



**National Park Service
U.S. Department of the Interior**

**Glacier National Park, a portion of Waterton-Glacier International Peace Park
Montana**

**FINDING OF NO SIGNIFICANT IMPACT
Going-to-the-Sun Road Corridor Management Plan/Environmental
Assessment**

Recommended:

Jeff Mow,
Superintendent, Glacier National Park

Date

Approved:

Michael T. Reynolds,
Regional Director, National Park Service Regional Office
Serving Department of Interior Regions 6, 7, and 8

Date

INTRODUCTION

In compliance with the National Environmental Policy Act (NEPA), Glacier National Park (the park) prepared an Environmental Assessment (EA) to examine the environmental impacts of proposed strategies and actions for managing transportation, visitation and visitor use, trail use levels and access throughout the Going-to-the-Sun Road (GTSR) corridor, including developed areas. These strategies and actions are needed to address a range of changing conditions and challenges within the GTSR corridor associated with unprecedented visitation levels and dynamic use patterns, including roadway gridlock and parking lot congestion; visitor safety issues, natural and cultural resource impacts; and heavy stress on park facilities, services and operations.

The statements and conclusions reached in this finding of no significant impact (FONSI) are based on documentation and analysis provided in the EA and associated decision file. To the extent necessary, relevant sections of the EA (which is available at <https://parkplanning.nps.gov/GTSRPlan>) are incorporated by reference below; and full references for citations in this FONSI are available in the EA. In addition, as this NEPA process was started prior to September 14, 2020 (the effective date of the new Council on Environmental Quality (CEQ) NEPA regulations), the NPS prepared this FONSI consistent with the 1978 CEQ NEPA regulations.

SELECTED ALTERNATIVE AND RATIONALE FOR THE DECISION

Considering the analysis presented in the EA, NPS selected the *Adaptive Management Approach to Address Visitation Levels* (the NPS preferred alternative).

This alternative provides the park a suite of strategies and actions intended to achieve and maintain desired conditions described in chapter 1 of the EA, as represented by thresholds for indicators, and/or visitor capacities established during the planning process as described below. This alternative also includes a suite of adaptive management actions the National Park Service will implement if monitoring indicates conditions are moving towards or exceed the thresholds for indicators and/or visitor capacities established during the planning process. These actions will support the park's ability to respond to future events, trends, risks, and threats, including those that are unknown or uncertain. These adaptive management actions are described below and/or are listed in appendix D of the EA. This alternative will maintain and provide a variety of visitor experiences throughout the GTSR corridor, including solitary, social, family friendly, and physically rigorous recreation. These alternative actions were developed using the Interagency Visitor Use Management Council framework.

The National Park Service will take the following initial management actions subject to funding:

- Implement visitor capacity and monitoring strategies using the Interagency Visitor Use Management Council framework.
- Expand the number of shuttle stops, number of buses and daily hours of operation.
- Manage traffic and parking by implementing a timed parking permit system for a portion of the popular locations, beginning with Logan Pass, Avalanche and St. Mary and Virginia Falls Trailhead.
- During the time the transit system is operating, visitors with backcountry permits will be prohibited from parking overnight during peak season at parking lots and pullouts in the GTSR corridor, with the exception of the visitor centers in West Glacier and St. Mary, the Rising Sun Motel, Lake McDonald Lodge and campgrounds.
- Provide additional vault toilets on the GTSR at new west side parking area, Siyeh Bend, and Avalanche.

- Provide backcountry toilet facilities at popular day use areas in the corridor at Preston Park, Haystack and Hidden Lake Overlook.
- Enhance opportunities for bicycle use, including adding bike trailers to shuttles, installing bike racks and consider bicycle-only events such as “car free mornings.”
- Construct a new approximately 100 car parking lot on the west side and expanded parking on the east side at the St. Mary Visitor Center and 1913 Ranger Station.
- Extend visitor center hours of operation at Apgar and St. Mary VC, and enhance visitor orientation and trip planning information.
- Improve circulation at Avalanche Campground by restoring the historic exit road to the Avalanche Campground and moving the existing shuttle stop to south side of road.

The National Park Service will also implement actions that are operational in nature to help manage transportation and visitor use. These actions are described in the EA and marked with an asterisk [*]. because they are important to understanding the full scope of the corridor management plan. However, because of their operational nature, these actions have little or no potential to cause meaningful environmental impacts that would have bearing on the decision-making process. In addition, these actions have independent utility and would normally be covered by categorical exclusions under NEPA. Therefore, while these actions are described in the EA, consistent with Council on Environmental Quality’s NEPA regulations and the 2015 NPS NEPA Handbook, impacts associated with these actions were not analyzed in the EA or this FONSI.

Several actions are also described in the EA as adaptive management actions that will be taken in the event that thresholds are approached or exceeded.

Design and construction for the physical changes described below will vary depending on the location and may require additional compliance (e.g., NEPA, Endangered Species Act, National Historic Preservation Act, etc.). Length of construction will vary by location but will likely take place during a four to six-month construction season over one to several years, depending on weather and site conditions of each location. Efforts will be made to mitigate construction impacts during peak season but will likely include temporary travel delays not to exceed 30 minutes.

