



National Park Service  
U.S. Department of the Interior  
Yellowstone National Park  
Wyoming, Montana, Idaho

## **Finding of No Significant Impact Canyon Overlooks and Trails Rehabilitation**

### **Background**

In compliance with NEPA, the National Park Service (NPS) prepared an Environmental Assessment (EA) to rehabilitate a number of existing overlooks and trails situated along the rim of the Grand Canyon of the Yellowstone River. These overlooks and trails are located on both the north and south rims of the canyon. Areas to be rehabilitated include: Uncle Tom's, Brink of the Upper Falls, Brink of the Lower Falls, Red Rock Point, Inspiration Point, Sunset Point, Crystal Falls, and portions of the North and South Rim Trails. Parking areas at Brink of the Upper Falls and Uncle Tom's would be reconfigured slightly to improve parking efficiency and circulation and increase parking capacity.

The proposal to rehabilitate the facilities along the canyon rim is needed to address aged and failing infrastructure, improve the visitor experience, and reduce safety risks associated with the use of this area. In particular, walking surfaces are uneven and erosion has undermined asphalt pavement, creating many potholes on the trails. Log rails on many of the bridges and along the trail are rotted and need to be replaced. Gravel and debris on steep sections of asphalt make for a treacherous situation while descending some trail sections. The proposed rehabilitation project will minimize these health and safety risks, and also will improve the visitor experience of using this area. Rehabilitation of the overlooks, trails, parking areas and associated infrastructure will improve visitor experience while minimizing these health and safety risks.

### **Selected Action**

Alternative B, Upgrade and Improve Canyon Rim Trails, Overlooks, and Associated Parking Areas, is the preferred alternative and NPS' Selected Action, because it best meets the purpose and need for the project as well as the project objectives to: 1) retain the historic integrity of the area, 2) provide safe and healthy pedestrian trails and overlooks that meet current safety standards and structural requirements, 3) improve the accessibility of the overlooks and associated trails, 4) repair and maintain existing historic masonry walls, rails, and surfaces of the overlooks and trails, and 5) better direct pedestrian flow and provide improved definition to the edges of pathways and trails.

Under Alternative B, the trails, overlooks and parking areas associated with the canyon rim will be improved. Materials and workmanship techniques that reflect the historic NPS Rustic Style of many park structures will be incorporated, while addressing the maintenance, safety, and durability of new elements. The rehabilitation work completed in 2008 at Artist's Point, Grand View, and Lookout Point will serve as the standard for which this project will continue. Overlooks and trails that will be rehabilitated include:

- Inspiration Point overlook
- Brink of the Upper Falls overlooks, trail, parking lot, and entry drive
- Uncle Tom's overlooks, trails, and parking lot
- Crystal Falls overlook and trail

- Brink of the Lower Falls overlook and trail
- Red Rock Point overlook and trail
- South Rim trail and overlooks
- North Rim trail and overlooks

The design will be focused on enhancing visitor experience; and drawing on the historical use of stone, wood, steel, and asphalt paving, while maintaining a very simple palette of materials and style.

The typical trail treatment will include work up to 7.5 feet from the centerline of the existing trails. Work within these areas will include construction of retaining walls; minor regrading of steep sections; and installation of trail edging constructed of stone, log, or rails. Existing paved trails will be repaved, and some non-paved trails will be paved.

Many of the trails at Inspiration Point, Brink of the Upper Falls, Uncle Tom's, Crystal Falls, and Sunset Point will be improved to conform to the Access Board's newly released "*Outdoor Developed Area Accessibility Guidelines*." Hard surfaces will consist of asphalt, concrete, pavers (concrete or fly ash), flagstone, and geometric recycled product glass. Handrails will be used on some of the steepest slopes on frontcountry trails only. No handrails will be installed on the backcountry trails. Where possible, grading will occur on trails to reduce steep sections if the work can be done without excessive grading that would cause extensive resource damage. Some short retaining walls will be installed in select areas, such as the Brink of the Lower Falls trail, and the Inspiration Point trails. Existing narrow sections on many pathways and trails will be widened to allow for a minimum of 36 inches required to meet the Access Board's guidelines for pedestrian trails. Most paved trails in high use areas will be 6 feet wide. A few trail segments have areas that will be difficult to widen to 36 inches for their entire length due to topography, ravines, and rock cliffs. While improving accessibility is a goal for all trails in the area, steepness of grade in some areas will limit or prohibit accessibility improvements to a degree that will meet the new guidelines (i.e., Red Rock Point trail).

Safety edging will be installed to a minimum 32 inches in height for distant view overlooks (Uncle Tom's, Sunset Point, Crystal Falls) and 42 inches in height for view areas that require you to look down (Brink of the Upper Falls, Brink of the Lower Falls) to see the view or feature. Edging and safety barriers will be constructed of a variety of materials including wood, metal, stone, and deadfall (tree trunks and branches). Heavily used overlooks that have the highest degree of danger will also have the highest degree of safety designed into the rail or edging system.

The parking areas at Brink of the Upper Falls and Uncle Tom's will be reconfigured to meet current codes and turning radii, increasing efficiency and capacity. Generally, the new footprint of these parking areas will remain within their existing footprints, however, some expansion beyond the existing footprint will occur.

Some drainage culverts across roads (Brink of the Upper Falls entrance road), trails, and parking areas (Brink of the Upper Falls and Uncle Tom's) will be replaced. Some water, sewer, and electric lines will be replaced or updated near existing restroom buildings at Uncle Tom's and at Brink of the Upper Falls.

A hierarchy of new signs will be installed to help improve wayfinding.

Revegetation efforts will be completed to address social trails, informal parking, steep cut slopes, slope stabilization and erosion.

Water sources for this project will be either from treated water from fire hydrants in the canyon developed area, or from pumped water from the Yellowstone River near the Otter Creek

confluence located about three miles south of Canyon Junction or other sites on the Yellowstone River approved by the park's project representative.

If needed, a temporary office facility (trailer) will be erected in either the canyon government administrative area, within the Canyon Contractor Camp, or in an already existing NPS maintenance area (i.e., within an already developed/disturbed site). This trailer will be removed following completion of the project.

Construction staging, material stockpiling, and equipment storage will occur within the existing parking areas, within areas of the project that are proposed for rehabilitation, at the Grebe Lake Pit, the canyon administrative corral area, the canyon administrative area, and existing canyon maintenance areas. Areas used will be sited in previously disturbed areas and typically away from active visitor use areas. No new areas will be developed for construction staging.

Full visitor closure of up to two overlooks at a time will occur. Efforts will be made to schedule closures such that two overlooks of the same feature (such as the Upper Falls) will not be closed at the same time. An example would be Uncle Tom's overlook and Brink of the Upper Falls overlook. Closures of a single overlook could be up to the entire visitor season. Night work may occur, if it is determined that project sound does not impact nearby lodging units or campgrounds.

The use of motorized carts and ATVs or other small vehicles that would fit on the narrow trails will be used in construction. In some cases, larger construction equipment (e.g. small dozers, backhoes, front end loaders) may be needed in areas where larger quantities of earth and stone need to be moved. In some cases, large cranes may be needed to transfer building materials to overlooks or trail sections that would be difficult to access with other construction equipment.

