

FIGURE 243. Expanding recreational opportunities.

Full Restoration of the Landscape Present during George Washington Carver's Life on the Farm

The park landscape is very different today than that which was experienced by George Washington Carver during the third quarter of the nineteenth century. As a property established to commemorate the life and contributions of Carver, the park landscape does not adequately depict conditions experienced by Carver.

This restoration alternative suggests enhancing visitor understanding of Carver's life by fully returning the park landscape to its character during the period during which George Washington Carver lived there: circa 1864–1877. Specific additions and changes to the park environment resulting from this alternative might include:

- conversion of existing grassland prairie to agricultural uses;
- establishment of field patterns that depict what was present during the nineteenth century;
- reduction of the size of existing woodlands;
- removal of understory growth to reflect the patterns associated with nineteenth century livestock grazing;
- removal of Williams Pond;
- return of the second Carver dwelling and the birthplace cabin sites to their accurate locations;

- 1 ■ use of archeological investigations to
- 2 determine what the farmstead area looked like
- 3 for interpretive and potential restoration;
- 4 ■ design of a new Carver Trail that connects
- 5 points in the restored landscape;
- 6 ■ reestablishment of the orchard;
- 7 ■ removal of the current visitor center and
- 8 restoration of this critical portion of the park
- 9 to its historic appearance;
- 10 ■ demolition of the housing buildings to provide
- 11 new visitor orientation, access, and parking;
- 12 and
- 13 ■ expansion of the trail system throughout the
- 14 site to provide more opportunities to interpret
- 15 the restored historic landscape.

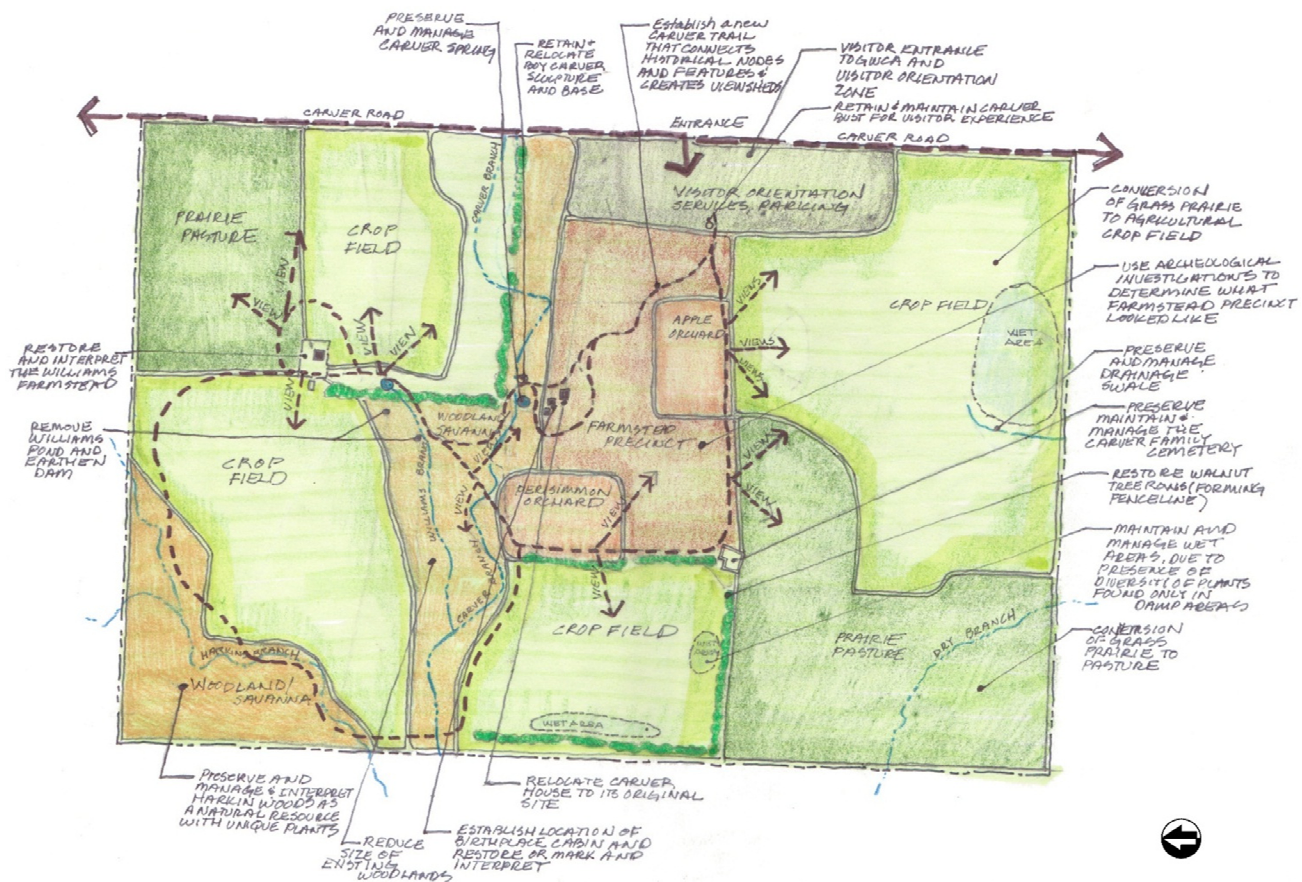


FIGURE 244. Full restoration of the landscape present during George Washington Carver's life on the farm.

