

ALTERNATIVES, INCLUDING THE PREFERRED ALTERNATIVE

CEQ regulations for implementing NEPA require that Federal agencies explore and objectively evaluate all reasonable alternatives to the preferred alternative. This chapter describes a range of reasonable alternatives, including the No Action Alternative. Implementation maps that illustrate all of the alternatives can be found in **Appendix C**.

Completion of this Trail Plan/EA does not mean that implementation of the trail recommendations would be forthcoming. Implementation is dependent upon future funding availability, competing park priorities, and budget realities. Implementation of some phases of this plan may be many years into the future; this plan does not guarantee the existence of future park funds. In addition, additional compliance and further impact analysis may be needed for site-specific actions that are not described in this plan.

The Blue Ridge Parkway has adopted standards for trail construction and public access points to the park's authorized trail system. Recommendations outlined in all alternatives are based on the following standards:

Criteria for Trails

- Located to assure minimal impacts to natural resources (i.e. avoid switchbacks and wetlands).
- Limit access to the Blue Ridge Parkway trail system to trails from the Roanoke Valley Greenway system, and/or other public owned lands or right-of-ways (ROW).
- Constructed to sustainable NPS trail standards.
- Ability to maintain and manage.
- Use appropriate to Blue Ridge Parkway and NPS policies.
- Positive user group interaction.

Criteria for Access Points

- Safe - with adequate signage, signed road crossings, and good visibility between users and motorists.
- Inconspicuous - located where users would be visible but trail would not be readily visible to the Parkway motorist.
- Stabilized - well designed and maintained with no unacceptable impacts to resources.
- Connections only to public right-of-ways or parks (i.e. state or city maintained roads).
- Available for use by the general public.

ACTIONS COMMON TO ALL ALTERNATIVES

Closure of Unauthorized Trails

Within the greater Roanoke area Parkway lands from MP 110.6 to 126.2, Section 1-M, contains approximately 42 unauthorized trails totaling 4.1 miles. Unauthorized trails and access points are undesirable and could cause resource damage and enforcement issues. Some of the following methods could be used to eliminate unauthorized trails: brushing the trail in, possibly felling hazard trees across the trail, revegetation and/or recontouring, signage, and fencing at some locations, which after closing

with conventional means continue to be reopened. NPS boundaries would be marked at trail access points in all alternatives. Exceptions to closure are specifically described in the alternatives; these trails would be brought up to NPS standards and designated and maintained as official trails.

ALTERNATIVE A – NO ACTION

Under the No Action Alternative, 17.4 miles of existing trail would remain for pedestrian and horse use. There would be no new trails constructed. There would be no connections between the Roanoke Greenway systems and Blue Ridge Parkway motor road or Parkway trails. No bicycle access would be allowed from the Roanoke Greenway system across park lands. CEQ regulations (40 CFR 1502.14) require the assessment of the No Action Alternative in NEPA documents. The No Action Alternative provides a basis for comparing the management direction and environmental consequences of the other action alternatives and must be considered in every EA.

Specific Actions

Stewarts Knob Overlook (OL)

This overlook would serve as a public parking area for horse and pedestrian trail access. One mile of unauthorized trail that currently leads to the summit and private lands would be eliminated and the boundary would be posted and explanatory sign(s) would be installed. A 50-foot section of unauthorized trail that provides a shortcut between the Roanoke Trail and the unauthorized trail to the summit would also be eliminated.

MP 111-112

Four unauthorized trails would be eliminated and boundary would be posted. The existing Wolf Creek Greenway connection to Mountain View Road would be retained. Parking at Mountain View road and the access at the Parkway Vinton Maintenance Area would be retained.

MP 112-113

The trail through the agricultural lease north of State Route 24 would be marked; Virginia Department of Transportation (VDOT) would be contacted to help develop a safe crossing of SR 24. The access to a deed reserved cemetery at MP 112.6 would be maintained at the current trail standard.

MP 113-114

Two unauthorized trails from adjacent lands would be eliminated, boundary would be posted, and signs installed; VDOT would be consulted to help establish a safe crossing of Hardy Road; the trail would terminate at Hardy Road.

MP 114-115

None.

Roanoke River Trail

Social trails along the river trail would be eliminated.

MP 115-116

One unauthorized trail would be eliminated; boundary signs would be posted.