Materials including stone and aggregate will be generated within the job site; purchased from commercial sources outside the park; obtained from existing stockpiles within existing maintenance storage and work areas within the park; obtained from ongoing road construction sites that require excavation of slopes to accommodate slightly wider roads; obtained from ditch cleaning activities from roadside rock fall catchment ditches within the park; obtained from rock readily available within existing NPS maintenance pits to allow for improved efficiency of the operation by removing the stone (as in leveling an existing work area); or obtained from existing areas used as dumping zones for asphalt and other construction debris to facilitate grading operations to rehabilitate these disturbed areas. Other commercially-sourced materials such as rails, logs, culverts, pipes, etc. will be purchased by the contractor from sources outside the park. Brush and logs used in erosion control will be generated from within the project area, or come from stockpiled sources within the park.

Investigations of the conditions below the ground surface are needed in order to properly design paving systems, foundations, and structures. Drilling to approximately 20-30 feet in depth (4-6 inch diameter holes) will be done to properly design footings or other elements of the design. In most cases truck-mounted drilling will occur within parking lots or on roads; in only a few instances would truck-mounted equipment be needed off roads (less than 100 yards). Most investigative holes for trails, overlooks, and trail reroutes will be completed using handheld augers to a depth of 4-6 feet and 1-2 inches in diameter.

#### Work to Occur At Various Locations:

*North Rim Trail.* The North Rim trail will have edge treatments including stone edging, log edging, low walls, and rails. Wide sections of trail (i.e., bump outs), will be created in five to ten areas that have good view opportunities of the canyon. Using these treatments, some of the overlooks on the North Rim trail will be redeveloped to better identify the limits of the overlook, and to address safety concerns. Surfacing of the overlooks, installing safety rail systems, and

conducting safety assessments of the location of existing trail in relation to the canyon edge will all be addressed. In most of these situations the surfacing will remain as native soil materials, which tend to be well drained, firm and stable in nature. Grades and widths will vary with that allowed by the natural terrain of the area. In approximately five to ten instances, minor reroutes of no more than 100 yards of the North Rim trail will occur to pull it back from the canyon edge; in other areas the trail could be located closer to the canyon rim with a better defined view area.

*Brink of the Upper Falls.* The access road to the Brink of the Upper Falls parking lot would be shifted to the south and widened from its existing 21 feet to 24 feet. An accessible pedestrian trail will be located on the north side of the road to the Crystal Falls overlook. A broken water drainage culvert on this entrance road will be repaired or replaced.

Some reconfiguration of the Brink of the Upper Falls parking lot will occur, increasing the size of the parking area by approximately 15% (0.18 acre). The restroom building currently located adjacent to the parking lot will be rehabilitated when funding permits.

The pedestrian route from the Brink of the Upper Falls parking lot to the Crystal Falls overlook will be regraded to improve accessibility. Three new resting/interpretive areas will be installed along this segment of paved trail; a low stone masonry wall, or stone masonry posts with a log rail suitable for sitting and resting, will also be constructed. The existing stone stairs that are parallel to the carriage road will be incorporated into the design and used in the main route to the existing lower viewing platform.

An existing overlook (located above the lower platform), will be made accessible, with a boulder barrier installed at its perimeter.

A new mid-level accessible overlook will be constructed that will provide views of the Brink of the Upper Falls from directly above the lowest existing overlook.

The existing stone stairs leading to the lower overlook platform will have small bump-outs, or alcoves, adjacent to the stairs; they will be constructed to allow for other pedestrians to pass, and for photo opportunities of the upriver views. These alcoves will be paved and have safety rails and will be sized for approximately five people.

A large stone masonry retaining wall located just above and upriver of the stairs to the lower viewing platform will be repaired.

The existing stone barrier wall located at the perimeter of the lower platform will be rehabilitated to ensure stability. This wall will have a rail system installed that ties into the existing boulders and stone. The existing asphalt surface of the overlook will be replaced. The new surface will be asphalt, concrete, flagstone, or pavers. Some seating, constructed of stone or log benches, will be developed at the backside of the viewing platform.

*Crystal Falls Trail/Overlook.* The existing trail from the entrance road to an informal overlook (about 375 feet in length), and the overlook itself will be formalized and made accessible. The trail connection and overlook will be paved to approximately 6 feet in width. A designated route from the existing Upper Falls parking area to the Crystal Falls/North Rim trail will be constructed. A trailhead parking lot may be constructed in the future, if increased use of this area warrants parking lot expansion.

*Brink of the Lower Falls.* Wayfinding will be improved with the implementation of additional and changed signage. New pedestrian striping will be added, and a new 50-foot section of trail will be installed from the south end of the parking lot to join with the North Rim trail. Slight shifts in trail alignment (up to 10 feet), will be constructed. An orientation area for visitors will be added adjacent to the beginning of the trail to the Lower Falls overlook, just off the parking lot.

Trail edges will be built up with edging or short retaining walls, to prevent eroded gravel and debris materials from falling onto the trail. This edging is anticipated to run almost the entire length of the Brink of the Lower Falls trail, from the parking lot to the overlook platform. The downhill side (fill side), of the trail will be better defined by placing stone, boulders, or logs at the edges of the trail. The trail surface will be stabilized by containing the trail tread material at the edges, or building small walls on either the cut or fill side of the trail. Drainage issues along the trail will be addressed with small culverts, ditches, or other features directing water off the trail and towards larger drainages into the canyon.

A new mid-level platform will be constructed between the larger lower main platform and the upper platform at the Brink of the Lower Falls overlook. A connecting stone stairway will join all three platforms. The existing barrier rails will be replaced with a system that meets current building codes; it will use materials such as native rock and stone and rails with non-reflective surfaces, reducing barrier rail visibility from views across the canyon or from other overlooks. The concrete surface of the overlook will be overlaid with concrete or asphalt.

*Red Rock Point.* The Red Rock Point overlook and trail will be rehabilitated. The existing asphalt trail will be regraded, resurfaced, and lined as needed at the edges to identify the trail extent. The existing boardwalk stairway will be removed and replaced with either a metal staircase that requires less maintenance, or stone stairs at grade. A new foot approach to the overlook may be constructed that will use a bridge (60-70 feet in length), spanning the ravine just north of the existing overlook. The existing overlook will not change from its existing location or size. If this bridge is constructed, a trail reroute of approximately 300-500 feet in length and 6 feet wide will be constructed on the north and west side of this ravine, in order to tie back into the existing Red Rock trail.

*Grandview Point to P Loop Trail.* Where needed, defining this 1,800 foot-long trail edge will be completed using stone and log elements to keep users on the trail tread. Placement of logs and brush will keep users from short-cutting switchbacks and curves in the trail. Trail tread will be maintained to allow for proper water drainage from the trail, and to ensure a near-level surface.