If implementation of this plan is not successful in managing desired conditions for the GTSR corridor, the NPS may consider a reservation system for the entire corridor. The National Park Service will complete additional planning, analyses and compliance, as appropriate, before implementing such a system.

Indicators and Thresholds

The NPS developed the indicators and thresholds for this plan using the framework created by the Interagency Visitor Use Management Council (the council) (see EA appendix D). Indicators measure conditions related to visitor use and resources that the NPS would monitor to track those conditions over time. Thresholds represent the minimum acceptable condition for each indicator. Although defined as “minimally acceptable,” thresholds still represent acceptable conditions. For some indicators, the NPS has developed triggers that reflect a condition of enough concern, for an indicator, to prompt a management response to ensure the maintenance of desired conditions before the threshold is crossed. The NPS will monitor these indicators, thresholds, and triggers to inform whether desired conditions are being met and to inform strategies to be used by park managers so that desired conditions are met. This iterative practice of monitoring, implementing potential management strategies, and then continuing to monitor to gauge the effectiveness of those actions will allow park managers to maximize benefits for visitors while achieving and maintaining desired conditions for resources and visitor experiences in a dynamic setting.

Under the selected alternative, the NPS will monitor the following trails, transportation, water use and availability, and backcountry soundscapes related to management of the GTSR corridor. Triggers and thresholds for these indicators are described in Appendix D of the EA. The park will also continue to monitor the number of visitors per year entering the park as well as hiking on trails during the peak and shoulder seasons and two components of the shuttle system: financial sustainability and ridership costs. Human-wildlife encounters and changes in visitor activity trends will also continue to be monitored.

If monitoring indicates conditions are approaching or exceeding their respective triggers or thresholds, the NPS will implement adaptive management strategies to maintain desired conditions, as described below and in appendix D of the EA.

Visitor Capacity

The park will use visitor capacity identified for the GTSR corridor to inform implementation of the management strategies selected as part of this Plan. Visitor capacity is the maximum amount and types of visitor use that an area can accommodate while sustaining desired resource conditions (i.e., goals and objectives for this plan) and visitor experience consistent with the purpose for which the area was established.

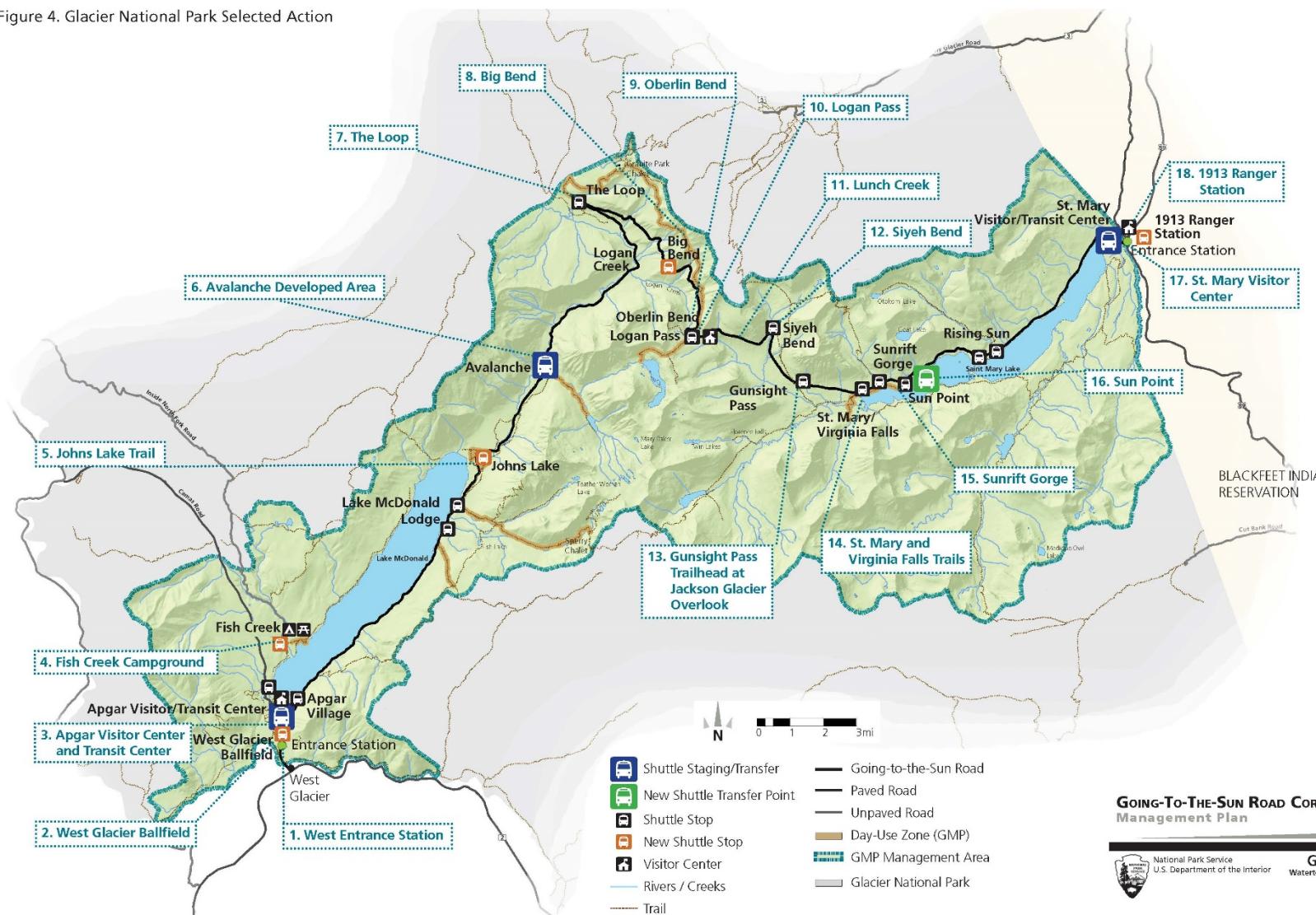
Chapter 1 and Appendix D of the EA details the considerations and process used to identify visitor capacities for each analysis area and how they inform management actions. The table below highlights visitor capacities by area. People at one time (PAOT) refers to the total number of people that are present at a site at any given point in time.