MP 116-117

Trail would remain between Rutrough Road and Simsmore Road; no additional work would be undertaken.

MP 117-118

One unauthorized trail that passes through a cemetery would be eliminated; social trail near MP 118 would be eliminated and the boundary posted at both locations.

MP 118-119

Four unauthorized trails would be eliminated and boundary would be posted.

MP 119-120

Six unauthorized trails would be eliminated and boundary would be posted.

MP 120-121

Ten unauthorized trails would be eliminated and boundary would be posted.

Mill Mountain Spur Road

Three unauthorized trails would be eliminated and boundary signs would be posted. Trails to Yellow Mountain Road would be consolidated into one trail and signs would be installed. The signage system for Chestnut Ridge Trail would be simplified. All trails would be consolidated in the Welcome Road Area to provide one access.

MP 121-122

One unauthorized trail would be eliminated and boundary would be posted.

MP 122-123

One unauthorized trail would be eliminated and boundary would be posted.

MP 123-124

Two unauthorized trails would be eliminated and boundary would be posted.

Buck Mountain Trail

No changes except one unauthorized trail leading to private lands near terminus would be eliminated and boundary would be posted.

MP 124-125

Three unauthorized trails would be eliminated and boundary would be posted.

MP 125– Masons Knob Overlook

Two unauthorized trails would be eliminated.

ALTERNATIVE B – EXPANDED TRAIL SYSTEM WITH CONNECTIONS

Under Alternative B, current and future trail needs along the Roanoke Valley section of the Parkway (MP 110.6 to 126.2) would be addressed in a comprehensive manner. The existing 17.4 miles of park trails would be brought up to NPS standards utilizing volunteer and outside funding sources. Some abandoned trails on park land would be reestablished; in some locations, multiple social trails would be consolidated and unneeded trails would be eliminated. New loop and connector trails would be constructed at several locations. New bicycle and pedestrian accesses and parking areas would be established at various locations to provide safe access to motor road and trails. New trailhead parking for hikers and horseback users would be provided at various locations. Several connections between Parkway trails and Roanoke Valley Greenways trail system would be authorized. All new construction (estimated at 6.25 miles) would be done by Roanoke Valley Greenways volunteers or with grant or private funding sources.

Specific actions for this alternative include all actions proposed in Alternative A, as well as the following:

Stewarts Knob

Parking for horse trailers would be provided at Stewarts Knob OL. 0.75 miles of the existing “unauthorized” trail to the summit would be upgraded to meet NPS standards and 1.2 miles of new trail would be constructed on the north side of this trail to create one short and one long loop. This trail would be called the Stewart’s Knob Loop Trail. The remaining 0.2 miles of unauthorized trail to the summit would be eliminated, the boundary would be posted and barrier or other explanatory sign(s) would be installed. Unlike Alternative A, the short connector trail between the Roanoke Trail and Stewarts Knob Loop Trail near the trailhead would be retained as part of the trail system.

MP 111-112

A current unauthorized parking area would be paved and marked at Mountain View Road near the Wolf Creek Greenway connection. A parking area and drive connection to the motor road would be constructed behind the Parkway ranger office, as well as a paved trail/sidewalk to connect with Mountain View Road for pedestrian and bike use.

MP 112-113

Through partnerships, parking would be constructed on private lands or within the VDOT right-of-way for Chestnut Mountain Drive, left of MP 112.6. The short (less than 50 feet) unauthorized trail would be improved across NPS lands to connect with the existing trail. The unauthorized trail would be eliminated if a public parking area is not developed. A pedestrian and horse connector trail (less than 0.2 miles) would be constructed connecting the existing trail to Roanoke Basin OL. Horse trailer parking would be added to the overlook.

MP 113-115

The existing Roanoke Trail would be extended 1.3 miles from Hardy Road to the Roanoke River (MP 114.8) on Parkway Left (PwL). A safe crossing of the motor road would be made just north of the Roanoke River and 1.1 miles of new trail would be constructed on Parkway Right (PwR) to connect with the Garden City Greenway Trail, just south of Hardy Road. A short connector would be constructed to provide bicycle access to the Parkway motor road. The loop trail would total 2.4 miles. An elevated bridge structure crossing of the Roanoke River would be considered.

Roanoke River Trail

The Roanoke River Interpretive Trail would remain a closed loop and signage upgraded, where necessary. Access to the river for fishing would be formalized and constructed to NPS trail standards.