*Inspiration Point.* The existing stairway and platform will be replaced with a 6-foot wide walkway (approximately 800 feet in length), that uses switchbacks to allow for a shallower grade and increased accessibility. Surface material will be asphalt, concrete, or pavers. Five viewpoints will be constructed along this trail. One of these overlooks will be accessed by a short spur trail about 90 feet in length and 6 feet wide. If needed, handrails along one or both sides of this trail will be added. The proposed walkway will be of a design similar to other formalized trail sections on the North and South Rims. Local stone (or similar), will be used at the trail edges to construct short walls, containing both soil and pedestrians. A more direct 6-foot wide stairway from the parking lot will be constructed that will shortcut a portion of this switchback trail. Two to five small pine trees will likely be removed in the vicinity of the lowest viewing platform to allow for a 180-degree view of the Yellowstone River and Canyon. A new vault toilet (single), will be installed in the forested island contained within the existing loop road of the parking area. An area of about 100-150 square feet of mature lodgepole pine trees will be cut and removed; grading of this area will be required to construct a level pad for the vault toilet. Excavation to about 8 feet in depth will be required to install a concrete vault for the toilet, located directly above the vault.

*Uncle Tom's.* The parking area at Uncle Tom's will be reconfigured for increased efficiency, large vehicles, and improved pedestrian movements. A bus unloading zone will be provided. Accessible parking spaces will be designated, and a central pedestrian route will be marked and identified from the parking area to a visitor orientation area adjacent to the parking lot.

The two existing overlooks of the Upper Falls will be reconstructed to create bi-level, terraced viewing platforms. A new viewing platform will be constructed just north of the existing Upper Falls overlooks with a view of Crystal Falls across the canyon. A few trees or branches directly in front of this proposed overlook will be removed to allow an unobstructed view of the falls.

About 200 feet of the South Rim trail will be rerouted to make it accessible to the Sunset Point overlook. Clearing limits of about 8 feet wide will be required to construct this 6 feet wide rerouted trail segment.

The existing metal staircase will have continuing maintenance performed in order to extend its useful life. Maintenance items will include, but are not limited to: re-welding of joints and connections, painting elements to prevent corrosion, replacement of bent stairs and rails, mitigation of rust, inspections to ensure structural stability, and other similar maintenance tasks.

*Sunset Point Overlook.* The existing Sunset Point overlook, with its steel I-beam supports will be removed and a new two-tiered platform will be constructed on the canyon edge just above it. The area of the existing overlook will be rehabilitated. The new overlook will be enclosed by stone, to contain visitors and provide for safety. The trail accessing this overlook from the Uncle Tom's overlooks will require some minor reroutes to reduce grades (to comply with accessibility standards). One of two options will be used for the final 350 feet of trail. The first will add stairs along the existing trail alignment on the final descent to Sunset Point overlook. The second option will create a large sweeping layout of the trail (approximately 500 foot), that will include short sections of boardwalk to span a wetland located prior to the overlook. A short section of trail will be rerouted to the South Rim trail heading south, and an equal section of trail will be obliterated in an area where a number of social trails have developed that are causing damage to vegetation near the river in this area. Each option includes paved surfacing of the trail as it extends from Uncle Tom's overlook. All obliterated trail sections will be rehabilitated.

*South Rim Trail.* Existing overlooks on the 2.5 mile South Rim trail will be redeveloped to better identify the limits of existing viewing areas from the trail, and address safety concerns. Surfacing of these overlooks, safety rail systems, and location of existing trail in relation to the canyon edge will be addressed. Minor reroutes (in approximately five to ten locations), of the South Rim trail to pull it back from the canyon edge will occur. Most of these trail reroutes will be 100 feet or shorter in length.

## **Mitigation Measures**

### General Construction

- Ground disturbance will be minimized in all aspects of the construction process. Previously disturbed sites will be used whenever possible to avoid new impacts. Construction-related sites will be kept separate from core visitor use and residential areas to the greatest extent possible. All disturbed sites used for construction-related administrative uses and/or activities will be returned to pre-construction conditions.
- Construction zones will be identified and fenced with construction tape, snow fencing, or some similar material prior to any construction activity. Fencing will define the construction zone and confine activity to the minimum area required for construction. All protection measures will be clearly stated in the construction specifications and workers will be instructed to avoid conducting activities beyond the construction zone as defined by the construction zone fencing.
- Fugitive dust generated by construction will be controlled by spraying water on the construction site, if necessary. Any water used for dust control will be taken from hydrants in park administrative areas, or a local source approved by the park project representative.

- Any water pulled from the Yellowstone River drainage to be used for dust control or other construction purposes, such as wash water for aggregate or asphalt production, will not be used where it could potentially run into any tributaries other than the Yellowstone River.
- To minimize possible petrochemical leaks from construction equipment, the contractor will regularly monitor and check construction equipment to identify and repair any leaks.
- Fuel will be stored in fuel trucks or above-ground storage tanks; all fuel storage will be in staging areas. Refueling will take place in staging areas and might occur at material sites. Some stationary equipment (cranes, trackhoes, pumps), may require fueling within 150 feet of streams. In these cases, special precautions (e.g., spill kits, training of operators in fuel containment), will be put in place to minimize the risk of fuel spills.
- Construction workers and supervisors will be informed about the special sensitivity of the Park's values, regulations, and appropriate housekeeping (trash storage and disposal, securing lunches, food, and beverages, and keeping a clean jobsite).
- The NPS project manager will be responsible for ensuring that the project remains within the construction limits.

#### Soils

- To minimize the amount of ground disturbance, staging and stockpiling areas will be in previously disturbed sites, and away from visitor use areas to the extent possible. All staging and stockpiling areas will be returned to pre-construction conditions following construction.
- Construction zones will be identified and fenced with construction tape, snow fencing, or some similar material prior to any construction activity. The fencing will define the construction zone and confine activity to the minimum area required for construction. All protection measures will be clearly stated in the construction specifications and workers will be instructed to avoid conducting activities beyond the construction zone as defined by the construction zone fencing.
- Topsoil conservation measures will be employed prior to construction, in accordance with Yellowstone's Vegetation Management Guidelines. Topsoil will be stripped and replaced wherever possible to enhance revegetation following the construction phase.
- Disturbed soils are more susceptible to erosion and, until revegetation takes place, standard erosion control measures, such as silt fences and/or sandbags, will be used to minimize potential soil erosion.

#### Vegetation

- Disturbance to existing vegetation at the site will be avoided to the greatest extent possible.
- Revegetation and recontouring of disturbed areas will take place following construction and will be designed to minimize the visual intrusions. Revegetation efforts will strive to reconstruct the natural spacing, abundance, and diversity using native species. All disturbed areas will be restored as nearly as possible to pre-construction conditions shortly after construction activities are completed (see Appendix A in the EA – Yellowstone's Revegetation Guidelines).
- The potential for proliferation of non-native plants during construction operations is a concern. Weed control methods will be implemented to minimize the introduction of noxious weeds (see Appendix A in the EA – Yellowstone's Revegetation Guidelines).

- Contractors will be required to adhere to proper construction vehicle precautions, including washing of equipment before it enters the park. Reclamation and revegetation efforts will follow Yellowstone's Revegetation Guidelines for construction, which also includes procedures for long-term management of non-native vegetation (see Yellowstone Revegetation Guidelines in Appendix A of the EA).
- The Park's Branch of Resource Management will monitor and control any new exotic plant infestations that might occur and are associated with this project.
- Equipment used will be cleaned using NPS protocols for reducing the spread of any non-native plant species.
- All wheeled conveyance over wetlands will require that plywood planking be laid down to alleviate any compaction concerns, and the number of trips required will be minimized to the least number required to complete the task.

