent and interpret a complex man of great achievement who preferred a quiet and simple lifestyle and little fanfare. Re-establishing plant communities is a lengthy process of careful study, inventorying, and monitoring over a period of time, allowing re-introduced communities to become self-sustaining. The park service also had the added complexity of ensuring that the setting did not overwhelm the accomplishments and influence of Carver and that the interpretation of and memorials to Carver did not overpower the natural setting.²¹

The CLI defined and confirmed the historic landscape boundary, identified significant viewsheds, and documented contributing features associated with Dr. George Washington Carver.

Over time, the park approach has evolved to include management of more than 120 acres of prairie; woodlands that are not necessarily managed but edge much of the trail; and the developed area that has become increasingly

ornamental in its character. Park staff has incorporated prairie restoration and the maintenance of a small garden plot into management of the park. Other aspects of the natural environment are interpreted as having influenced the young George Washington Carver, including the presence of wildflowers, fruit and nut trees, and the Carver Spring. Natural resource management therefore emphasizes maintenance and restoration of native flora and fauna.²²

Management Issues. The following list summarizes management issues identified as part of the research, inventory, and evaluation of George Washington Carver National Monument's cultural landscape and resources. These issues address those elements and challenges associated with the existing site, buildings, and structures, and operations or maintenance that make it difficult for the park to realize the vision and goals for the property. Detailed descriptions and associated treatments that address the management issues are presented in Chapter 5.

- Sustained adequate management for the prairie restoration.
- Identification of an area of the park to be maintained as an agrarian environment similar to that of the Moses Carver farm in the 1860s and 1870s. This is central to the interpretive goals for the site and an integral part of the proposed alternatives in Chapter 5 of the CLR/EA.
- Management of existing natural systems including Carver Spring and the three streams, Carver, Harkins, and Williams branches, which are part of the cultural landscape of the national monument. The Arkansas Darter (*Etheostoma cragini*), a candidate for federal

20. *George Washington Carver National Monument Long-Range Interpretive Plan* (National Park Service, November 2007), 7–9.

21. *Cultural Landscape Inventory*, 22–23.

22. Gust M. Annis, Michael D. DeBacker, David D. Diamond, Lee F. Elliott, Aaron J. Garringer, Phillip A. Hanberry, Kevin M. James, Ronnie D. Lee, Sherry A. Leis, Michael E. Morey, Dyanna

L. Pursell, and Craig C. Young, *George Washington Carver National Monument Natural Resource Condition Assessment*, Natural Resource Report NPS/HTLN/NRR—2011/425. (Fort Collins, Colorado: National Park Service, Natural Resource Stewardship and Science, July 2011), 18–20.

listing as a Threatened and Endangered species, has been found present in park streams.

- Sustained adequate management of Williams Pond. Though the pond is not considered a contributing feature to the historic landscape, it is a valuable resource to be managed and maintained. It is a common feature in all the treatment alternatives developed in the CLR/EA.

- Addition of more trails within the 240-acre landscape of George Washington Carver National Monument. This would allow visitor access to more of the site and expanded interpretive opportunities. Expanded trails are part of the conceptual alternative plans in the treatment section of the CLR/EA.

- Identification of the presence, cover, and dispersion of invasive and problematic species at the park and higher-than-desirable cover of invasive non-native vegetation. Treatment recommendations include specific invasive species to be removed and recommendations for inhibiting the spread of invasive vegetation in the park.

- Integration of interpretation with the cultural landscape. The park wants to tie additional interpretive programming to the cultural landscape and is looking to the CLR/EA for direction.

- Establishment of universal accessibility according to the Architectural Barriers Act Accessibility Standards of 1968 (ABAAS) and the 2004 ADA-ABA Accessibility Guidelines (ADA-ABA). This is a major issue that will be addressed as the preferred alternative is selected and developed.

- Address the condition, treatment, management, and maintenance of the wall surrounding the cemetery and the cemetery burial markers. Specific treatment recommendations are included in the treatment section of the CLR/EA.

- Establishment of a designated parking area for use during special events at the national monument. A location, access and design for overflow parking is included in the alternatives proposed in the treatment section of the CLR/EA.

1.8.2 Impact Topics Evaluated

An important part of the decision-making process associated with development of treatment recommendations is seeking to understand the consequences of making one decision over another. This CLR/EA identifies the anticipated impacts of possible actions on specific resources, park visitors, and neighbors, and park operations. The impacts are organized by topic, including natural resources, cultural resources, aesthetic resources and visitor use and experience, NPS operations and infrastructure, and long-term management and sustainability of resources. Impact topics serve to focus and give boundaries to the environmental analysis and ensure the relevance of impact evaluation.