MP 115-116

On PwR from the Roanoke River Parking Area to SR 618 Highland Road, .56 miles of new trail would be constructed. Also on PwR, 0.3 miles of greenway connector trail would be constructed. The greenway connector and a small portion of the new trail to the overlook would be designed for pedestrian use and bicycle access to the motor road.

MP 116-117

Just south of Rutrough Road, a new trail alignment would cross the Parkway motor road and connect with the existing trail. Public trail access would be provided from Rutrough Road.

MP 117-118

A public parking area would be constructed in an existing agricultural lease at Pitzer Road to provide pedestrian and horse access. A 0.4-mile section of new trail would be constructed between Simsmore Avenue and Jae Valley Road. Public access would be provided at Jae Valley Road.

MP 118-119

A public parking area would be constructed within the park boundary and the American Electric Power Company ROW. Access to the trail would be made by upgrading the unauthorized trail to meet NPS standards. Vehicular access to the parking area would be via Eanes Road and Carol Lane. If a public parking area were not developed, this unauthorized trail would be eliminated whenever park maintenance staff and volunteers had the time and materials to do so.

MP 119-120

In partnership with the City of Roanoke, an access to the trail would be established at the Roanoke City Park and Playground off Yellow Mountain Road. If this location could not be designated as an official trail access point, the unauthorized trail would be eliminated.

MP 120-121

Nothing new proposed.

Mill Mountain Spur Road

Two public access points would be developed to provide pedestrian access from adjacent neighborhoods via Fordham Road SW and from the adjacent mobile home park. A greenway connection would be constructed that would provide pedestrian access to the trail system and bike access to Mill Mountain Spur Road.

MP 121-122

The existing trail would be extended from MP 121 to Stable Road (0.5 miles of new trail). A public parking area and trail access for pedestrian and horse use would be constructed along Stable Road. If a parking area were to be developed in this location, the park would work with VDOT to end the road at the parking area and obliterate the connection with US 221. Public access would be provided for pedestrians and bicycles to the Parkway motor road with parking along the shoulder of Falcon Ridge Road by upgrading an unauthorized trail. If parking on the shoulder of Falcon Ridge Road could not be provided and the trail was not formalized, it would be eliminated.

MP 122-123

Public access would be provided for pedestrians and bicycles from Buck Mountain Road.

MP 123-124

A new section of trail (1.4 miles) would be constructed on PwR from Buck Mountain OL to Merriman and Starkey Parks.

Buck Mountain Trail

Nothing new proposed.

MP 124-125

Access to the Merriman and Starkey Parks would be constructed using 0.2 miles of unauthorized trail that would be upgraded to meet NPS standards. Public parking and access would be provided at those parks.

MP 125–Masons Knob Overlook

Public access for pedestrians and bicycles would be provided to the Parkway motor road from Raintree Drive to the motor road on PwR across from Masons Knob OL by upgrading an existing unauthorized trail.

ALTERNATIVE C – EXPAND TRAIL SYSTEM WITH CONNECTIONS AND MOUNTAIN BIKING (NPS PREFERRED ALTERNATIVE)

Under Alternative C, all actions included in the No Action Alternative and Alternative B would occur, with the addition of a separate mountain biking and pedestrian trail system at the Roanoke River Parkway.

Designation of Roanoke River Parkway Trails

During the planning of the Roanoke River Parkway, which was constructed to provide a vehicular connection between the Blue Ridge Parkway and Explore Park, 3.50 miles of trails, road crossings and parking areas were designed to be constructed on easement and fee simple lands. Under Alternative C, construction of these trails would provide mountain bike and pedestrian trails and future linkages between the Roanoke River Greenway and the Parkway motor road. Providing separate facilities for mountain biking and not mixing user groups (bikes and horses) at the Chestnut Ridge Loop Trail would limit user conflicts.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

In accordance with DO-12, the NPS is required to identify the “environmentally preferred alternative” in all environmental documents, including environmental assessments. The environmentally preferred alternative is determined by applying the criteria suggested in NEPA, which is guided by the CEQ. As stated in Section 2.7 (D) of the NPS DO-12 Handbook, “The environmentally preferred alternative is the alternative that will best promote the national environmental policy expressed in NEPA (Section 101(b)).” This environmental policy is stated in six goal statements, which include:

- 1) Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- 2) Assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;
- 3) Attain the widest range of beneficial uses of the environment without degradation, risk to health and safety, or other undesirable and unintended consequences;
- 4) Preserve important historic, cultural, and natural aspects of our national heritage, and maintain wherever possible, an environment which supports diversity and variety of individual choice;
- 5) Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life’s amenities; and
- 6) Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources (NEPA, 42 USC 4321-4347).