#### Wildlife

- All outdoor food storage will adhere to current park policies to ensure no unattended food sources are available to wildlife.
- Construction workers and supervisors will be informed about special status species. Contract provisions will require the cessation of construction activities if a species are discovered in the project area, until park staff re-evaluates the project. This will allow modification of the contract for any protection measures determined necessary to protect the discovery.
- All project-related employees, such as contract and government construction employees, will be given orientation about working in grizzly bear country and on how to avoid disturbing or encountering bears and how to minimize unavoidable effects or encounters. Orientation will include information about park regulations regarding food storage, disposal of garbage and other bear attractants, safety measures, and approaching or harassing wildlife.

#### Birds

- Within the proposed construction area, from Chittenden Bridge to Inspiration Point, the typical dates for nesting birds is between May 1 and July 31. Per the Migratory Bird Treaty Act, no cutting of trees, vegetation clearing, grubbing, or other site preparation and construction activities which could affect nesting birds will occur between those dates, unless qualified biologists from Yellowstone National Park survey the area prior to any of these listed activities and confirm that no nesting birds are found in the area.

#### Federally Threatened, Endangered and Special Status Species

- Construction workers and supervisors will be informed about federally threatened, endangered and special status species. Contract provisions will require the cessation of construction activities if a species were discovered in the project area, until park staff re-evaluates the project. This will allow modification of the contract for any protection measures determined necessary to protect the discovery.

#### Soundscapes and Air Quality

- To reduce noise and emissions, construction equipment will not be permitted to idle for more than 10 minutes while not in use as per the Superintendent's Compendium, which is based on 36 CFR 5.13 (Nuisances).

## Historic Resources

- Designs for new structures within the boundaries of the landmark and historic districts, or in close proximity to the districts, will be executed to be sensitive to the cultural and natural environment. The NPS will identify the districts' character-defining features in its design planning process, and will use a project-specific design that recognizes the unique visual and cultural features that qualified the districts for listing in the National Register of Historic Places.
- New construction will be consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties, and the Secretary of the Interior's Standards for Rehabilitation & Illustrated Guidelines on Sustainability for Rehabilitating Historic Buildings. Any construction activity with the potential to affect historic properties will be contingent upon completion of Section 106 responsibilities, including consultation with the Wyoming State Historic Preservation Office (SHPO).
- Should construction unearth previously undiscovered cultural resources, work will be stopped in the area of the discovery and the park staff will consult with the Wyoming SHPO and the Advisory Council on Historic Preservation, as necessary, in accordance with 36 CFR 800.13 (Post Review Discoveries). In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990) and NPS Director's Order 28 will be followed.
- The NPS will ensure that all contractors and subcontractors are informed of the penalties for illegally collecting artifacts or intentionally damaging archeological sites or historic properties. Contractors and subcontractors will also be instructed on procedures to follow in case previously unknown archeological resources are uncovered during construction.
- Should operations uncover or find any paleontological remains, operations will immediately be suspended and the park geologist notified. Any paleontological remains found within the project area are the property of the NPS and will be removed only by NPS staff or designated representatives.
- Small structures, such as vault toilet(s), information kiosk(s), and a shade structure, will be placed in/near parking areas and away from the canyon rim in order to avoid visibility from other contributing overlooks and trails.
- This project will be similar to the rehabilitation project implemented at Artist Point Overlook, which received Wyoming SHPO concurrence (SHPO file #0307JPP005). This rehabilitation maintained the NPS Rustic Style philosophy, utilizing natural stone materials as much as possible, blending built and natural features, and conforming to the 1930s layout.

## Archeological Resources

- Should construction unearth previously undiscovered cultural resources, work will be stopped in the area of any discovery and the park will consult with the Wyoming SHPO and the Advisory Council on Historic Preservation, as necessary, according to 36 CFR 800.13 (Post Review Discoveries). In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990) will be followed.
- The NPS will ensure that all contractors and subcontractors are informed of the penalties for illegally collecting artifacts or intentionally damaging paleontological materials,

archeological sites, or historic properties. Contractors and subcontractors will also be instructed on procedures to follow in case previously unknown paleontological or archeological resources are uncovered during construction.

- The portions of archeological site 48YE637 adjacent to the Uncle Tom's overlook, which remain unevaluated, will be fenced off for the duration of the project and will not be disturbed.
- Prior to any investigative borings, archeological surveys will be completed.

#### Geothermal Resources

- It is the contractor's responsibility to stop work in the immediate vicinity and contact the park geologist if any of the following conditions are encountered: 1) a pre-existing hole in the ground the size of a basketball, or larger; 2) standing or flowing water, either hot or cold; 3) any concentrations of either carbon dioxide or hydrogen sulfide gas are measured; 4) a red clay layer is encountered during excavation; or 5) ground temperatures above 80 degrees Fahrenheit are measured in early morning.
- Prior to any investigative borings, contractors will ensure the drilling plan is reviewed by the park geologist and will ensure the previous mitigation measures regarding geothermal concerns are adhered to. Work will be stopped if any of the five conditions listed above are encountered.

#### Visual Quality

- Colors, textures, and reflectivity of materials used to accomplish this project will be chosen to keep them as unobtrusive as possible, especially when viewed from across the canyon.

#### Visitor Use and Experience

- As much as possible, all construction activities will be conducted during daylight hours, to avoid loud and disruptive work at night.
- To minimize the potential for impacts to park visitors, variations on construction timing will be considered. One option includes conducting the majority of the work in the off-season (winter), or in shoulder seasons. Another option includes implementing daily construction activity curfews, such as not operating construction equipment between the hours of 6 PM to 7 AM in summer (May – September), and 6 PM to 8 AM in the winter (October – April). The National Park Service will determine this in consultation with the contractor.

#### **Alternatives Considered**

Two alternatives were evaluated in the EA including the no action alternative and one action alternative. Under Alternative A, No Action, there would be no improvements or changes to the existing trails, overlooks, and associated parking areas at the canyon rim. Alternative B, Upgrade and Improve Canyon Rim Trails, Overlooks, and Associated Parking Areas, is the preferred alternative and NPS' Selected Action, as described in the previous section.

#### **Environmentally Preferable Alternative**

According to the Council on Environmental Quality (CEQ) regulations implementing NEPA (43 CFR 46.30), the environmentally preferable alternative is the alternative "that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources. The environmentally preferable alternative is identified upon consideration and weighing by the Responsible Official of long-term environmental impacts against short-term impacts in evaluating what is the best protection of these resources.

In some situations, such as when different alternatives impact different resources to different degrees, there may be more than one environmentally preferable alternative."