5.7 Mitigation

The NPS places strong emphasis on avoiding, minimizing, and mitigating potentially adverse environmental impacts. To help ensure the protection of natural and cultural resources and the quality of the visitor experience, the following

protective measures would be implemented as part of the preferred alternative (Table 1). The NPS would implement an appropriate level of monitoring throughout the construction process to help ensure that protective measures are being properly implemented and are achieving their intended results.

Table 5-1. Mitigation

Resource Area	Mitigation
General Considerations	<p>Where necessary for resource or visitor protection, work areas would be identified with construction fence, silt fence, or some similar material prior to any activity. The fencing would define the work zone and confine activity to the minimum area required. All protection measures would be clearly stated in the construction specifications, and workers would be instructed to avoid conducting activities beyond the work zone. Disturbances would be limited to areas inside the designated construction limits. No machinery or equipment would access areas outside the work limits.</p> <p>Construction equipment staging would occur within previously disturbed areas as much as possible. All staging and stockpiling areas would be returned to preconstruction conditions following construction.</p> <p>Contractors would be required to properly maintain construction equipment (i.e., mufflers and brakes) to minimize noise.</p> <p>All tools, equipment, barricades, signs, surplus materials, and rubbish would be removed from the project work limits upon project completion.</p>
Soils	BMPs would be developed to support of the implementation and management of all the action alternatives.
Grassland and Forest Vegetation	All disturbed ground would be reclaimed using appropriate BMPs including planting native plants.
Cultural Vegetation	Until the soil is stable and vegetation is established, erosion-control measures would be implemented to minimize erosion and prevent sediment from leaving the site.
Wildlife and Wildlife Habitat	Temporary barriers would be provided to protect existing trees and shrubs that are not identified for removal.
Water Quality	BMPs would be developed for site clearing, turf cover establishment and maintenance, and invasive plant control.
Wetlands and Floodplains	BMPs would also target tree clearing, installation of plants and trees, landscape maintenance and riparian buffer preservation
Cultural Resources	<p>All activities would comply with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 Federal Register 44716, revised).</p> <p>Prior to any soil disturbing activities, a thorough geophysical baseline survey of the property would be conducted and adequate archeological ground truthing of the geophysical anomalies would be conducted to determine their nature, integrity, and extent.</p> <p>Known archeological resources in the vicinity of project activities would be identified and delineated for avoidance prior to project work.</p> <p>NPS would continue to coordinate with the SHPO throughout the course of the project to protect and mitigate cultural resources affected by any of the action alternatives.</p> <p>Should any archeological resources be uncovered during construction, as appropriate, work would be halted in the area and NPS associated archeologists, the Missouri SHPO, and appropriate Native American tribes would be contacted for further consultation.</p> <p>Cultural resource staff at George Washington Carver National Monument would be available during construction to advise or take appropriate actions should any archeological resources be</p>

	<p>uncovered during construction. In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990) would be followed.</p> <p>NPS would ensure that all contractors and sub-contractors are informed of the penalties for illegally collecting artifacts or intentionally damaging archeological sites or historic properties. Contractors and sub-contractors also would be instructed on procedures to follow in case previously unknown archeological resources are uncovered during construction.</p> <p>Equipment and material staging areas would avoid known archeological resources.</p>
Visitor Experience and Park Operations	<p>Visitors would be informed in advance of construction activities via the park website and visitor center.</p>

5.8 Summary of Goals and Objectives by Alternative

Table 5-2. Summary of Goals and Objectives by Alternative

Project Goals:	Treatment Alternative 1 (No Action)	Treatment Alternative 2	Treatment Alternative 3	Treatment Alternative 4
Protect and manage cultural and natural resources at George Washington Carver National Monument				
Address the entire 240-acre cultural landscape, balancing historic landscape protection with natural resource efforts. This includes the 30 acres of disturbed land acquired by the Park in 2006.	The entire 240 acres are managed by the Park. Strategies may not emphasize balancing historic landscape protection with natural resource efforts and therefore do not meet this objective. The 30 acre site is not currently managed as prairie that is responsive to recommendations in previous studies.	This alternative meets this objective as it addresses the entire 240 acres and includes recommendations for balancing historic landscape protection with natural resource efforts. It also includes conversion of the 30-acre parcel to prairie to incorporate it into the overall approach to landcover management beyond the central interpretive area.	This alternative meets this objective as it addresses the entire 240 acres and includes recommendations for balancing historic landscape protection with natural resource efforts. It also includes conversion of the 30-acre parcel to prairie to incorporate it into the overall approach to landcover management beyond the central interpretive area.	This alternative meets this objective as it addresses the entire 240 acres and includes recommendations for balancing historic landscape protection with natural resource efforts. It also includes conversion of the 30-acre parcel to prairie to incorporate it into the overall approach to landcover management beyond the central interpretive area.
Manage cultural and natural resources to memorialize Dr. Carver's life in a dignified and inspirational setting.	Current management strategies meet this objective to memorialize Dr. Carver's life in a dignified and inspirational setting through maintenance of existing interpretive programs and media.	Based on goals derived from the GMP, the project scope, workshops and NPS communications, this alternative meets this objective.	Based on goals derived from the GMP, the project scope, workshops and NPS communications, this alternative meets this objective.	Based on goals derived from the GMP, the project scope, workshops and NPS communications, this alternative meets this objective.
Preserve the agrarian setting.	Existing prairie management is more oriented to Natural Resource conservation and less to agrarian land use. This objective is partially met with the existing strategies in place.	Based on goals derived from the GMP, the project scope, workshops, and NPS communications, this alternative meets this objective.	Based on goals derived from the GMP, the project scope, workshops, and NPS communications, this alternative meets this objective.	Based on goals derived from the GMP, the project scope, workshops, and NPS communications, this alternative meets this objective.