Table 1 Visitor Capacity as Defined by People at One Time Delivered to These Locations

Location on Figure 4	Location/Shuttle Stop Area	Identified Visitor Capacity
6	Avalanche	975 PAOT
7	The Loop	130 PAOT
8	Big Bend	145 PAOT
10	Logan Pass	1,390 PAOT
11	Lunch Creek	85 PAOT
12	Siyeh Bend	190 PAOT
13	Gunsight Pass and Jackson Glacier Overlook	140 PAOT
14	St. Mary Falls/Virginia Falls	160 PAOT
15	Sunrift Gorge	190 PAOT

SELECTED ACTION

Figure 4. Glacier National Park Selected Action



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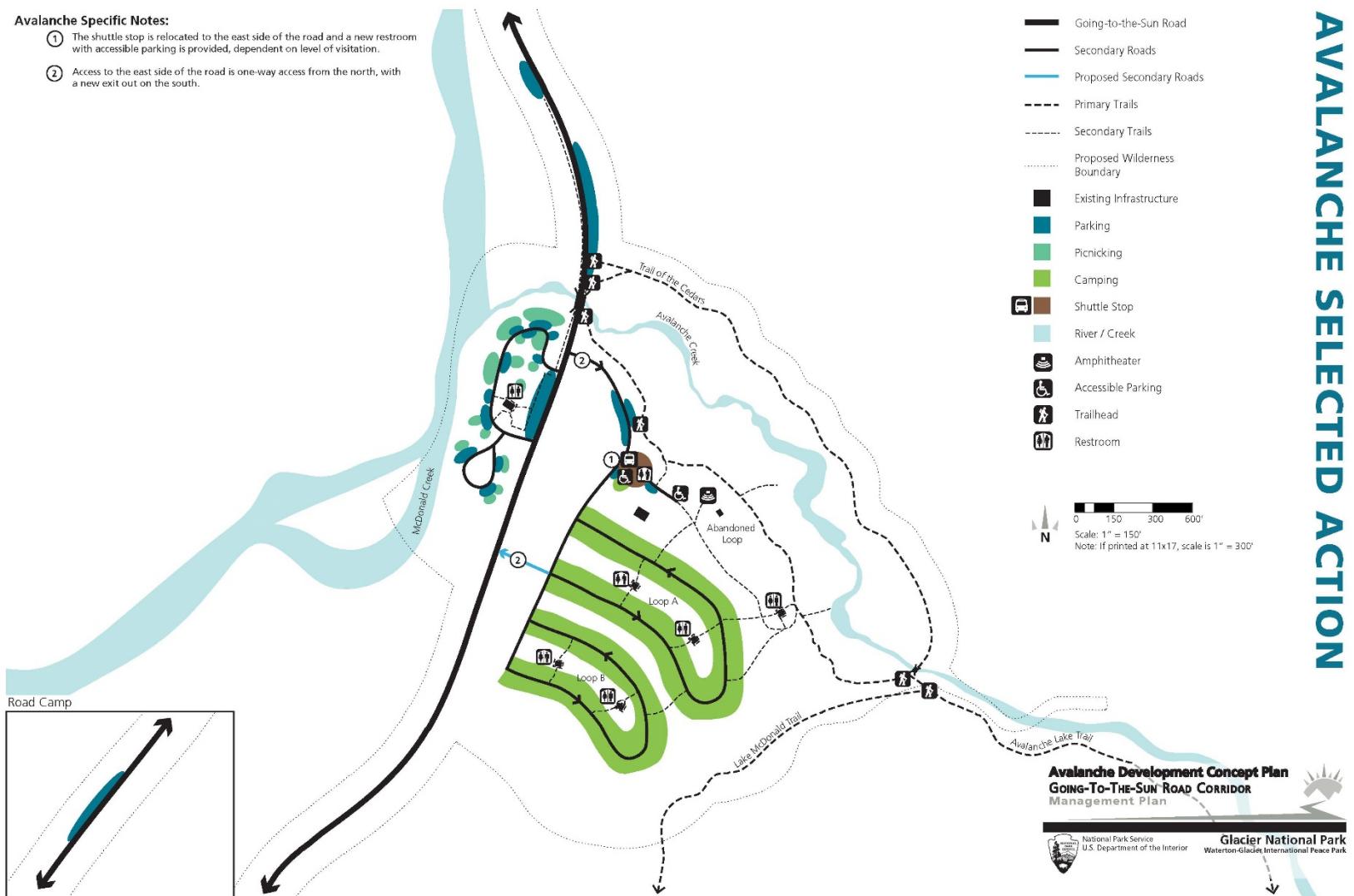


AVALANCHE SELECTED ACTION

Figure 5. Avalanche Selected Action

Avalanche Specific Notes:

- ① The shuttle stop is relocated to the east side of the road and a new restroom with accessible parking is provided, dependent on level of visitation.
- ② Access to the east side of the road is one-way access from the north, with a new exit out on the south.