In sum, the environmentally-preferred alternative is the alternative that, not only results in the least damage to the biological and physical environment, but also that best protects, preserves, and enhances historic, cultural, and natural resources. Subsequently, Alternative B is the Environmentally Preferred Alternative as it more adequately resolves visitor use patterns against current conditions.

The No Action Alternative does not adequately resolve the continued need for authorized trail connections to and from the Parkway trail system, or connections between park lands and the greenway trail system, or the need to stabilize and reestablish existing and abandoned trails.

Alternative C, like Alternative B, would resolve all issues but also add mountain bike use which might adversely impact park operations and public health and safety.

MITIGATION MEASURES

For all alternatives, best management practices and mitigation measures would be used to prevent or minimize potential adverse effects associated with this trail plan. These practices and measures would be incorporated to reduce the magnitude of impacts and ensure that major adverse impacts would not occur. Mitigation measures undertaken during project implementation would include, but would not be limited to, those listed below. The impact analysis in the *Environmental Consequences* section was performed assuming that these BMP and mitigation measures would be implemented as part of all action alternatives.

Soils and Geology

- Existing pedestrian trails, subject to compaction, erosion and muddiness, would be properly maintained by volunteer groups under a Memorandum of Agreement (MOA) according to NPS standards.
- Horse trails would be maintained to NPS standards by horse riding clubs under a MOA.
- If trails were not properly managed and maintained by volunteer groups to NPS standards, the NPS would consider closing and eliminating segments of trails.
- Existing trails may be relocated or surfaced if soil movement and compaction could not be maintained to NPS standards.

Water Resources

- Construction of new trails in and around the Roanoke River OL, the entrance to Explore Park (MP 115 –116), and on Roanoke River Parkway lands would be completed after consultation with the RVRA to assure that monitoring equipment is not disturbed, that any “caps” that might occur on the landfill would not be compromised by trail activity, and that contaminants known to occur in the area would not be exposed during construction, use, or maintenance of the trail.
- Stream crossings would be constructed and sized so as not to obstruct natural flow of water.
- Construction of stream crossings would require Section 404 USACE permits and the park would obtain all necessary permits before any construction activities began.

Vegetation/Wildlife

- Throughout the life of the trail, downed and dying trees would be felled and left adjacent to the trail unless an extenuating circumstance were present. This action would benefit small mammal, amphibians and reptiles. Extenuating circumstances could include, but would not be limited to, aesthetic concerns or increased fire fuels loading. This decision would be made by NPS personnel.

Archeological Resources

In order to mitigate any adverse impacts to cultural resources and comply with Section 106 of the NHPA, the NPS negotiated a programmatic agreement with the State Historic Preservation officer of Virginia. The PA recorded the terms and conditions agreed upon to resolve and mitigate the potential adverse effects associated with the proposed action and is presented in **Figure B-1** in **Appendix B**.

When specific locations for trail work have been determined, the NPS will fulfill compliance requirements for each site-specific trail. Examples of these additional requirements might include:

- If previously unknown archeological resources were discovered in existing trails, areas of minor rerouting and/or areas of minor rehabilitation, the trail would be closed and use would be halted until the resources were identified, documented, and an appropriate mitigation strategy developed. All work would be carried out in accordance with pertinent laws and regulations, including the stipulations of the 2010 Programmatic Agreement entered into by the Blue Ridge Parkway, the Advisory Council on Historic Preservation, the Virginia State Historic Preservation Office, and the affected American Indian Tribes.
- If the BLRI determined in consultation with the SHPO that further efforts were needed to identify archeological sites, the BLRI would develop an archeological testing program of sufficient intensity to support evaluation of the sites' eligibility for listing in the National Register of Historic Places, following the regulations outlined in 36 CFR Part 800.4(c).
- If as a result of the testing program, archeological sites were identified that were eligible for the NRHP, the BLRI would develop a plan for each site for the avoidance and protection of, or for recovery of information, or destruction without data recovery. The plan would be submitted to the SHPO for review and approval prior to implementation of the plan.
- All data recovery plans prepared under the terms of the 2010 PA would include the following elements:
 - Information including site maps, boundaries, nature, and time period of the archeological property or properties where data recovery would be carried out, and the context in which such properties would be eligible for the National Register.
 - Information on any property, properties, or portions of properties that would be destroyed without data recovery and the context in which such properties would be eligible for the National Register.
 - Discussion of the research questions to be addressed through the data recovery with an explanation/ justification of their relevance and importance.
 - Description of the recovery methods to be used, with an explanation of their pertinence to the research questions.
 - Information on any regular progress reports or meetings to keep the NPS and the SHPO up to date on the course of the work. The plan should contain the expected timetable for excavation, analysis and preparation of the final report.
- Existing trail segments would be surveyed for archeological resources, as funding becomes available.