Preserve the setting of the Moses Carver farm and birthplace of George Washington Carver.	Existing setting and structure of the Moses Carver house is preserved as well as the currently defined and interpreted location of the birth house of George Washington Carver. The objective of preserving the farmstead setting and the exact locations of the Moses Carver house and the birthplace house is not met.	This alternative recommends the interpretation of the accurate location of the birthplace cabin, Moses Carver homestead and other former Moses Carver farm features to depict the character of the Moses Carver farm and agricultural activities, based on further research and investigation using foundation outlines and mow patterns. This alternative meets the project objective.	This alternative recommends preservation of the existing Moses Carver home structure and site as well as the currently defined and interpreted location of the birth house of Dr. Carver. This alternative does not fully meet the objective for preservation of the setting of the farm and other agricultural activities.	This alternative recommends the interpretation of the accurate location of the birthplace cabin, Moses Carver homestead and other former Moses Carver farm features to depict the character of the Moses Carver farm and agricultural activities, based on further research and investigation using foundation outlines and mow patterns. This alternative meets the project objective.
Support and enhance existing interpretive/ educational programs at the national monument.				
Integrate interpretation with an approach to managing the cultural landscape.	Existing interpretation strategies would remain with no current approach to integration with managing the cultural landscape. The alternative would not meet this objective.	This alternative meets the objective due to interpretation of other former Moses Carver farm features, clearing of woodlands not present during the Carver period, thinning and management of bottomland woodlands to depict the historic savanna-like character, and expansion of the Carver Trail to provide access to viewsheds of agricultural setting and fields.	This alternative partially meets the objective due to the recommended continued natural resource management of restored grassland prairie and Harkins Woods, and interpretation of the approach. Otherwise the interpretive approach focuses on Dr. Carver's exploration of the uses of plants and the application of scientific knowledge to improve the human condition through a lens of ethnobotany.	This alternative fully meets the objective due to the mowing and haying of prairie units to interpret the agrarian setting, planting of a heritage fruit and nut orchard to interpret the Carver farm, planting of a persimmon grove to interpret one of the key features described by Carver from his childhood and enhancing natural resource management of restored grassland prairie and Harkins Wood for health, diversity and soil and water conservation.

Utilize the LRIP visitor experience objectives and goals to form justification for proposed introduction of elements of the historic landscape.	Existing conditions will remain where the Park has based LRIP visitor experience objectives for introduction of elements or features of the historic landscape. This alternative would not meet the goal of introduction of new elements for interpretation in the historic landscape.	Based on goals derived from the GMP, the project scope, workshops, and NPS communications, this alternative meets this objective.	Based on goals derived from the GMP, the project scope, workshops, and NPS communications, this alternative meets this objective.	Based on goals derived from the GMP, the project scope, workshops, and NPS communications, this alternative meets this objective.
Expand opportunities on the site for further interpretation and commemoration of the entire life and legacy of George Washington Carver.	Existing efforts to enhance interpretation and commemoration of the entire life and legacy of Dr. Carver will remain. This alternative would not meet the goal of expansion.	This alternative does not meet the objective as it does not provide or adequately represent Dr. Carver's accomplishments over the course of this lifetime.	This alternative partially meets the objective as it focuses on the planting native species known to have been a focus of Dr. Carver's work and interpretation of the ways plant species served local resident in a variety of capacities during the nineteenth century and first part of the twentieth century. The alternative does not adequately blend Carver's early years with his later work at Tuskegee.	This alternative combines elements of alternatives 2 and 3 and fully meets the objective. The alternative blends the concept of plantings familiar to Dr. Carver, with site-specific enhancement of the interpretive programming involving the nineteenth century Moses Carver farm and enhanced environmental education opportunities. Also Dr. Carver's work at Tuskegee is recognized and interpreted.
Expand use of plants other landscape features in interpretation and commemoration of the life-long achievements of Dr. Carver.	Existing plants will remain within the context of current interpretation. This alternative does not meet the objective of expansion of plants and other landscape features in interpretation.	This alternative partially meets the objective. Use of plants and other landscape features is not emphasized as much as in Alternative 3 and 4.	This alternative partially meets the objective of the use of plants and landscape features in interpretation and commemoration of Dr. Carver. It does not adequately blend his early years with his later work at Tuskegee.	This alternative fully meets the objective with the use of plants and landscape features in interpretation and commemoration of Dr. Carver. It uses plants and landscape features to blend his early years with interpretation of his later work at Tuskegee.