Alternative Transportation—Expanded Shuttle System and Related Projects

Visitors will continue to have access to the shuttle after entering the park. However, the NPS will expand the system as follows:

- Manage shuttle fleet size and operations seasonally based on funding and snow removal operations, and to achieve 15-40 minute average headways *
- Continue express shuttles from Apgar Visitor Center to Logan Pass
- Maintain all existing shuttle stops, and modify Siyeh Bend drop-off schedule (e.g., once or twice in the morning and once or twice in the afternoon) to distribute use levels on this trail
- Add new shuttle stops at the new West Side Parking Area (previously a Construction Staging Area), the Fish Creek Campground, in the vicinity of the Johns Lake Trail, Big Bend (if connecting trail to Highline is developed) and the 1913 Ranger Station. Additional shuttle stops may be added outside the park on the east and west sides as partnerships develop. *
- *Adaptive Management Option:* Modify other shuttle drop-off schedules at other trail locations identified to be managed for lower levels of use, to distribute use levels so desired conditions are maintained.
- *Adaptive Management Option:* Consider a commercial use agreement or similar to allow alternative commercial transportation services in the GTSR Corridor that would solely provide transport to various locations along the corridor without a guided tour element.

Access by Private Vehicle Including Traffic Management and Parking

The following actions related to private vehicle management in the GTSR corridor will occur:

- Continue access to the GTSR for private vehicles 21 feet or under*
- Staff a travel information center daily in an existing building during peak season providing traffic levels, parking availability, trail information and real time updates on park conditions. *
- Restripe select parking lots and pullouts (e.g., Apgar Visitor Center, Logan Pass, Big Bend) *
- Add electric vehicle charging stations at Apgar Visitor Center, Apgar Transit Center, and Logan Pass, and new West Side parking area (currently known as west side construction staging area). *
- Restrict overnight parking in the corridor during peak season for visitors with backcountry overnight permits while the shuttle is in operation. During peak season, all parking lots in the corridor (except for those associated with Lake McDonald Lodge, Rising Sun Motel, Visitor Centers and campground) will be designated for day use parking only with signage.
- Implement a day use parking permit system beginning with Logan Pass and St. Mary and Virginia Falls Trailhead using the following design parameters:
 - Hold a percentage of permits aside for short-term purchase (i.e., day of, day before, week of). Add leftover advance reservations and no-shows to the short-term reservation pool.
 - Provide opportunities to obtain permits online and in locations throughout the park and local community.
 - Timed-parking permits will only be valid for parking during a specified time and when accompanied by an entrance pass. Provide opportunities to purchase entrance passes in tandem with parking permits, separately online, and at locations including visitor information centers.
 - Fund operation of the parking permit system through a fee associated with the reservation. The fee will be tied to the cost of operating the reservation system.
 - *Adaptive Management Option:* Monitor vehicles numbers at other sites such as Avalanche, Big Bend, and St. Mary Visitor Center to ensure these areas are meeting desired conditions. If conditions exceed thresholds, to assure that desired conditions are maintained, a parking permit system will be implemented at these locations.
 - *Adaptive Management Option:* After initial implementation of the day use parking permit system, monitor the number of permits, allocations of permits (between types of users), or the length of time a parking permit is valid. Adjust these up or down to ensure the highest possible use of the existing available parking while achieving and maintaining desired conditions.

- West Side Construction Staging Area. Widen the 0.25-mile segment of Quarter Circle Bridge Road to the Ball Field to accommodate increased traffic. Convert the site to an approximately 100-space parking area for passengers and oversized vehicles.
- Avalanche Developed Area. Prohibit parking along the campground entrance road. To facilitate better traffic flow, make the current entrance one way and restore the historic exit just west of the entrance road.
 - *Adaptive Management Option:*
 - Maintain 10 existing spaces for oversized vehicle parking and turnaround.
 - Maintain picnicking in the existing area as either walk-in or drive-in, dependent on the level of visitation.
 - Continue to use the campground for parking during early and late season, before the campground opens and after it closes.
- St. Mary Visitor Center. Add approximately 10 additional parking spaces.
- 1913 Ranger Station. Widen the 1-mile-long approach road and expand the parking lot by approximately 40 spaces for compact and oversized vehicles.

Collectively, these actions add up to approximately 150 additional parking spaces in the corridor, for a total of approximately 2,250 spaces.

The NPS will monitor indicators for transportation as described in Appendix D of the EA. If, after implementation of these proposed actions, desired conditions are still not being met, additional adaptive management strategies will be considered, as described in Appendix D of the EA.