Alternative B (Upgrade and Improve Canyon Rim Trails, Overlooks, and Associated Parking Areas) is the environmentally preferable alternative for several reasons. The rehabilitated overlooks and trails will require much less time to maintain than the existing infrastructure, in the long term. While there will be some new ground disturbance that will damage the previously undisturbed elements of the biological and physical environment, the design rehabilitates the overlooks and trails and helps stunt the deterioration of the historic fabric that continues over time. The footprint of the existing overlooks and trails needs only minor adjustments to the original design to address safety issues and to improve accessibility, thereby reducing impacts to previously undisturbed lands as much as possible. The design of the new improvements (rails, boulder edges), will meet the tenets of the original design intent of keeping these viewing areas as invisible as possible when viewing from across the canyon. This alternative includes improving accessibility and improving safety measures to protect the public, while increasing the availability of this experience for visitors to the park. Finally, this alternative maintains, preserves, and improves the historic experience far into the future, a historically significant experience for many of the visitors to the park. For these reasons, Alternative B causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources, thereby making it the environmentally preferable alternative.

By contrast, Alternative A (No Action) is not the environmentally preferable alternative because, although there would be no construction or ground disturbing activities that would damage previously undisturbed elements of the biological and physical environment, the existing overlooks and trails are not sustainable in the long term. Many safety issues, such as uneven trail surface, poor edge definition at trail edge, lack of edge barriers or barriers of improper height would not be addressed. In addition, this alternative would not formalize the existing social trails or encourage people to stay on one trail and minimize damage to sensitive resources, or improve safety for the visitor. Last, this alternative would allow the historic overlooks, important historic properties, to deteriorate.

### **Why the Selected Action Will Not Have a Significant Effect on the Human Environment**

As defined in 40 CFR §1508.27, significance is determined by examining the following criteria:

***Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.***

Implementation of the Selected Action will result in some adverse impacts; however, the overall benefit of the project, particularly to cultural resources, human health and safety, and visitor use and experience, outweighs these negative effects. The adverse effects are summarized as follows. Minor adverse impacts from construction activities will result in the loss of approximately 2 acres of soils and vegetation and 0.07 acres of wetlands from ground disturbing activities. These activities include the installation of boardwalk, expanding parking and road radii, and shifting roads and trails from their centerline. Approximately 2 acres of wildlife habitat will be lost following infrastructure rehabilitation and improvements. Displacement of wildlife during construction activities will be the primary impact. Impacts of this project on wildlife will be negligible to minor and adverse. Most elements of the Selected Action are screened from cross-canyon views, and those that are visible use materials that are non-reflective, and of colors that will blend with their background. Great effort will be taken to use construction materials that will be compatible and fitting with the existing facilities of the area. Minor, temporary, adverse impacts to visitor use and experience will result from increased noise and dust associated with

construction activities. Rehabilitation of the overlooks and trails will have long-term, minor, direct and indirect, beneficial impacts (no adverse effect under Section 106), on cultural resources. The Wyoming SHPO, Yellowstone National Park staff, and designers at Otak (the A&E design firm), have worked collaboratively to avoid adversely affecting historic structures, districts, and sites through design and materials selection.

The overall benefit of implementing the Selected Action is that cultural resources, human health and safety, visitor use and experience, and park operations will be improved to a minor-moderate degree because the structural and safety deficiencies associated with the current infrastructure will be remedied with its rehabilitation, such that it meets current health, safety, and accessibility standards. The rehabilitated trails, overlooks, parking, and associated infrastructure will also allow increased staff hours to be used for other duties, as these improvements would likely continue to function well for years with limited maintenance activities by employees.

***The degree to which the selected action affects public health or safety***

The Selected Action will have an overall beneficial effect on public health and safety, particularly for the park's visitors who will regularly use the rehabilitated trails and overlooks. The rehabilitated facilities will minimize many of the current unsafe conditions associated with the existing uneven pavement, rotted log rails, poorly defined trail edges, continual deposition of gravel onto steep asphalt surfaces from erosion. Improved turning radii in parking areas and on one road segment will provide a safer environment for the park's visitors.

***Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas***

The Selected Action will not impact unique characteristics of the area including park lands, prime farmlands, wild and scenic rivers, or ecologically critical areas; these resources do not exist in the project area. The Selected Action will impact wetlands and historic structures to a negligible to minor degree, as discussed previously and later in this document.

***The degree to which the effects on the quality of the human environment are likely to be highly controversial***

Throughout the environmental process, the proposal to rehabilitate the canyon rim overlooks, trails and some associated parking was not highly controversial, nor are the effects likely to generate future controversy. This conclusion is based on the low number of comments received during the public scoping period and EA review period, and the positive nature of the comments in regards to the project.

***The degree to which the possible effects on the quality on the human environment are highly uncertain or involve unique or unknown risks***

The effects of rehabilitating the overlooks, trails, parking areas are fairly straightforward and do not pose uncertainties. The environmental process has not identified any effects that may involve highly unique or unknown risks.

***The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration***

The Selected Action will not set a precedent for future actions with significant effects, nor does it represent a decision in principle about a future consideration.

***Whether the action is related to other actions with individually insignificant but cumulatively significant impacts: Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.***

Cumulative effects were analyzed in the EA and no significant cumulative impacts were identified.

***The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.***

In accordance with Section 106 of the National Historic Preservation Act, park staff engaged in early consultation with the Wyoming SHPO on the designs of the trails, overlooks, parking, and minor structures. In a letter to the Wyoming SHPO dated, August 18, 2015, park staff documented a finding of "no adverse effect" to the Grand Canyon of the Yellowstone Historic District, the Grand Loop Road Historic District, and the North Rim Drive. In a letter dated September 11, 2015, the Wyoming SHPO concurred with park staff's finding of "no historic properties adversely affected."

***The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.***

In accordance with Section 7 of the Endangered Species Act, park staff mailed a letter to the U.S. Fish and Wildlife Service, Wyoming Ecological Services Field Office (USFWS), on September 3, 2015, asking for concurrence with the park staff's determination that the preferred alternative (Alternative B) "may affect, but not likely to adversely affect" threatened grizzly bears or gray wolves, and that the project will have "no effect" on Canada lynx and Canada lynx critical habitat. In a letter dated September 23, 2015, the USFWS concurred with the determination.

***Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment***

The action will not violate any federal, state, or local laws or environmental protection laws.

### **Public Involvement and Native American Consultation**

External scoping was initiated in September 2014 with the distribution of a scoping letter to 169 interested parties to inform the public of the proposal to rehabilitate the overlooks, trails, and some associated parking along the rim of the Grand Canyon of the Yellowstone River. A press release was also sent to local news organization and the public was given until October 2014 to comment on the proposed project. The EA was made available for public review and comment during a 30-day period ending September 16, 2015. To notify the public of this review period, a postcard was mailed to stakeholders and interested parties, and a press release was distributed to approximately 200 media outlets, numerous local chambers of commerce, local visitor centers, public officials, social media, and posted on the park's website. Copies of the document were sent to the USFWS and the Wyoming SHPO for consultation and a copy was posted on the NPS PEPC website at <http://parkplanning.nps.gov/CanyonOverlooks>. A total of 20 individuals submitted correspondence that included 21 substantive comments. The vast majority of these comments were in favor of Alternative B (the Selected Action). Substantive comments centered on 8 topics: bathrooms, construction closures, maintainability, nesting birds, visual aesthetics, safety, circulation, and alternative modes of transportation including bicycles. These

comments are addressed in the "Response to Comments" attached to this FONSI. The FONSI, Errata Sheets, and Response to Comments will be posted on PEPC and made available to all commenters. Consultation letters were mailed to 73 tribal members of Yellowstone's 26 associated tribes in October 2014 to solicit concerns and comments for the proposed project. The same tribal members were sent a second letter in September 2015 notifying them of completion of the EA and soliciting any comments or input on the project. The park did not receive any comments from Native American tribes.