Provide support and enhancement of the overall visitor experience.				
Focus rehabilitation treatment on providing opportunities for the public to experience the peaceful environment and reflect on Dr. Carver's life.	Existing opportunities to experience the peaceful environment will remain and address this objective. Rehabilitation treatment is not part of this alternative.	Based on goals derived from the GMP, the project scope, workshops, and NPS communications, this alternative meets this objective.	Based on goals derived from the GMP, the project scope, workshops, and NPS communications, this alternative meets this objective.	Based on goals derived from the GMP, the project scope, workshops, and NPS communications, this alternative meets this objective.
Address accessibility needs in existing areas such as the Moses Carver house, Boy Carver Statue, picnic area, and other deficiencies noted in the 2013 NCA assessment.	This objective will be met within the existing framework of developing necessary future park projects.	Any deficiencies noted in the 2013 NCA assessment will be addressed by this alternative.	Any deficiencies noted in the 2013 NCA assessment will be addressed by this alternative.	Any deficiencies noted in the 2013 NCA assessment will be addressed by this alternative.
Provide universal accessibility to any proposed features such as trails and interpretive waysides.	This objective will be met within the existing framework of developing necessary future park projects.	Based on goals derived from the GMP, the project scope, workshops, and NPS communications, this alternative meets this objective. Accessibility compliance would be a part of all site restorations, rehabilitation or installation of new features in this alternative.	Based on goals derived from the GMP, the project scope, workshops, and NPS communications, this alternative meets this objective. Accessibility compliance would be a part of all site restorations, rehabilitations or installation of new features in this alternative.	Based on goals derived from the GMP, the project scope, workshops, and NPS communications, this alternative meets this objective. Accessibility compliance would be a part of all site restorations, rehabilitations or installation of new features in this alternative.
Conduct detailed investigations to locate the actual site of the Carver birthplace cabin and incorporate into the visitor experience	This objective will be met within the existing framework of developing necessary future park projects, including archeological investigations.	Based on goals derived from the GMP, the project scope, workshops, and NPS communications, this alternative meets this objective.	The focus of this rehabilitation alternative is on the interpretation of Carver's work and career through plants known to have been the focus of his experiments and scientific exploration. It does not meet this objective.	Based on goals derived from the GMP, the project scope, workshops, and NPS communications, this alternative meets this objective.

Provide alternative management strategies for park operations and maintenance.				
Develop sustained and adequate management strategies for the prairie zones based on interpretation of the cultural landscape, conservation of natural resources, and viewsheds.	Existing management strategies are currently based on Natural Resource preservation as prescribed in previous studies. This alternative does not meet the objective due to lack of integration of interpretation of cultural landscape and conservation of natural resources.	This alternative meets this objective through recommendations of adequate management strategies for the prairie zones based on interpretation of the cultural landscape, conservation of natural resources, and viewsheds.	This alternative partially meets this objective, but focuses more on the addition of plantings known to have been a focus of Dr. Carver's work and his exploration of the uses of plants as a scientist during the first part of the twentieth century.	This alternative meets this objective through recommendations of adequate management strategies for the prairie zones based on interpretation of the cultural landscape, conservation of natural resources, and viewsheds.
Manage various vegetation across the site, incorporating recommendations from past studies, the Missouri Resource Assessment, input from the Heartland Inventory and Monitoring Program and guidance from Heartland Network Invasive Plant Management Plan/EA Assessment.	Existing vegetation management does in part incorporate some recommendations based on previous studies. This alternative partially meets this objective.	This alternative partially meets this objective, and only uses some of the recommendations in the previous studies to combine with other goals and objectives for rehabilitation of the site.	This alternative partially meets this objective, and only uses some of the recommendations in the previous studies to combine with other goals and objectives for rehabilitation of the site.	This alternative partially meets this objective, and only uses some of the recommendations in the previous studies to combine with other goals and objectives for rehabilitation of the site.
Develop sustained and adequate management strategies for the core developed area (app. 20 acres) requiring intensive management and including the visitor center/maintenance building complex, the area immediately adjacent to the memorial entrance, the picnic area, and the 1 mile Carver Trail.	Current management and maintenance strategies would continue. This alternative would not meet the objective as it does not address all issues for intensive management of the core developed area.	Based on goals derived from the GMP, the project scope, workshops, and NPS communications, this alternative meets this objective. Long range sustainable repair and maintenance will be utilized for these features.	Based on goals derived from the GMP, the project scope, workshops, and NPS communications, this alternative meets this objective. Long range sustainable repair and maintenance will be utilized for these features.	Based on goals derived from the GMP, the project scope, workshops, and NPS communications, this alternative meets this objective. Long range sustainable repair and maintenance will be utilized for these features.