Trails and Trailhead Facilities

- Avalanche Developed Area. Move the shuttle shelter to the south side of the road. Construct a vault toilet near the new shuttle shelter. Do not allow commercially guided hikes and organized group hikes during peak season (currently July and August), and limit them to two trips per day and 35 people per trip per operator during other seasons. Harden up to 2.5-miles of the existing trail in appropriate locations where necessary to accommodate high-use levels.
- Big Bend. *Adaptive Management Option:* If conditions exceed thresholds, designate one-way travel along the Highline Trail (from Logan Pass to the Big Bend cutoff) during peak season. Construct an exposed soil footpath from Big Bend to the Highline Trail for one-way travel during peak season from the Highline down to Big Bend pullout. The trail will only be open mid to end of July through Labor Day to address wildlife concerns. Exceptions to one-way travel will be allowed in the event of wildlife encounters and or other emergencies.
- Logan Pass. Assign volunteers during peak season to conduct foot traffic control at the cliff area on the Highline Trail. *Adaptive Management Option:* To maintain desired conditions, designate one-way travel on the Highline Trail to Big Bend and implement a timed-entry permit system for hiking this trail to manage use levels. Exceptions to one-way travel will be made in the event of wildlife encounters or other emergencies. Establish a group size of 25 people for commercially guided hikes and organized group hikes and a maximum of two trips per day per operator along the Highline Trail (exempt concessioner-guided hikes from the hiking permit requirement). Construct a backcountry toilet near Hidden Lake Overlook on the Hidden Lake Trail and another at Haystack Butte on the Highline Trail. Enlarge Hidden Lake Overlook by approximately 15 square feet.
- Siyeh Bend. Construct a vault toilet adjacent to the GTSR. Construct a backcountry toilet at Preston Park if need continues.
- Gunsight Pass Trailhead at Jackson Glacier Overlook. Manage the trail for a lower level of use to offer opportunities for solitude in the corridor. Promote use of the trail from Jackson Glacier Overlook to Sun Point during peak season. *Adaptive Management Option:* Implement a day hike permit system to maintain desired conditions, if use increases.

- Sun Point. Maintain and promote trailhead to Three Falls hike and Sun Point Nature Trail.
- St. Mary and Virginia Falls Trail. Establish a group size of 35 people for commercially guided hikes and all organized group hikes and a maximum of two trips per day per operator along the St. Mary Falls Trail. An exception to the group size would be for the boat tour concessioner who would be permitted to continue offering NPS led Ranger hikes twice a day on the trail, limited to 49 people (the capacity of the boat). These individuals arrive by boat and no parking is required.
- St. Mary Visitor Center. Construct an under-road crossing for pedestrians and bicycles. The crossing will also be designed to provide floodwater passage during high-water events.
- 1913 Ranger Station. Construct a 1.5-mile-long and up to 12-foot-wide asphalt bicycle trail from the 1913 Ranger Station to St. Mary Campground and St. Mary town site. This will require additional documentation and public notification in accordance with 36 *Code of Federal Regulations* (CFR) 4.30.

Trail design for the areas described above will vary depending on topography and adjacent resources, but trails will generally be approximately 3 to 8 feet in width depending on the type, location and site conditions.

At all trail locations, the NPS will monitor indicators and capacity as described in Appendix D of the EA. If, after implementation of these actions, desired conditions were still not being met, additional adaptive management strategies will be considered as described in Appendix D of the EA.

Bicycle Use

Access to current bicycling opportunities and regulations during peak season will continue as described in the no-action alternative. Other actions related to bicycle use include providing bicycle trailers on some shuttle, installing bike racks at select locations throughout the corridor, and, if parkwide visitation decreases, considering bicycle-only events (e.g., car-free mornings)* Add 1.5 mile bike trail from 1913 Ranger Station to St. Mary Campground, Visitor Center and townsite.

Visitor Use, Experience, Interpretation, and Education

The NPS will take a number of actions including extending operating hours/seasons at the Apgar and St. Mary Visitor centers*; improving access to educational materials, wayfinding, and other visitor information*; providing a site manager at Logan Pass*; and managing use levels on trails to provide a range of experiences in the GTSR corridor.

Technology

Technology being applied in the park will continue as described in the no-action alternative. In addition, the NPS will explore emerging technology such as connected vehicles, driverless vehicles, electric vehicles, automated entrance gates, roving fee collection, and use of cameras*; installing device charging stations at select service areas*; and providing real-time information for trip planning on parking conditions, congested areas, and shuttle stops*.

Partner Opportunities

The NPS will partner with other entities to provide opportunities that neither the park, community, nor other agencies could accomplish alone, such as making park entrance passes available for sale outside the park*; encouraging regional transit connections between parking and transit stops inside and outside the park*; and encouraging off-peak visitation*.