Specific impact topics were developed to allow comparison of the environmental consequences of each alternative presented in this CLR/EA. These impact topics were identified based on the issues raised during scoping; site conditions; federal laws, regulations, and Executive Orders; NPS *Management Policies 2006* (NPS 2006) and topics specified in NPS *Director's Order 12 Handbook* (NPS 2001); park-specific resource information; and agency and public input during scoping. Each of the impact topics listed in the table at the end of this chapter would be affected by one or more of the alternatives evaluated in this CLR/EA. A brief rationale for the selection of each impact topic is provided and each impact topic is further discussed in detail in Chapter 4: Affected Environment.

A table of impact topics, reasons for retaining impact topic, and relevant laws, regulations, and policies is provided at the end of this chapter.

1.8.3 Impact Topics Dismissed from Further Analysis

The following impact topics or issues were eliminated from consideration because the effects, if any, would be minor to negligible.

Geology. The NPS Organic Act and NPS *Management Policies 2006* direct the NPS to preserve and protect geologic resources and maintain natural geologic and coastal processes. The NPS must also comply with state and local requirements for work in coastal zones.

The entire area of George Washington Carver National Monument is on the western side of the Ozark physiographic province, an uplifted dome of sedimentary rock beds that have been dissected by hundreds of thousands of years of erosion. Included within the Ozark Dome lithographic series are sandstones, limestones, shales, and dolomites.²³ The action alternatives would have little to no impact on site geology because no subsurface excavation is proposed. No important or unusual geologic formations would be affected by the alternatives. As a result, each action alternative would have negligible local or long-term adverse impacts on geological resources. The no action alternative would have no effect on geologic resources. The goals and vision for the George Washington Carver National Monument preclude large-scale development from intruding on the site. They also limit physical changes at the national monument to those that can be carried out without altering geologic processes. The action alternatives proposed in this document are consistent with past NPS actions on the site and would not alter current geologic processes. Therefore, the impact topic of geology was dismissed.

Prime and Unique Farmland. *The Farmland Protection Policy Act (FPPA) (7 Code of Federal Regulations [C.F.R.] sec. 658)* states that “the purpose of the Act is to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of

farmland to nonagricultural uses.” In addition, the FPPJA states that federal programs shall be administered in a manner that, as practicable, would be compatible with state and local government and private programs and policies to protect farmland. The FPPJA requires identification of proposed action that would affect any land classified as prime or unique farmland before federal agency approval of any activity that would convert farmland. The Natural Resources Conservation Service (NRCS), part of the U.S. Department of Agriculture (USDA), administers the FPPA as it relates to protection of farmland. Responsible federal agencies are required to consider alternative actions and ensure that their programs are compatible with state and local government programs. There is prime/unique farmland in Newton County and at the national monument, but nothing in the list of actions would permanently remove potentially productive land from being productive. Therefore, the impact topic of prime and unique farmland was dismissed for consideration in the impact analysis.

Climate Change. Any emissions associated with the proposed action alternatives would be negligible. These emissions would have an indiscernible effect on climate change. Changes in visitor use following implementation of the action alternatives would not result in a substantial increase in traffic to the park. Because the proposed project would result in indiscernible contributions to climate change, this impact topic was dismissed from further analysis.

Paleontological Resources. NPS *Management Policies 2006* directs the NPS to protect, preserve, and manage paleontological resources. Because George Washington Carver National Monument is not known to contain scientifically important paleontological resources, it is unlikely there would be any effects on paleontological resources. Therefore, paleontological resources were dismissed as an impact topic.

23. *Resource Management Plan, 1980, 2.*

Wilderness. The Wilderness Act and NPS *Management Policies 2006* require that all lands administered by the NPS be evaluated for their suitability for inclusion within the National Wilderness Preservation System. Areas suitable for wilderness designation are those that generally have the qualities of being untrammeled, natural, undeveloped, and offering solitude or a primitive and unconfined type of recreation. The project area is neither within nor even close to existing or proposed wilderness boundaries and therefore, is not subject to Wilderness Act requirements. Because there would be no direct effects on wilderness resources and values, this topic was dismissed from further evaluation.

Natural Soundscape. An important part of the NPS mission is preservation of natural soundscapes associated with national park units as indicated in NPS *Management Policies 2006* and *Director's Order 47: Sound Preservation and Noise Management*. Natural soundscapes exist in the absence of human-caused sound. The natural ambient soundscape is the aggregate of all natural sounds within the park, together with the physical capacity for transmitting natural sound through air, water, or solid material. Acceptable frequencies, magnitudes, and durations of human-caused sound varies among national park units, as well as potentially throughout each park unit, but are generally greater in developed areas and less in undeveloped areas. George Washington Carver National Monument is in a low use area with negligible vehicular traffic and background noise. None of the action alternatives would introduce additional noise and traffic from visitors and park staff. Because the alternatives would not increase noise levels, natural soundscapes was dismissed as an impact topic.