Develop sustained and adequate management strategies to consider how woodlands and open space and savanna areas might address differences between the contemporary landscape and the former spatial character of the property during the Carver period, circa 1865–1877.	Current management strategies would continue. This alternative would not meet the objective as it does not address strategies to highlight differences in the contemporary landscape and the former spatial character of the property during the Carver period.	This alternative meets the objective by recommending the clearing of woodlands not present during the Carver period and thinning and management of bottomland woodlands to depict the historic savanna-like character.	This alternative does not meet the objective, as the recommended thinning of woodlands is for the planting of ethnobotanical species, such as a persimmon grove.	This alternative partially meets the objective through recommendations such as managing riparian woodlands to remove invasive species and promote a pre-settlement savanna-like composition, and interpreting bottomland farming practices during the nineteenth century.
Develop sustained and adequate management strategies for repair and maintenance of the Carver family cemetery perimeter wall and headstones.	Current management strategies will remain. This alternative does not meet the objective of a long range strategy to focus on sustainable solutions to the repair and maintenance of the cemetery and specifically the perimeter wall and headstones.	Based on goals derived from the GMP, the project scope, workshops, and NPS communications, this alternative meets this objective. Long range sustainable repair and maintenance will be utilized for these features.	Based on goals derived from the GMP, the project scope, workshops, and NPS communications, this alternative meets this objective. Long range sustainable repair and maintenance will be utilized for these features.	Based on goals derived from the GMP, the project scope, workshops, and NPS communications, this alternative meets this objective. Long range sustainable repair and maintenance will be utilized for these features.

5.9 Summary of Impacts by Alternative

Table 5-3. Summary of Impacts by Alternative

Impact Topic	Treatment Alternative 1 (No Action)	Treatment Alternative 2	Treatment Alternative 3	Treatment Alternative 4
Soils	No changes to current conditions. Existing management or maintenance strategies remain in place. No further clearing would be undertaken and current mowing and vegetation management regimens would continue.	Approximately 49 acres of total 61 acres of woodland; management for historical spatial patterns, historic character, and managed riparian woodland as corridors projected into savanna-like landscapes, with less dense tree cover, removal of invasive species, and continued natural resource management 12 acres of cleared woodlands Trail Expansion: App. 4680 LF	Approximately 51 acres of total 61 acres of woodland; management for removal of invasive species and continued natural resource management and sustaining ethnobotanical plantings Approximately 10 acres of woodland cleared for ethnobotanical plantings and views Trail Expansion: App. 5400 LF	Approximately 51 acres of total 61 acres of woodland; management for interpretation of historical farmstead, and managed riparian woodland as corridors projected into savanna-like landscapes, with less dense tree cover, removal of invasive species, and continued natural resource management 10 acres of woodland cleared for plantings familiar to Dr. Carver and views Trail Expansion: App. 4140 LF
	Overall Impact: Overall impact would be <i>park-wide, long term, and negligible adverse impact on soils</i>	Overall Impact: Overall impact would be <i>local, short-term, and moderate adverse impact</i> on soils.	Overall Impact Overall impact would be <i>local, short-term, and minor adverse impact</i> on soils.	Overall Impact Overall impact would be <i>local, short-term, and moderate adverse impact</i> on soils.
	Cumulative Impact Cumulative effects would be local, short-term, minor and adverse.	Cumulative Impact Cumulative effects would be local, short-term, moderate and adverse.	Cumulative Impact Cumulative effects would be local, short-term, minor and adverse.	Cumulative Impact Cumulative effects would be local, short-term, moderate and adverse
Vegetation (Grassland and Forest)	Existing vegetation management strategies remain in place. The park manages both grassland and forest. Grasslands cover app. 127 acres and woodlands cover app. 61 acres. Cultural vegetation in the core developed area covers app. 22 acres.	Comprehensive woodland management and removal of invasive species management strategies as well as prairie management strategies recommended to the park by previous studies. Continued natural resource management	Comprehensive woodland management and removal of invasive species management strategies as well as prairie management strategies recommended to the park by previous studies. Continued natural resource management	Comprehensive woodland management and removal of invasive species management strategies as well as prairie management strategies recommended to the park by previous studies. Continued natural resource management

	Overall Impact Overall impacts would be <i>park-wide, long-term, minor and adverse</i> on grassland prairie. Overall impacts would be <i>local, long-term, moderate, and adverse</i> on woodlands	Overall Impact Overall impacts would be <i>park-wide, short-term, moderate and adverse impact</i> to grassland prairie and woodlands during implementation. Overall impacts would also be <i>park-wide, long-term, moderate and beneficial</i> to grasslands and woodlands once established.	Overall Impact Overall impacts would be <i>park-wide, short-term, minor and adverse impacts</i> to grassland prairie and woodlands during implementation. Overall impacts would be <i>park-wide, long-term, minor and beneficial impacts</i> to grasslands and woodlands once established.	Overall Impact Overall impacts would be <i>park-wide, short-term, moderate impacts</i> to grassland prairie and woodlands during implementation. Overall impacts would also have <i>park-wide, long-term moderate and beneficial impacts</i> to grasslands and woodlands once established.
	Cumulative Impact Cumulative effects would be park-wide, short-term, moderate and adverse.	Cumulative Impact Cumulative effects would be park-wide, long-term moderate and adverse to moderate and beneficial.	Cumulative Impact Cumulative effects would be park-wide, long-term, minor and adverse to minor and beneficial.	Cumulative Impact Cumulative effects would be park-wide, long-term, moderate and adverse to moderate and beneficial.
Water Quality	Protection of surface water and ground water is a management priority and currently water quality meets or exceeds all applicable water quality standards... Protection will continue with the current management and maintenance strategies in place.	Protection will be expanded to include the stabilization of the stream banks and preservation of landscape patterns of spatial organization composed in part by riparian woodlands along stream corridors. Management strategies will address Williams Pond as well and the springs that occur on the site.	Protection will be expanded to include the stabilization of the stream banks and preservation of landscape patterns of spatial organization composed in part by riparian woodlands along stream corridors. Management strategies will address Williams Pond as well and the springs that occur on the site.	Protection will be expanded to include the stabilization of the stream banks and preservation of landscape patterns of spatial organization composed in part by riparian woodlands along stream corridors. Management strategies will address Williams Pond as well and the springs that occur on the site.
	Overall Impact Overall impact would be <i>park-wide, long-term, negligible, adverse</i> impact on water quality	Overall Impact Overall impact would be <i>park-wide, long-term, minor, and beneficial impact</i> on water quality.	Overall Impact Overall impact would be <i>park-wide, long-term and minor beneficial impact</i> on water quality	Overall Impact Overall impact would be <i>park-wide, long-term and minor beneficial impact</i> on water quality
	Cumulative Impact Cumulative effects would be local, short-term, minor and adverse.	Cumulative Impact Cumulative effects would be park-wide, long-term, minor and beneficial.	Cumulative Impact Cumulative effects would be park-wide, long-term, minor and beneficial.	Cumulative Impact Cumulative effects would be park-wide, long-term, minor and beneficial.