Resource Protection

Current activities for resource protection described in the no-action alternative will continue. Other actions the NPS will take include using staff/volunteers to educate visitors about and wildlife interactions and other resource protection initiatives, and to manage routine human-wildlife encounters*; developing a mountain goat safety video*; and implementing water conservation measures at Logan Pass if use exceeds capacity and/or threatens the federally-listed stonefly species

Natural Soundscape Protection

The NPS will perform noise monitoring as described in Appendix D of the EA*, and will continue using education, outreach, and best management practices to reduce the duration and intensity of notice (e.g., encouraging motorists to turn off engines while parked, minimize idling, avoid revving engines and using aftermarket mufflers; limiting use of horns and vehicle radios)*. The NPS would also apply any national level guidance when considering future actions*.

Mitigation Measures

The selected alternative incorporates the mitigation measures listed in Appendix A of this document and the EA.

Table 2 Preferred Alternative Elements by Location

Location on Figure 4	Location	Actions
1	West Entrance Station	No changes at this location.
2	West Side Construction Staging Area (Old Ball Field)	Widen the 0.25-mile segment of Quarter Circle Bridge Road to the old Ball Field to 8 feet to accommodate increased traffic. Convert the old Ball Field to an approximately 100-space parking area for passengers and oversized vehicles. Add one shuttle stop with an approximately 200-square-foot waiting area with shelter and related signage and a vault or backcountry toilet. Install two electric vehicle solar-powered charging stations in the new lot.
3	Apgar Visitor Center and Transit Center	Add two hard-wired electric vehicle charging stations. Install bicycle racks.
4	Fish Creek Campground	Add a shuttle stop.
5	Johns Lake Trail	Add a shuttle stop consisting of a roughly 800-square-foot waiting area and related signage. The exact location and related compliance will be determined in the future.
6	Avalanche Developed Area	Improve visitor orientation by moving the shuttle stop sign and site to the south side of the road. Construct a vault toilet near the new shuttle shelter and install bicycle racks to support increased bicycle use in the shoulder season on the GTSR. Prohibit parking along the campground entrance road. To facilitate better traffic flow, designate the current entrance one-way and restore the historic exit just west of the current entrance. Monitor vehicle numbers at Avalanche to ensure desired conditions are being maintained. If the thresholds are exceeded, implement a parking permit system in this location. Do not allow commercially guided hikes and organized group hikes during peak season (currently July and August), and establish a group size of 35 people per trip per operator during other seasons. Harden up to 2.5 miles of the existing Avalanche Lake Trail in appropriate locations as necessary to accommodate high-use levels.
7	The Loop	Install bicycle racks to support increased bicycle use on the GTSR.
8	Big Bend	Install bicycle racks to support increased bicycle use on the GTSR. Reorganize and stripe the pullout at Big Bend within the current footprint to mitigate traffic congestion and increase parking efficiency. Monitor vehicle numbers at Big Bend to ensure desired conditions are being maintained (see appendix D). If the thresholds are exceeded, implement a parking permit system in this location. <i>Adaptive Management Option:</i> If conditions exceed thresholds, add signs to designate a shuttle stop at Big Bend, designate one-way travel along the Highline Trail (from Logan Pass to the Big Bend cutoff) during peak season and peak hours. Construct an approximately 3-foot-wide and 3-mile-long exposed soil footpath from Big Bend to the Highline Trail for one-way travel during peak season only. This trail would open after July 1 and close by Labor Day. Install signage to designate the parking lot for day use parking only during the peak season.
9	Oberlin Bend	Install bicycle racks to support increased bicycle use on the GTSR.
10	Logan Pass	Install bicycle racks to support increased bicycle use on the GTSR. Restripe a portion of the parking lot for compact vehicles and install two electric vehicle solar-powered charging stations. During the peak season, backcountry permit holders will be required to use the shuttle and will not be permitted to park overnight at Logan Pass parking lot. The Logan Pass Lot will be designated for day use parking only and a day use parking permit system would be used (described above) to more effectively manage use. Add technology improvements to communicate parking conditions at the entrance stations (e.g., real-time information).