### Conclusion

As described above, the Selected Action does not constitute an action meeting the criteria that normally require preparation of an environmental impact statement (EIS). The Selected Action will not have a significant effect on the human environment. Environmental impacts that will or could occur are limited in context and intensity, with generally adverse and beneficial impacts that range from localized to widespread, short- to long-term, and negligible to moderate. There are no unmitigated adverse effects on public health, public safety, federally listed threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any federal, state, or local environmental protection law.

Based on the foregoing, NPS has determined that an EIS is not required for this project and thus will not be prepared.

Approved:



Sue E. Masica

Regional Director, Intermountain Region, National Park Service

9/24/15  
Date

# Errata Sheets

## Canyon Rim Overlooks & Trails Rehabilitation Yellowstone National Park

According to NPS policy, substantive comments are those that 1) question the accuracy of the information in the EA, 2) question the adequacy of the environmental analysis, 3) present reasonable alternatives that were not presented in the EA, or 4) cause changes or revisions in the proposal.

Some substantive comments may result in changes to the text of the EA, in which case, they are addressed in the *Text Changes* section of the Errata Sheets. Other substantive comments may require a more thorough explanatory response and are addressed in the *Response to Comments* section. NPS responds to all substantive comments in either or both of these sections.

During the 30-day public review and comment period of the EA 20 pieces of correspondence were received. Of the comments contained in the correspondence, 21 are considered substantive. Substantive comments for this EA centered on 8 topics: bathrooms, construction closures, maintainability, nesting birds, visual aesthetics, safety, circulation, and alternative modes of transportation including bicycles. These concerns resulted in no changes to the text of the EA and are explained more thoroughly in the *Response to Comments* section.

### Text Changes

While the interdisciplinary team did have discussion on the appropriateness of promoting bicycle use in the Canyon area, it was not discussed in the EA. Changes to the text of the EA include the following:

#### Page 32, Under Alternatives Considered and Dismissed

Bicycling use was considered by the interdisciplinary team. This use was not considered to be appropriate for the Canyon area at this time. Reasons included the potential for negative wildlife/human interactions, safety concerns with bicycle use on pathways or trails in close proximity to the steep canyon edge, adverse bicycle/pedestrian interactions, and the lack of present road shoulders of appropriate width on the Grand Loop Road. While exploring all options for reducing automobile traffic is fully supported, and increased bicycle use of the area was considered, the interdisciplinary team did not feel that its use was appropriate at this time due to a lack of infrastructure (wider trails and road shoulders) and potential safety concerns from bicycles approaching quickly on blind curves where they might encounter either large wildlife, unsuspecting pedestrians, or steep drop-offs adjacent to the trail.

### Response to Comments

**Comment 1** – Raise the entrance fees to help offset the cost.

**Response 1** – *Funding for this project is anticipated to come from a combination of private fundraising, fee system money. Raising park entrance fees would not guarantee that the money from this source could be used for this project. Entrance fee money goes into a system where projects and parks compete on the merit of the project and eligibility for this funding.*

**Comment 2** – The asphalt should be removed from the trails in favor of hard pack dirt. These would be easier to repair and more comfortable to walk on. Pot holes in the asphalt are dangerous and more difficult and expensive to maintain.

**Response 2** – *Most of the trails within the project area that are currently hard-packed native soils will remain as such. Many of the trail surfaces in the closest proximity to the most-used overlooks have been historically surfaced with asphalt. Native soils with very high use tend to require a higher degree of maintenance to keep the surfaces even and prevent the trail surface from becoming dished, as pedestrian use casts the material to the sides of the trail.*

**Comment 3** – The opportunity cost of doing this project versus similar projects in Yellowstone which may be more urgently needed is not addressed. Planners should consider whether funds for the Canyon Rim Overlook project might have a larger and more immediate impact on safety and environmental protection if diverted to Grand Prismatic Spring.

**Response 3** – *The Canyon area of the park is one of the most heavily visited, receiving over two million visitors on average per year. It has been 50 years since the last extensive upgrades were completed in the mid-1960s. Much of the funding anticipated to be used will be from private donations collected specifically for this project through our fundraising partners. Grand Prismatic spring is located in the middle geyser basin and outside the scope of this project. Visitor safety issues and resource damage concerns from social trails located to the west of the spring have prompted discussions by park staff to start formulating ideas to address these issues. The opportunity cost of one project versus another are typically discussed through management and staff meetings where park priorities, needs, and issues are debated between the various park divisions (e.g., maintenance, resources, education, visitor protection).*

#### Yellowstone Needs More Bathrooms

**Comment 4** – YNP needs more bathrooms. Please add more toilets and have them emptied more often during peak season.

**Response 4** – *An additional vault toilet is proposed to be installed adjacent to the parking area at Inspiration Point. The flush toilet facilities adjacent to the parking areas at both the Brink of the Upper Falls and Uncle Tom's will be rehabilitated. The park's pumper truck (used in emptying vault toilets), operates daily throughout the park.*

#### Closures During Construction

**Comment 5** – There should only be simultaneous closures of one site on the north rim and one on the south at any time during peak visitor season, to avoid extra congestion at the remaining sites.

**Response 5** – *See the response to comment 6 below.*

**Comment 6** – Space the work out so as to not adversely affect visitors' access.

**Response 6** – *Page 21 of the EA states: "Full closure of up to two overlooks at a time would occur. Efforts would be made to schedule closures such that two overlooks of the same feature (such as the Upper Falls) will not be closed at the same time."*

**Comment 7** – Do not preclude visitors from using the areas during construction. There are far too many areas closed off in Yellowstone, we do not need any more.

**Response 7** – *There are a number of overlooks and trails along the Grand Canyon of the Yellowstone River. No more than two overlooks may be closed to the public at any given time for this project. For safety reasons (i.e., Occupational Safety and Health Administration standards), visitors will not be permitted within construction zones.*

**Comment 8** – The documents states "As much as possible, all construction activities would be conducted during daylight hours, to avoid loud and disruptive work at night." while this is a good idea on the North Rim, which is near habitation areas such as the Lodge, campground and employee housing, the South Rim is quite removed from these habitation areas and is visited more heavily than the north rim, so construction could occur at night along the South Rim.

**Response 8** – *While it may be possible to work at night on some portions of the project, the steep drop offs that occur in very close proximity to the work areas will likely preclude night work due to safety reasons. It is possible for some night work to occur in areas such as parking lots or other areas away from the canyon edge, campgrounds, or lodges. Night work requests will be reviewed on a site-by-sites basis if they were to come in. All night work requests will be evaluated as to potential impacts to park resources, as well as visitors.*

**Comment 9** – It would be best to conduct the majority of the work in the off-season (winter) or shoulder seasons.

**Response 9** – *Winter comes early and stays late at the canyon. The construction season is short, especially for activities that require grading of the ground surface as this one will. By constructing only in the shoulder seasons, the project would be pushed into extra years, which would greatly increase project constructability issues and costs. As noted in the EA, full closure of up to two overlooks at a time will occur and efforts will be made to schedule closures such that two overlooks of the same feature (such as the Upper Falls), will not be closed at the same time. As a result, visitors will still be able to experience the canyon at any time during construction of this project.*

#### Nesting Birds

**Comment 10** – The typical dates for nesting birds is between May 1 and July 31. I would like to insist that any construction in that area that would produce loud noise not be allowed in that time period.