Air Quality. The 1963 Clean Air Act, as amended (42 USC 7401 et seq.) Section 118; and NPS *Management Policies 2006* require that air quality related values must be taken into consideration as an impact topic due to potential pollution sources related to action alternatives proposed for park sites. The scale of the action alternatives for George Washington Carver National Monument would not have any measureable impact on air quality. Therefore, air quality was dismissed as an impact topic. The closest air monitoring station is located in Carthage, Missouri, 9 miles north of the national monument.

Lightscape. In accordance with NPS *Management Policies 2006*, the NPS strives to preserve natural ambient lightscapes, which are natural resources and values that exist in the absence of human-caused light. The action alternatives would not increase any use of nighttime lighting, specifically at the visitor center and the entrance to the site. Any necessary additions of nightlight for safety purposes would also have a negligible impact on the night sky. Therefore, lightscape was dismissed as an impact topic.

Museum Objects. NPS-28: *Cultural Resource Management Guideline* defines a museum object as “a material thing possessing functional, aesthetic, cultural, symbolic, and/or scientific value, usually movable by nature or design. Museum objects include prehistoric and historic objects, artifacts, works of art, archival materials, and natural history specimens that are part of a museum collection.”²⁴ The proposed action does not include any design for storage and/or display of museum collections or collections accrued through site archeology, and does not otherwise affect museum objects. Therefore, this impact topic was dismissed from further analysis.

24. NPS-28: *Cultural Resource Management Guideline* (National Park Service, June 11, 1998), Appendix A: Glossary.

Environmental Justice. Executive Order 12898, *Federal 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 disproportionately high and adverse human health or environmental impacts of their programs and policies on minorities and low-income populations and communities. There are no environmental justice populations in the project area and none of the action alternatives would have an adverse effect on any population in general. Therefore, environmental justice was dismissed as an impact topic.

Indian Trust Resources. Secretarial Order 31.75 requires that any anticipated impacts to Indian trust resources from a proposed project or action by Department of Interior 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 American Indian and Alaskan Native tribes. There are no Indian trust resources in George Washington Carver National Monument according to this definition. In addition, any Indian titles to such lands now within the park have been extinguished through cession or sale. The lands comprising George Washington Carver National Monument are not held in trust by the Secretary of the Interior for the benefit of Indians due to their status as Indians. Therefore, Indian Trust resources are dismissed as an impact topic in this CLR/EA.

Natural or Depletable Energy Resource Requirements and Conservation Potential. In accordance with NPS Management Policies 2006 and Executive Orders 12873 and 12902, there are requirements in everything the NPS does that will have some small affect in improving our environmental footprint (green buying and sustainable building materials, etc.). However, individual changes at George Washington Carver National Monument are unlikely to have

significant impacts to the wider universe of energy use and depletable resources. Therefore this impact topic was dismissed from further analysis.

Summary of Impact Topics

Impact Topic	Reasons for Retaining Impact Topic	Relevant Laws, Regulations, and Policies
Soils	NPS actively seeks to understand and preserve the soil resources of parks, and to prevent, to the extent possible, the erosion, physical removal, or contamination of the soil or its contamination of other resources. There is potential for soil disturbances from the implementation of the alternatives. Therefore, this topic was retained for further analysis.	NPS Organic Act; NPS Management Policies, 2006
Vegetation (including non-native and invasive plant species)	The park manages both grassland and forest. Grasslands cover approximately two-thirds of the park. Forested areas occur primarily along streams, but extend into the uplands. The picnic area and the visitor center/headquarters complexes are highly managed and manicured with a large proportion of non-native trees and shrubs. Also there is a higher than desirable cover of invasive non-native vegetation and problematic species at the park. Vegetation disturbance could occur and the introduction of more invasive non-native species is possible from activities implemented in the alternatives. Therefore, this topic was retained for further analysis.	National Environmental Policy Act (42 USC 4321 <i>et seq.</i>); NPS Organic Act; NPS Management Policies, 2006; Resource Management Guidelines (NPS-77); Federal Noxious Weed Control Act; Executive Order (EO) 13112, Invasive Species, 1999
Water Quality	There are three streams that flow through the monument and two spring branches that are completely contained within the park. Carver Branch, Harkins Branch, and Williams Branch are all tributaries of Shoal Creek. Aquatic habitats are an important part of the natural and cultural interpretive programs at the park. Disturbances from the implementation of these alternatives could affect water quality. Therefore, this topic was retained for further analysis.	NPS Organic Act; NPS Management Policies, 2006; Clean Water Act, Section 404
Wildlife and Wildlife Habitat	The landscape of George Washington Carver National Monument supports a variety of wildlife. Disturbances from the implementation of the alternatives could affect the wildlife and their habitat. Therefore, this topic was retained for further analysis.	NPS Organic Act; NPS Management Policies, 2006
Rare, Threatened and Endangered Species	Species of concern (flora and fauna) are present at George Washington Carver National Monument. Disturbances due to the implementation of the alternatives could affect species on the site and within the site's regional context. Therefore, this topic was retained for further analysis.	1973 Endangered Species Act, administered by U.S. Fish and Wildlife Service; U.S. Fish and Wildlife Service's Endangered Species Program; NPS Management Policies, 2006