Location on Figure 4	Location	Actions
		<p>Create a volunteer group to educate visitors about wildlife safety topics and to manage routine visitor-wildlife encounters in this location. Provide an NPS site manager to provide additional area oversight. During peak season, assign volunteers to conduct foot traffic control at the cliff area on the Highline Trail. Establish a group size limit of 25 people and two trips per day per operator for commercially guided hikes and organized group hikes along the Highline Trail (exempt concessioner-guided hikes from this hiking permit requirement). Construct a backcountry toilet near Hidden Lake Overlook and another at Haystack Butte on the Highline Trail. In addition, enlarge and harden Hidden Lake Overlook by approximately 15 square feet.</p> <p><i>Adaptive Management Option:</i> If conditions exceed thresholds and to maintain desired conditions, designate one-way travel on the Highline Trail to Big Bend and implement a timed-entry permit system for hiking this trail to manage congestion.</p>
11	Lunch Creek	No change at this location.
12	Siyeh Bend	<p>Modify the shuttle drop-off schedule to distribute use levels on the trail. Drop-offs at this location will only occur once or twice in the morning and once or twice in the afternoon. Install bicycle racks to support increased bicycle use on the GTSR.</p> <p>Construct a vault toilet at the pullout adjacent to the road. Construct backcountry toilet at Preston Park if needed.</p>
13	Gunsight Pass Trailhead at Jackson Glacier Overlook	<p>During peak season, designate the parking lot for day use parking only. Install bicycle racks to support increased bicycle use on the GTSR.</p> <p>Manage the trail for a lower level of use to offer opportunities for solitude in the corridor. During peak season, promote hikes from the Jackson Glacier Overlook to Sun Point.</p>
14	St Mary and Virginia Falls Trail	<p>During peak season and peak time of day, designate the parking lot for day use parking only and implement a day use parking permit system (described above) to more effectively manage use in the desired resource and experiential conditions of the site. Install bicycle racks to support increased bicycle use. Establish a group size limit of 35 people per group and two trips per day per operator for commercially guided hikes and organized group hikes along the St. Mary Falls Trail. An exception to the group size would be for the boat tour concessioner who would be permitted to continue offering NPS led Ranger hikes twice a day on the trail, limited to 49 people (the capacity of the boat). These individuals arrive by boat and no parking is required.</p>
15	Sunrift Gorge	There are no changes at this location.
16	Sun Point	Maintain oversized and regular vehicle parking and a turnaround site. Install bicycle racks to support increased bicycle use on the GTSR. Promote and maintain trailhead to Three Falls hike and Sun Point Nature Trail.
17	St. Mary Visitor Center	Add approximately 10 additional parking spaces on undisturbed flat ground. Install bicycle racks to support increased use on the GTSR. Extend daily operating hours and extend the open season into the spring and fall shoulder seasons. Construct approximately a 12-foot-wide, under-road crossing for pedestrians and bicycles. The crossing will also be designed to provide floodwater passage during high-water events. This will require additional compliance and consultation.
18	1913 Ranger Station	Widen the one-mile-long approach road approximately up to 20 feet and expand the parking lot by approximately 40 spaces including oversized vehicles. Install bicycle racks to support increased bicycle use on the GTSR. Construct a 1.5-mile-long and up to 12-foot-wide asphalt bike trail from the 1913 Ranger Station to St. Mary Campground, visitor center and St. Mary town site.

Changes to the Selected Alternative

In response to public comments and errors found after releasing the plan in September 2019, changes were made to the preferred alternative in the EA and are reflected in the selected action in the FONSI. The changes are listed below.

- The addition of parking at the 1913 Ranger Station, adding a bike trail and development of a shuttle stop is an action the park would occur when funding is obtained. It is not an adaptive management action that would be taken in response to monitoring. The text was corrected.
- The transit transfer at Sun Point was removed because this is an operations action that could change depending on levels of visitation and buses available.
- No overnight parking in the corridor is clarified to refer to backcountry permit holders during peak season while the shuttle system is operating and excludes parking areas for hotels/motels and the visitor centers.
- The proposal to use one loop of the Avalanche Campground as parking during peak season and close to camping and reopen the abandoned loop to parking was removed.
- The Big Bend Trail was changed to be one way during peak season, peak hours. Outside of peak season, this trail will be closed. The trail will only be open from after July 1 through Labor Day. The one-way travel on the Highline Trail and the Big Bend Cutoff was clarified to acknowledge there could be exceptions in the event of wildlife encounters or other emergencies which will require hikers to turn around. A shuttle stop will not be built unless a trail is built from Big Bend to the Highline.
- The West Entrance Station will not be modified.
- Construction of new trails totaling two miles from Siyeh to Lunch Creek and Lunch Creek to Logan Pass was removed.
- The backcountry toilet at Siyeh was moved to the parking and pullout area for this trailhead on the GTSR. The St. Mary/Virginia Falls and Big Bend vault toilets were removed. These toilets were analyzed in the GTSR Rehabilitation Plan and are being designed and built under that plan and decision.
- The existing trail from the foot of Avalanche Lake to the head of Avalanche Lake already exists but will be improved.

These changes are described further in the errata attached to this FONSI. As a result of the changes, the effects described in the EA associated with actions that have been removed will not occur; and the other changes made do not substantially alter the impacts analysis.

Rationale

The preferred alternative was selected because it will provide Glacier National Park with an initial suite of strategies and actions to manage transportation, unprecedented visitation and visitor use levels and access throughout the GTSR corridor including at developed areas to:

- meet desired conditions established for the park's fundamental resources and values, including providing high quality visitor experiences;
- address visitor safety issues;
- address parking lot congestion; and
- address heavy stress on park facilities, services and operations.

FINDING OF NO SIGNIFICANT IMPACT

CEQ regulations at 40 CFR Section 1508.27 identify ten criteria for determining whether the Selected Action will have a significant effect on the human environment. The NPS reviewed each of these criteria given the environmental impacts analyzed during the EA process and determined there will be no significant direct, indirect, or cumulative impacts under any of the criteria.

The following impact topics were dismissed from full analysis in the EA (see appendix H) and therefore they are not discussed in this FONSI: archaeology, socioeconomic resources, air quality, dark skies, floodplains, natural soundscapes, soils, water resources, wetlands and riparian areas. In addition, based on the analysis conducted to support the EA, there will be no significant impacts on public health, public safety or unique characteristics of the region; there are no highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence; and implementation of the NPS selected alternative will not violate any federal, state, or local environmental protection law.