**Response 10** – *Page 30 of the EA states no cutting of trees, vegetation clearing, grubbing, or other site preparation and construction activities which could affect nesting birds would occur between May 1 and July 31 unless qualified biologists from Yellowstone National Park survey the area prior to these dates. As loud construction noises could affect nesting birds, this would be considered as an activity that needs to be avoided, or needs a survey prior to these noise-producing activities to ensure that no nesting birds are within the zone of disturbance.*

#### Visual Aesthetics

**Comment 11** – When you repair the log trails and bridges you should use logs that have been treated for weather so the appearance doesn't change so you can still retain the natural look.

**Response 11** – Page 17 of the EA states: "This alternative attempts to incorporate materials and workmanship techniques that reflect the historic Rustic Style of many park structures, while addressing the maintenance, safety, and durability of any new elements." As the project area is located within a historic district, construction styles, techniques, and materials will be chosen such that the finished product will fit within the historic and natural elements of the canyon.

### Safety

**Comment 12** – If wildlife is a risk to visitors consider enclosure fencing of the trails and walkways to help protect visitors.

**Response 12** – While fencing of trails and walkways would help to keep wildlife and visitors separate, it may have unintended effects on both wildlife and the visitor. Fences act as barriers to wildlife movements, create visual impacts, sometimes give people a false sense of security, and remove some elements of being able to experience your surroundings. Yellowstone has taken the approach that wildlife have lived here for thousands of years, and that the visitor, through education, can learn to safely interact with wildlife by giving it the space it needs, being aware of their surroundings, practicing proper wildlife safety protocols, and anticipating when and where wildlife encounters may occur. Safety rails will be installed at many overlooks and in areas of close proximity to known hazards, but will not be used in this project to separate wildlife and visitors.

**Comment 13** – Overlooks need to have an enclosed fence to protect the visitors from injury from a fall but more so for the young (children) visitors.

**Response 13** – The second objective, listed on page 9 of the EA states: "Provide a safe and healthy experience for those venturing for a view of the canyon that meets current health and safety standards and structural requirements." There are a range of experiences to be enjoyed along the canyon rim and from many of the overlooks. It is the intent of this project to improve safety for visitors while allowing them to interact with the natural environment Yellowstone offers. Yellowstone is a vast park, with over 2.2 million acres, and visitors are encouraged to experience it. It is not the intent of this plan to eliminate all hazards for those who visit, but rather to ensure that they learn and be aware of what the hazards are, and to offer protections that meet current codes and standards to ensure that the most popular, and most accessible, features can be beheld in a safe and enjoyable manner.

### Circulation

**Comment 14** – Please consider changing the direction of the North Rim Drive so that cars enter at Canyon Village and exit at the Chittendon Bridge. I feel it would enhance visitor appreciation of the falls to see them from a distance first.

**Response 14** – The flow of the North Rim Drive was historically one-way traffic from the Canyon Village to Inspiration Point and working towards the Lower Falls. The traffic flow was changed in 2009 to address congestion of traffic that occurred, as the first overlooks encountered had the smallest parking lots with the largest lot (Brink of the Lower Falls), occurring last in the progression. While the present progression may not be ideal for everyone, it has helped alleviate the congestion and frequency of traffic jams that occurred in the past.

## Alternate Modes of Transportation

**Comment 15** – Parking lot expansion is an unsustainable choice. A policy of simply adding more parking is unsustainable.

**Response 15** – *The parking lot footprints of the redesigned lots are very similar to the existing in both size and shape. The changes that occur are from changing turning radii for larger vehicles using the lots, more efficient parking space layout, accommodating large vehicle parking, and improving pedestrian flow through these lots. Increased parking capacity is mostly the result of increased efficiency, rather than from parking lot growth or expansion. Page 22 of the EA states: "The Brink of the Upper Falls parking lot would expand by 0.18 acres, and an increase of 6-8 automobile spaces would occur." Page 26 of the EA states: "Uncle Tom's parking lot would expand by 0.23 acres and a negligible increase in parking is anticipated."*

**Comment 16** – There is no consideration in the document of adding a shuttle from the large parking lot at the Canyon Village Visitor Center/Campground/Lodge that would serve the main features of the Grand Canyon of the Yellowstone.

**Response 16** – *While this project does not consider the implementation of a shuttle system for the Canyon area, it does advance some features that would make a shuttle system easier to implement in the future. The parking lots will be redesigned to accommodate larger vehicle turning radii and construct parking spaces for large vehicles which are currently lacking. A bus pullout will be added at the Brink of the Upper Falls and Uncle Tom's parking areas to allow debarking of passengers. Most shuttle systems require some type of subsidy in order to operate, and presently there is no identified funding source for purchasing rolling stock (buses) or operating expenses.*

**Comment 17** – The parking lot configurations in this plan should accommodate future shuttle service.

**Response 17** – *The parking lot changes proposed in the Selected Action could likely accommodate future shuttle service if the park chooses to evaluate this type of service in the future. See response to Comment 16.*

## Consider Bicycling

**Comment 18** – A significant problem with this EA is the failure to consider the needs and opportunities of park visitors that bicycle or might like to bicycle some portion of their park visit. The NPS needs to include an assessment bicycling access and plan better bicycling accommodation into the Canyon Rim project. The project should be revised to include appropriate consideration of bicycle access and accommodation. Additionally recommend two objectives be added on page 9: a. Incorporate bicycle access as a safe and encouraged option to visit Canyon Rim. b. Study a Canyon Bicycle Share system to encourage non-auto visits from Canyon Village area, to reduce impacts of increasing motor vehicle use.

**Response 18** – *Bicycling use was considered by the interdisciplinary team. This use was not considered to be appropriate for the canyon area at this time. Reasons included the potential for negative wildlife/human interactions, safety concerns with bicycle use on pathways or trails in close proximity to the steep canyon edge, adverse bicycle/pedestrian interactions, and the lack of present road shoulders of appropriate width on the Grand Loop Road. While exploring all options for reducing automobile traffic is fully supported, and increased bicycle use of the area*

was considered, the interdisciplinary team did not feel that its use was appropriate at this time due to a lack of infrastructure (wider trails and road shoulders) and potential safety concerns from bicycles approaching quickly on blind curves where they might encounter either large wildlife, unsuspecting pedestrians, or steep drop-offs adjacent to the trail.

**Comment 19** – Goodyera orchids occur very close to a trail in the Canyon area. While these are not an endangered orchid, they are not common in Yellowstone. While I have not found orchids close to the particular trails and roads in this plan, I would like to see the botanists have a look prior to the work. I see no evidence in the documents that the botanists have been asked to do even a cursory survey of the areas where trails and roads will be re-aligned and parking lots will be expanded.