Wildlife and Wildlife Habitat	Existing habitat would remain in place to continue to support populations of birds, mammals, and reptiles that currently inhabit the park landscape. Over time, the existing successional woodland would continue to mature.	Implementing construction of overflow parking, restoration of the persimmon grove, and expansion of the trail system would displace or disturb some vegetation that is wildlife habitat. Use of BMPs would be implemented to minimize impacts to wildlife habitat.	Implementing construction of overflow parking, restoration of the persimmon grove, and expansion of the trail system would displace or disturb some vegetation that is wildlife habitat. Use of BMPs would be implemented to minimize impacts to wildlife habitat.	Implementing construction of overflow parking, restoration of the persimmon grove, and expansion of the trail system would displace or disturb some vegetation that is wildlife habitat. Use of BMPs would be implemented to minimize impacts to wildlife habitat.
	Overall Impact Overall impact would be <i>park-wide, long-term, minor, adverse impact</i> on wildlife and wildlife habitat.	Overall Impact Overall impact would be <i>park-wide, short-term, minor, adverse impact</i> to wildlife and wildlife habitat.	Overall Impact Overall impact would be <i>park-wide, short-term, minor, adverse impact</i> to wildlife and wildlife habitat.	Overall Impact Overall impact would be <i>park-wide, short-term, minor, adverse impact</i> to wildlife and wildlife habitat.
	Cumulative Impact Cumulative effects would be park-wide, short-term, minor and adverse.	Cumulative Impact Cumulative Impact would be park-wide, short-term, minor and adverse.	Cumulative Impact Cumulative Impact would be park-wide, short-term, minor and adverse.	Cumulative Impact Cumulative Impact would be park-wide, short-term, minor and adverse.
Rare, Threatened, and Endangered Species	Existing habitat would remain in place and continue to support populations of birds, mammals, reptiles and fish that currently inhabit the site and the water resources on the site. Quality of the water is most important to the identified species of fish, the Arkansas darter, as a candidate for federal listing and a species of concern in Missouri.	Implementing construction, restoration of grove and orchard, removal of invasive species, expanded woodland management, and stream, spring and pond management would result in potential impacts due to displacement of vegetation along stream corridors and subsequent effects on water quality. Use of BMPs would be implemented.	Implementing construction, restoration of grove and orchard, removal of invasive species, expanded woodland management, and stream, spring and pond management would result in potential impacts due to displacement of vegetation along stream corridors and subsequent effects on water quality. Use of BMPs would be implemented.	Implementing construction, restoration of grove and orchard, removal of invasive species, expanded woodland management, and stream, spring and pond management would result in potential impacts due to displacement of vegetation along stream corridors and subsequent effects on water quality. Use of BMPs would be implemented.
	Overall Impact Overall impact would be <i>local, long-term, negligible, and adverse impact</i> on rare, threatened and endangered species.	Overall Impact Overall impact would be <i>local, short-term, minor, adverse impact</i> to rare threatened and endangered species.	Overall Impact Overall impact would be <i>local, short-term, minor, adverse impact</i> to rare threatened and endangered species.	Overall Impact Overall impact would be <i>local, short-term, minor, adverse impact</i> to rare threatened and endangered species.
	Cumulative Impact Cumulative effects would be local, short-term, minor and adverse.	Cumulative Impact Cumulative effects would be local, short-term, minor and adverse.	Cumulative Impact Cumulative effects would be local, short-term, minor and adverse.	Cumulative Impact Cumulative effects would be local, short-term, minor and adverse.