- Consistent with the provisions of the 2008 PA among the NPS, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers, the BLRI would prepare assessments of effect for the actions in consultation with the appropriate cultural resource advisors in the fields of archeology, history, historic landscape architecture, and historic architecture who meet the professional qualifications set forth in the Secretary of the Interior's, "*Standards and Guidelines for Archeology and Historic Preservation.*"
- Actions that meet the criteria for streamlined review as specified in Stipulation III.C of the 2008 PA would require no further review by the SHPO. For those actions that would not meet the criteria for streamlined review, the BLRI would submit the assessment of affect and all necessary supporting documentation to the SHPO for review and comment.

Socioeconomic Environment

- There should be no impacts that require mitigation as a result of implementation of the trail plan.

Visitor Use and Experience

- Efforts would be made to minimize conflict between different user groups through education and monitoring. If visitor use and experience were to be adversely impacted by the implementation of the trail plan, i.e., overcrowding, accidents or incidents related to increased visitor use, recurring complaints about noise and/or crowding, or other adverse impacts, adaptive management strategies would be implemented based upon the severity of the impact. These strategies would range from those associated with lesser impacts, such as increased educational campaigns aimed at making visitors more aware of use issues and impacts to increased enforcement which would ensure compliance with use regulations. For more severe impacts, adaptive management strategies could include selective or limited use of a particular area through permitting, separation of horse and mountain bike uses, or closure of an area if health and safety hazards were occurring.

Human Health and Safety

- Trails, trail connections and road crossings would be designed so that medical and law enforcement personnel have adequate access to the trail system in the event that they must respond to a health or safety concern. The Parkway does not currently, and does not anticipate in the future, having capability to provide emergency services beyond Level I response; the Parkway relies upon local jurisdictions to carry out rescue and medical emergency response. All trail plan implementation decisions would be made in conjunction with partner emergency service providers based upon thorough consideration of potential human health and safety concerns.
- Safety at road crossings would be improved with the implementation of the trail plan; mitigation as described above. If visitor safety were to be adversely impacted by the implementation of the trail plan, adaptive management strategies would be used to identify appropriate solutions and address those impacts.

Park Operations

- Organized, coordinated trail maintenance and construction would be undertaken through agreement with local trail organizations. This shared maintenance agreement would cut down on maintenance costs and operational costs associated with keeping the trails in satisfactory condition.

- Sources of funding for new trails and other new construction would be identified beyond the park ONPS funds. Partnerships and donated funds would be identified to assist in completion of new construction projects and offset impacts to park operations.
- The Parkway is unable to dedicate current staff positions to trail monitoring given other critical park priorities, nor does the Parkway anticipate being able to hire additional staff to patrol and monitor the trail system.

Table 1 compares the potential environmental impacts resulting from the alternatives. Potential impacts are provided according to environmental resource topic. The *Environmental Consequences* section of this EA contains a detailed discussion of these potential impacts by resource topic.