**Response 19** – Thank you for your interest in the park flora. Goodyera, or rattlesnake-plantain, orchids are not common in the park. There is one species of Western rattlesnake-plantain (*Goodyera oblongifolia*) that is known to occur in the park. The park staff maintains a rare plant list based on the state lists, herbarium records, and park botanist knowledge. While Goodyera orchids are uncommon, they are not on the rare plant list because they are not rare enough to warrant concern.

**Comment 20** – It would be good to have the archeologists have a look at the areas where trails and roads will be re-aligned, PRIOR to initiating work.

**Response 20** – Many archeological surveys have been completed in the past along the canyon rims. A search of the surveys found that the project would not impact these sites. Archeology was therefore dismissed as an impact topic in the EA. Page 31 of the EA lists four mitigation measures that will ensure known cultural resources are protected, and if previously undiscovered cultural resources are found, they would be evaluated by the proper professionals and the Wyoming SHPO would be consulted.

**Comment 21** – There may be some oral history in some of the tribes with respect to Canyon, and some attempt to collect that might be helpful.

**Response 21** – Past ethnographic research indicated that the canyon is significant to some of the associated tribes. This project would not impact or change that significance. Park staff consulted with the 26 associated tribes on this project, and did not receive any responses. Native American consultation is discussed further on page 14 of the FONSI.

## Appendix – Non-Impairment Finding

National Park Service's *Management Policies*, 2006 require analysis of potential effects to determine whether or not actions will impair park resources. The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. National Park Service (NPS) managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adversely impacting park resources and values.

However, the laws do give the NPS the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the NPS the management discretion to allow certain impacts within park, that discretion is limited by the statutory requirement that the NPS must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. An impact to any park resource or value may, but does not necessarily, constitute an impairment. An impact would be more likely to constitute an impairment to the extent that it affects a resource or value whose conservation is:

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

An impact would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to pursue or restore the integrity of park resources or values and it cannot be further mitigated.

The park resources and values that are subject to the no-impairment standard include:

- the park's scenery, natural and historic objects, and wildlife, and the processes and conditions that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structures, and objects; museum collections; and native plants and animals;
- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- the park's role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and
- any additional attributes encompassed by the specific values and purposes for which the park was established.

Impairment may result from NPS activities in managing the park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the park. The NPS threshold for considering whether there could be an impairment is based on whether an action will have significant effects.

Impairment findings are not necessary for visitor use and experience, socioeconomics, public health and safety, environmental justice, land use, and park operations, because impairment findings relates back to park resources and values, and these impact areas are not generally considered park resources or values according to the Organic Act, and cannot be impaired in the same way that an action can impair park resources and values. After dismissing the above topics, topics remaining to be evaluated for impairment include: geology, and soils; vegetation, rare plants, and wetlands; wildlife; federally listed threatened and endangered species; cultural resources; and visual resources.

Fundamental resources and values for the Yellowstone National Park are identified in the enabling legislation for the park, the Foundation for Planning and Management Statement, and the Long Range Interpretive Plan. Those documents state that the fundamental resources and values come from the park's geologic wonders, the abundant and diverse wildlife, the 11,000-year-old continuum of human history, and providing for the benefit, enjoyment, education and inspiration of this and future generations. According to these documents, all of the impact topics carried forward in the EA are considered necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park; are key to the natural or cultural integrity of the park; and/or are identified as a goal in relevant NPS planning documents.

- **Geology, and Soils** – Yellowstone National Park is about 2.2 million acres in size, 98 percent of which is undeveloped. This project would impact about 2 acres of land adjacent to existing overlooks, trails, parking lots, and roads. Impacts are considered minor, short- and long-term, adverse and beneficial by reducing erosion potential and allowing for better revegetation of past disturbances. As long-term impacts are minor, there would be no impairment to geology, or soils.
- **Vegetation, Rare Plants, and Wetlands** – Yellowstone National Park has numerous wetlands located within its boundaries. Permanent impacts would occur to 0.07 acres within eight wetlands inside the project limits. The wetland impacts met the definition for the exceptions listed in DO 77-1 due to code and safety upgrades and a Statement of Findings would not be prepared. There would be no impairment to wetlands and other waters of the U.S. from the implementation of this project. Rehabilitation activities would impact about 2 acres of vegetation along existing overlooks, trails, roads, and parking lots. Impacts would be long-term and minor affecting minor portions of the species' population and restricted to a very small geographic area. No species of special concern would be adversely impacted. No impairment to park vegetation would occur.
- **Wildlife** – Yellowstone National Park has an abundance of wildlife within its 2.2 million acres. This project would cause approximately 2 acres of habitat to be lost following infrastructure rehabilitation and improvements. Displacement of wildlife during construction activities would be the primary impact. Impacts of this project to wildlife would be negligible to minor and adverse. No impairment to wildlife resources would occur.
- **Federally Listed Threatened and Endangered Species** – Yellowstone National Park is home to the threatened Canada lynx, and grizzly bear. The gray wolf is considered an experimental population and also considered threatened within the park. The rehabilitated infrastructure along the canyon rims will have minor negligible impact to federally listed threatened and endangered species. Because of the loss of about 2

acres of habitat and some short-term displacement of species wandering through the area, negligible adverse impacts to wolves and grizzly bears could occur. The project is outside any lynx analysis unit and Canada lynx will not be affected. Consultation with the United States Fish and Wildlife Service (USFWS) concurred that the Selected Action "may affect, but not likely to adversely affect" threatened grizzly bears or gray wolves, and that the project will have "no effect" on Canada lynx and Canada lynx critical habitat. No impairment of special status species will occur.

- **Cultural Resources** – Yellowstone National Park contains numerous historic structures that are eligible for the National Register of Historic Places. This project involves reconstructing or rehabilitating many of the historic overlooks and trails located along the rim of the Grand Canyon of the Yellowstone River. All work that would be done on these structures will be in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties, and accomplished so that the rehabilitation does not diminish the integrity of the historic structures. Implementation of the Selected Action will result in No Adverse Effect on structures and historic districts. The WYSHPO concurred with the park's finding of "no historic properties adversely affected" in a letter dated September 11, 2015. Because the Selected Action will result in minor, long-term, direct beneficial impacts to cultural resources, there will be no impairment to historic structures.
- **Visual Resources** – Yellowstone abounds with impressive viewsheds of the highest quality. The majority of Yellowstone's landscape appears untouched by humans and retains its primeval characteristics. Materials and colors choices for this project would be selected to blend with their surroundings. Views across the canyon are typically from long distances, material choices, color, and placement all work to screen man-made elements. Impacts from to visual resources will be minor, long-term, and adverse on scenic resources. There will be no impairment of visual resources within the park.

In addition, mitigation measures for these resources will further lessen the degree of impact to and help promote the protection of these resources. Park Service staff will monitor all rehabilitation activities to minimize potential damage to any of the park resources discussed above.

In conclusion, as guided by this analysis, good science and scholarship, advice from subject matter experts and others who have relevant knowledge and experience, and the results of public involvement activities, it is the Superintendent's professional judgment that there would be no impairment of park resources and values from implementation of the Selected Action.