Wetlands	No change to current conditions. Wetland areas will remain within prairie management units and managed for preservation of unique wetland vegetation.	Wetland areas will remain within prairie management units and managed for preservation of unique wetland vegetation.	Wetland areas will remain within prairie management units and managed for preservation of unique wetland vegetation.	Wetland areas will remain within prairie management units and managed for preservation of unique wetland vegetation. Mown hayfield management in Unit 6
	Overall Impact Overall impact would be a local, short term, and negligible adverse impact on wetlands.	Overall Impact Overall impact would be local, short-term, and negligible adverse impact on wetlands	Overall Impact Overall impact would be local, short-term, and negligible adverse impact on wetlands	Overall Impact Overall impact would be local, short-term, and minor adverse impact on wetlands
	Cumulative Impact Cumulative effects would be local, short-term, minor and adverse.	Cumulative Impact Cumulative effects would be local, short-term, minor and adverse.	Cumulative Impact Cumulative effects would be local, short-term, minor and adverse.	Cumulative Impact Cumulative effects would be local, short-term, minor and adverse.
Floodplains	Protection of floodplains will continue with the current management and maintenance strategies in place. The Williams Pond would remain in its current configuration. Maintenance of existing water systems and features would continue as well as protection of water resources.	In Alternative 2 there would be stream bank restoration and management of corridor woodlands along the streams and into the floodplain. Maintenance of existing water systems and features would continue as well as protection of water resources.	In Alternative 3, there would be stream bank restoration and management of corridor woodlands along the streams and into the floodplain. Maintenance of existing water systems and features would continue as well as protection of water resources.	In Alternative 4, there would be stream bank restoration and management of corridor woodlands along the streams and into the floodplain. Maintenance of existing water systems and features would continue as well as protection of water resources.
	Overall Impact Overall impact would be local, long-term, minor, adverse impact on floodplains	Overall Impact Overall impact would be local, long-term, moderate and beneficial impact on floodplains	Overall Impact Overall impact would be local, long-term, moderate and beneficial impact on floodplains	Overall Impact Overall impact would be local, long-term, moderate and beneficial impact on floodplains
	Cumulative Impact Cumulative effects would be local, long-term, minor and adverse.	Cumulative Impact Cumulative effects would be local, long-term, moderate and beneficial	Cumulative Impact Cumulative effects would be local, long-term, moderate and beneficial	Cumulative Impact Cumulative effects would be local, long-term, moderate and beneficial

Cultural Landscapes	Existing conditions focus on preservation of the existing character of the national monument landscape and current interpretive programs. No further exploration of ways to utilize the cultural landscape as a tool for interpreting Carver's life and accomplishment would be conducted.	Enhanced interpretation of the park by re-establishing and interpreting missing nineteenth century features. There also would be thinning and management of woodland and establishment of clear connection between Dr. Carver's life and achievements and the historic landscape of the farm.	There would be thinning and management of woodland and establishment of clear connection between Dr. Carver's life and work with plants. This alternative focuses on ethnobotanical plantings to connect the cultural landscape to the life and legacy of Dr. Carver.	Enhanced interpretation of the park by re-establishing and interpreting missing nineteenth century features. There also would be thinning and management of woodland and establishment of clear connection between Dr. Carver's life and achievements and the historic landscape of the farm.
	Overall Impact Overall impact would be <i>park-wide, long-term, minor, and adverse impacts</i> on cultural landscapes	Overall Impact Overall impact would be <i>park-wide, long-term, and major beneficial impact</i> on the cultural landscape For purposes of 106 compliance there would be <i>no adverse effect.</i>	Overall Impact Overall impact would be <i>park-wide, long-term, and moderate beneficial impact</i> on the cultural landscape. For purposes of 106 compliance there would be <i>no adverse effect.</i>	Overall Impact Overall impact would be <i>park-wide, long-term, and major beneficial impact</i> on the cultural landscape. For purposes of 106 compliance there would be <i>no adverse effect.</i>
	Cumulative Impact Cumulative effects would be local, short-term, negligible and adverse.	Cumulative Impact Cumulative effects would be park-wide, long-term, major and beneficial	Cumulative Impact Cumulative effects would be park-wide, long-term, moderate and beneficial	Cumulative Impact Cumulative effects would be park-wide, long-term, major and beneficial
Historic Buildings and Structures	Existing conditions and management focus on preservation of the Moses Carver house and the family cemetery perimeter wall. Also the preservation of the stone boundary markers on the west corners of the national monument site.	These buildings and structures are preserved, managed, and maintained with enhanced interpretation. It also includes repair and restoration of the family cemetery perimeter wall.	These buildings and structures are preserved, managed, and maintained with enhanced interpretation. It also includes repair and restoration of the family cemetery perimeter wall.	These buildings and structures are preserved, managed, and maintained with enhanced interpretation. It also includes repair and restoration of the family cemetery perimeter wall.
	Overall Impact Overall impact would be <i>local, long-term, negligible, adverse impact</i> on historic buildings and structures.	Overall Impact Overall impact would be <i>local, long-term, moderate, and beneficial impact</i> on historic buildings and structures. For purposes of 106 compliance there would be <i>no adverse effect.</i>	Overall Impact Overall impact would be <i>local, long-term, moderate, and beneficial impact</i> on historic buildings and structures. For purposes of 106 compliance there would be <i>no adverse effect.</i>	Overall Impact Overall impact would be <i>local, long-term, moderate, and beneficial impact</i> on historic buildings and structures. For purposes of 106 compliance there would be <i>no adverse effect.</i>