Impact Topic	Reasons for Retaining Impact Topic	Relevant Laws, Regulations, and Policies
Wetlands	Several areas of the park experience wet conditions throughout much of the year. The south-central, west-central, and east-central portions often have standing water in them during the winter and spring. Some of the water results from runoff, while much of it results from ground water seepage. Implementation of the alternatives could affect wetlands. Therefore, this topic was retained for further analysis.	NPS Organic Act; NPS Management Policies, 2006; Clean Water Act, Section 404; Executive Order 11988, Floodplain Management; Executive Order 11990, Protection of Wetlands; NPS Director's Order No. 77-1, 2002
Floodplains	Three small streams occur in the park, Carver, Harkins, and Williams branches. Carver and Williams branches originate as springs and have historic and natural significance. Carver Branch is a small spring-fed stream that flows across the park primarily from east to west. Implementation of alternatives may affect floodplains. Therefore, this topic was retained for further analysis.	NPS Organic Act; NPS Management Policies, 2006; Clean Water Act, Section 404; Executive Order 11988, Floodplain Management; Executive Order 11990, Protection of Wetlands; NPS Director's Order No. 77-1, 2002
Cultural Landscapes	The future of the cultural landscape of George Washington Carver National Monument is a key issue and concern of the CLR/EA. Changes to the cultural landscape that could result from implementing one or more of the alternatives would be of concern to visitors, the public, the SHPO, interested tribes and THPOs, and NPS managers; therefore, this topic was retained for further analysis.	Sections 106 and 110 of the NHPA; ACHP implementing regulations regarding the "Protection of Historic Properties" (36 CFR 800); DO-28: Cultural Resources Management Guideline; NPS Management Policies, 2006; Secretary of the Interior's Standards for the Treatment of Historic Properties; NEPA; Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes, 1996
Historic Structures	The future of historic structures on the landscape at George Washington Carver National Monument is a key issue and concern of the CLR/EA. Changes to historic structures that could result from implementing one or more of the alternatives would be of concern to visitors, the public, the SHPO, and NPS managers; therefore, this topic was retained for further analysis.	Sections 106 and 110 of the NHPA; ACHP implementing regulations regarding the "Protection of Historic Properties" (36 CFR 800); DO-28: Cultural Resources Management Guideline; NPS Management Policies 2006; Secretary of the Interior's Standards for the Treatment of Historic Properties; NEPA; Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes, 1996

Impact Topic	Reasons for Retaining Impact Topic	Relevant Laws, Regulations, and Policies
Archeological Resources	Ground-disturbing construction activities and vegetation removal associated with the CLR/EA alternatives have the potential to impact archeological resources and therefore, this topic was retained for further analysis.	Sections 106 and 110 of the NHPA; ACHP implementing regulations regarding the “Protection of Historic Properties” (36 CFR 800); DO-28: Cultural Resources Management Guideline; NPS Management Policies, 2006; Secretary of the Interior’s Standards for the Treatment of Historic Properties; NEPA; Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes, 1996
Visual Resources	The alternatives could affect the views to and from George Washington Carver National Monument and views from one part of the site to another. Therefore, this topic was retained for further analysis.	NPS Management Policies, 2006
Visitor Use and Experience	The alternatives could affect overall visitor understanding of the entire landscape and the story of George Washington Carver, including interpretive and educational opportunities. Therefore, this topic was retained for further analysis.	NPS Organic Act; NPS Management Policies, 2006; General Management Plan, 1997; and the Long-Range Interpretive Plan, 2007
Park Operations	Park operations could be affected by the alternatives, including additional management /maintenance needs; facility and interpretation needs. Therefore, this topic was retained for further analysis.	NPS Management Policies, 2006