Table 1. Summary Comparison of Impacts

| Impact Topic | Alternative A <i>No Action</i> | Alternative B <i>Expanded Trail System with Connections</i> | Alternative C <i>Expand Trail System with Connections and Mountain Biking (Preferred Alternative)</i> |
|--------------------------|---|---|---|
| <i>Soils and Geology</i> | Alternative A would reduce the amount of soil exposed by restoring more than 4.1 miles of unauthorized trail. However, little improvement in unacceptable trail tread condition would be addressed under this alternative. Thus, this alternative would exhibit moderate adverse impacts for the long-term. | Alternative B would provide the best protection of soil and geological features with the introduction of user groups providing trail maintenance on a routine basis, as needs arise. Thus, adverse impacts would be negligible to minor for the long-term. | As with Alternative B, Alternative C would provide the greatest protection of soil and geological features with the introduction of user groups providing trail maintenance on a routine basis, as needs arise. Some additional ground exposure could occur with the introduction of mountain bikes on Roanoke River Parkway, but this impact would be minor for the long-term. Thus, adverse impacts from this alternative would be negligible to minor for the long-term. |
| <i>Water Resources</i> | Alternative A would do little to reduce erosion into headwaters of Wolf Creek, Roanoke River and Back Creek since few funds would be expended to maintain trails to NPS standards. Under this alternative, adverse impacts to water resources would be minor for the long-term. | Alternative B has the greatest potential to minimize degradation of water resources. Under this alternative, trails would be adequately maintained by user groups through MOA, thus minimizing the amount of erosion that could reach streams and creeks. Under this alternative, adverse impacts to water resources would be negligible for the long-term. | The conclusion for Alternative C is the same as for Alternative B as construction of additional mountain bike trails would be to strict specifications limiting cut and fill slopes. All new construction would meet RVRC approved standards and guidelines. |
| <i>Vegetation</i> | Alternative A provides the most protection for the spread of exotic plants since 42 unauthorized trails would be eliminated and restored, reducing the ease with which exotic plants would invade Parkway land. This alternative, then, would allow negligible to minor adverse impact from exotic plants. | Under Alternative B, the adverse impact of exotics would be minor for the long-term. | Under Alternative C, the adverse impact of exotics would be minor for the long-term. |

| Impact Topic | Alternative A <i>No Action</i> | Alternative B <i>Expanded Trail System with Connections</i> | Alternative C <i>Expand Trail System with Connections and Mountain Biking (Preferred Alternative)</i> |
|----------------------------------|--|--|---|
| <i>Wildlife</i> | Adverse impacts to wildlife under Alternative A would be negligible for the long-term. There would be long-term beneficial impacts for salamanders as trees would be felled to create the trail or to eliminate hazard trees and left in place adjacent to the trail. | Adverse impacts to wildlife under Alternative B would be negligible for the long-term. Leaving trees along the trail corridor would successfully maximize salamander habitat. | Adverse impacts to wildlife under Alternative C would be negligible to minor for the long-term. Leaving trees along the trail corridor would successfully maximize salamander habitat. Education of mountain bikers would reduce some excessive displays of challenging maneuvers or off-trail use. |
| <i>Archeological Resources</i> | Adverse effects to archeological resources under Alternative A would be moderate for the short-term, though long-term impacts are unknown. | Adverse effects to archeological resources under Alternative B would be none to negligible for the short-and long-term since Phase I investigations would be undertaken before new trails or parking areas would be constructed. | Adverse effects to archeological resources under Alternative C would be negligible for the short-and long-term since Phase I investigations would be undertaken before new trail sections or parking areas would be constructed and before additional use would be permitted. |
| <i>Socioeconomic Environment</i> | There could be long-term, negligible, and adverse impacts to economic revenue and quality of life if the trails were to continue to degrade and there were no connections beyond the Parkway as these conditions would not draw tourists and trail users to the area. Property values could be affected when unauthorized trails were eliminated and convenient authorized trail connections not provided. | Under Alternative B, the development of new trails, reestablishment of abandoned trails, new greenway connections, additional visitor parking, improved horse facilities and bike access to the motor road would provide positive quality of life benefits to local residents and positive increases in tourism, as well as potential business and economic (income generating) opportunities related to trail use. These impacts would be long-term and beneficial depending on the scale of the regional trail system connecting to the Parkway. | Under Alternative C, the development of new trails, reestablishment of abandoned trails, new greenway connections, additional visitor parking, improved horse facilities, bike access to the motor road and the introduction of mountain biking could provide quality of life benefits to local residents and increases in tourism, as well as potential business and economic (income generating) opportunities related to trail use. These impacts would be long-term and beneficial. |