	Cumulative Impact Cumulative effects would be local, short-term, negligible and adverse.	Cumulative Impact Cumulative effects would be local, long-term, moderate and beneficial.	Cumulative Impact Cumulative effects would be local, long-term, moderate and beneficial.	Cumulative Impact Cumulative effects would be local, long-term, moderate and beneficial.
Archeological Resources	There would be no new ground-disturbing activities that would potentially affect archeological resources. Current levels of maintenance and repairs to historic features would continue. These activities do not typically include excavation. Current management practices would continue and there would be no new impacts to archeological resources.	Alternative 2 would include some excavation for trail expansion, removal and thinning of woodlands, and installation of new plantings. There would be ground disturbance during demolition of former residences and development of overflow parking. Mitigation measures would be in place	Alternative 3 would include some excavation for trail expansion, removal and thinning of woodlands, and installation of new plantings. There would be ground disturbance during demolition of former residences and development of overflow parking. Mitigation measures would be in place	Alternative 4 would include some excavation for trail expansion, removal and thinning of woodlands, and installation of new plantings. There would be ground disturbance during demolition of former residences and development of overflow parking. Mitigation measures would be in place
	Overall Impact Overall impact would be <i>park-wide, long-term, and negligible adverse impacts</i> to archeological resources.	Overall Impact Overall impact would be <i>local, short-term, and minor adverse impacts</i> on archeological resources. For purposes of Section 106 compliance there would be no adverse effect .	Overall Impact Overall impact would be <i>local, short-term, and minor adverse impacts</i> on archeological resources. For purposes of Section 106 compliance there would be no adverse effect .	Overall Impact Overall impact would be <i>local, short-term, and minor adverse impacts</i> on archeological resources. For purposes of Section 106 compliance there would be no adverse effect .
	Cumulative Impact Cumulative effects would be park-wide, long-term, negligible and adverse.	Cumulative Impact Cumulative effects would be park-wide, long-term, minor and adverse with mitigation measures in place	Cumulative Impact Cumulative effects would be park-wide, long-term, minor and adverse with mitigation measures in place	Cumulative Impact Cumulative effects would be park-wide, long-term, minor and adverse with mitigation measures in place

Visitor Use and Experience	No change to current conditions, facilities, or interpretation. Under this alternative, there would be no changes to the facilities that currently accommodate visitor access and interpretation or to park administration/maintenance facilities. No new construction of visitor amenities. No expansion of interpretation using the cultural landscape to tell the complete story of the life and legacy of Dr. Carver	Expansion of the trail for interpretive opportunities; identification of location of former Moses Carver farmstead features and associated interpretation; accurate location through archeology of the birthplace cabin and original location of the Moses Carver house and associated interpretation.	Ethnobotanical plantings would be installed to enhance interpretation of Dr. Carver's entire life and work. Expansion of the trail to provide interpreted ethnobotanical plantings and an interpreted environmental trail through Harkins Woods.	Expansion of the trail for interpretive opportunities; identification of location of former Moses Carver farmstead features and associated interpretation; accurate location through archeology of the birthplace cabin and original location of the Moses Carver house and associated interpretation.
	Overall Impact Overall impact would be a <i>park-wide, long term, and minor adverse impact</i> on visitor experience.	Overall Impact Overall impact would be a <i>park-wide, long term, and major beneficial impact</i> on visitor use and experience.	Overall Impact Overall impact would be a <i>park-wide, long term, and moderate beneficial impact</i> on visitor use and experience.	Overall Impact Overall impact would be a <i>park-wide, long term, and major beneficial impact</i> on visitor use and experience.
	Cumulative Impact Cumulative effects would be park-wide, short-term, minor and adverse.	Cumulative Impact Cumulative effects would be park-wide, long-term, major and beneficial.	Cumulative Impact Cumulative effects would be park-wide, long-term, moderate and beneficial.	Cumulative Impact Cumulative effects would be park-wide, long-term, major and beneficial.
Park Operations	Park operations would remain consistent with those currently being undertaken. There would be no change in current site operations or infrastructure. The visitor center would continue to be the primary point of visitor contact. Maintenance requirements would continue at current levels.	Alternative 2 would require expanded park operations due to enhanced interpretation of the park to tell the story of George Washington Carver's life and interpreting missing nineteenth century features. There would also be thinning and management of woodlands, and mown hay viewsheds.	Alternative 3 would require expanded park operations. Plants would be installed along trails to enhance interpretation, thinning and clearing of woodland would occur to allow for plantings of ethnobotanical species.	Alternative 4 would require expanded park operations due to enhanced interpretation of the park to tell the story of George Washington Carver's life and interpreting missing nineteenth century features. There would also be thinning and management of woodlands, and mown hay fields in units 2, 6, and 7.
	Overall Impact Overall impact would be <i>park-wide, short-term, and negligible adverse impact</i> on park operations	Overall Impact Overall impact would be <i>park-wide, long-term, and moderate adverse impact</i> to park operations	Overall Impact Overall impact would be <i>park-wide, long-term, and moderate adverse impact</i> to park operations	Overall Impact Overall impact would be <i>park-wide, long-term, and moderate adverse impact</i> to park operations

	Cumulative Impact Cumulative effects would be park-wide, short-term, minor and adverse.	Cumulative Impact Cumulative effects would be park-wide, long-term, moderate and adverse.	Cumulative Impact Cumulative effects would be park-wide, long-term, moderate and adverse.	Cumulative Impact Cumulative effects would be park-wide, long-term, moderate and adverse.
--	---------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------