| Impact Topic | Alternative A <i>No Action</i> | Alternative B <i>Expanded Trail System with Connections</i> | Alternative C <i>Expand Trail System with Connections and Mountain Biking (Preferred Alternative)</i> |
|-----------------------------------|---|--|---|
| <i>Visitor Use and Experience</i> | Under the No Action Alternative, if trails were left in their existing condition and continued to degrade, visitor enjoyment of the trails would diminish. Visual character would be degraded by roadside parking and loss of vegetation through soil compaction resulting in long-term, minor to moderate to eventually major, adverse impacts on visitor use and experience. There could be long-term, beneficial impacts to visitor use and experience from improved safety in crossing SR24 and Hardy Road. | Implementation of Alternative B, which includes the development of new trails, trail connections, parking, and trail connections through to the Roanoke Greenway, could provide long-term, beneficial impacts to visitor use and experience. There could be adverse impacts if crowding became an issue, which could be offset by more opportunities for use which would disperse visitors and alleviate crowding on Parkway trails. | Under Alternative C, the development of new trails, reestablishment of abandoned trails, new greenway connections, additional visitor parking, improved horse facilities, bike access to the motor road and the introduction of mountain biking could provide long-term, beneficial impacts to visitor use and experience. There could be adverse impacts if crowding became an issue, which could be offset by more opportunities for use which would disperse visitors and alleviate crowding on Parkway trails. There would also be a potential short to long-term, beneficial impact from addition of mountain biking to Roanoke River Parkway Trails. |
| <i>Human Health and Safety</i> | Under the No Action Alternative, if trails were left in existing condition and continued to degrade, there would continue to be a long-term, minor, and adverse impact on health and safety. However, there would be beneficial impacts to health and safety from improved safety in crossing SR24 and Hardy Road. | Under Alternative B, improvements to the trail system and existing crossings would have a long-term, beneficial impact on health and safety. However, increased use and creation of more access to and across the motor road for users could result in adverse, long-term impacts on health and safety as the likelihood of accidents/incidents increases. | Improvements to trail system and existing crossings would have long-term, beneficial impacts on health and safety. However, increased use and creation of more access to and across the motor road for users would result in long-term, minor to moderate, adverse impacts on health and safety as the likelihood of accidents/incidents increases. The addition of a new use-mountain bicycling-would have the potential to increase incidents/accidents as there would be more users, users travelling at different rates of speed, and all users learning to adjust to new trail use and conditions. Increased potential for accidents/incidents would result in short to long-term, minor to moderate, adverse impacts on health and safety. These impacts could be mitigated through enforcement and educational activities or use restrictions. |

| Impact Topic | Alternative A <i>No Action</i> | Alternative B <i>Expanded Trail System with Connections</i> | Alternative C <i>Expand Trail System with Connections and Mountain Biking (Preferred Alternative)</i> |
|------------------------|--|--|--|
| <i>Park Operations</i> | Continuation of current management actions of traditional recreational use, use of the motor road and associated vistas and management of those resources under this trail plan would have few additional impacts on park operations above normal and scheduled interpretive, resource management, maintenance and law enforcement activities. Over time, there would be a long-term, minor, adverse impact to park maintenance and resource management activities as trails would need more repair and resource damage would occur. Additional workload for law enforcement could occur as the need for trail connections and bike access to the motor road would not be addressed. | Improvements to the trail system would increase trail traffic and use and would result in impacts to park operations. While some issues related to crowding could be offset by dispersed use over a larger trail system, any increase in visitors would cause an impact to park operations. Under Alternative B, expanding the trail system and providing connections and access to and over the motor road could result in more accidents and/or incidents or at the least a need for more enforcement, monitoring and additional safety and outreach activities. Working with volunteer groups would necessitate increased time in training, oversight and coordination. New facilities would increase lifecycle maintenance costs. Implementation, given existing staffing levels for the foreseeable future, could cause long-term, minor to moderate, adverse impacts to park operations in the district and park-wide. | Improvements to trail system, including new trails, connections, parking and introduction of a new use on the Parkway would increase trail traffic and use and would result in impacts to Parkway operations. While some issues related to crowding could be offset by dispersed use over a larger trail system, any increase in visitors would cause an impact to park operations. Under Alternative C, expanding the trail system, introducing a new use, and providing connections and access to and over the motor road could result in more accidents/incidents or at the least a need for more enforcement, monitoring and additional safety and outreach activities. Working with volunteer groups would necessitate increased time in training, oversight and coordination. New facilities would increase lifecycle maintenance costs. Implementation, given existing staffing levels assumed for the foreseeable future, could cause long-term, minor to moderate and adverse impacts to district and park-wide operations. |