As a result, the FONSI below focuses on those topics carried forward for detailed analysis in the EA: visitor use and experience, vegetation, species of special management concern, character of recommended wilderness, and cultural resources. In addition, the FONSI includes an analysis of wildlife impacts, which was added to the EA through errata after the public comment period (see Appendix C). However, as described below there is no potential for significant impacts to these resources.

Visitor Use and Experience

After the plan is fully implemented, direct, indirect and cumulative impacts of the selected alternative on visitor use and experience will be beneficial because the proposed actions will result in increased certainty of access to services and facilities; a diverse range of recreational opportunities; improved experiences on trails, at overlooks and in visitor centers; improved traffic flow and opportunities to park; and improved access from nearby communities. Some adverse impacts will occur to visitors who are accustomed to visiting the park during peak season without doing much pre-planning. However, the parking permit system will only apply to a percentage of parking areas and will not require all visitors to participate in pre-trip planning for parking. Additionally, increased alternative transportation access will likely result in increased visitors being delivered to certain areas that were previously constrained by the number of parking spaces. The increase in visitors to certain areas could increase crowding on trails and result in an adverse impact for those seeking opportunities for solitude. However, managing for visitor capacities at certain locations and for desired conditions will reduce the potential for this crowding and associated impacts. There will be temporary adverse impacts to visitor use and experience during construction from temporary closures and noise. Despite some adverse impacts, the selected alternative will contribute a sizeable beneficial increment to effects from other cumulative actions. Therefore, when the effects of the selected action are combined with other past, present, and reasonably foreseeable future impacts, the total cumulative impact on visitor use and experience will be beneficial.

Vegetation

The direct, indirect and cumulative impacts of the selected alternative on vegetation will be adverse from removing approximately 9 acres of vegetation as a result of constructing new shuttle stops, one new backcountry trail, widening 1.25 miles of road, adding or expanding parking areas, construction of backcountry toilet facilities, adding a bike path and improving trails to accommodate high use levels. The vegetation lost will be primarily montane grassland (and to a much lesser extent mixed conifer and avalanche chute deciduous shrublands, forest, woodland, shrubland, and herbaceous plant communities) most of which occurs in already disturbed, developed and/or high use visitor areas. The montane grassland vegetation class covers 0.4% of the land cover in the GTSR Corridor or 784 acres.

The other land cover vegetation classes listed above cover 44.9% of the GTSR corridor or 82,658 acres. Therefore 5.6% of these vegetation land cover classes within the park will be removed. The plant communities affected are all common in the GTSR corridor, and design efforts will be used to minimize the removal of trees and sensitive vegetation if present. Mitigation measures including restoration will also result in a noticeable, small but beneficial impact. Overall, the selected action will contribute very small adverse and beneficial increments to the cumulative effects on vegetation from other past, present, and reasonably foreseeable future actions, which will remain minimally adverse.

Species of Special Management Concern

The direct, indirect and cumulative impacts of the selected alternative on species of special management concern will be adverse from continued high use of trails in certain locations, but beneficial from management of some trails throughout the corridor for lower levels of use. Individual mammals (i.e., grizzly bears, Canada lynx, and wolverines) and birds of management concern (i.e., bald and golden eagles, migratory birds, and other birds of conservation concern) residing in or near the corridor will continue to be locally affected by noise levels, visitor activity, impacts to safe movement across the road, and an increased potential for vehicle collisions. In addition, wildlife species of management concern residing in or near current low-use areas that could see increased visitation could experience an increase in similar adverse effects. There will also be similar effects in the vicinity of the three backcountry toilets that will be constructed under the selected action. However, grizzly bears, Canada lynx, and wolverines are accustomed to noise and human activity in the corridor, flight allows most birds to safely cross and easily avoid areas of the corridor, and population-level effects are not expected. In addition, the selected alternative will result in a slight benefit to mammals, birds, aquatic species (e.g. bull trout and stoneflies), and rare plants from the dispersal of visitor use, management of group sizes and numbers of commercially guided hikes at Avalanche and Highline Trails, implementation of a timed-entry permit system for the Highline Trail, keeping hikers on single trail alignments, removing attractants and social trails that result from human waste, and managing a parking permit system and providing additional parking which are intended to reduce congestion and roadside parking. Benefits will also result from managing group sizes and numbers of commercially guided hikes along the Avalanche and Highline If warranted, the National Park Service will also implement water conservation measures at Logan Pass Visitor Center to protect stoneflies.

Construction and modifications of trails, overlooks, restrooms, roads, and parking lots will primarily occur in highly developed, frontcountry areas where mammals and birds of management concern are less likely to reside, den, nest, and/or forage. However, construction-related activity and noise differs from other daily and seasonal customary activities and sounds and could displace species of management concern for four to six months. In addition, while the design and placement of three backcountry toilets and one potential new trail will minimize impacts, several acres (estimated to be approximately three backcountry acres and up to six more frontcountry acres) of potential foraging habitat will be temporarily disturbed or permanently removed. Construction and the resulting displacement will typically last four to six months in any given year and will be timed to avoid sensitive points in species' life cycles. For example, construction and removal of nesting habitat for birds of management concern will be timed outside of nesting periods. of vegetation suitable for bird nesting. Although this displacement and loss of habitat will result in adverse impacts to sensitive mammals and birds, this loss of habitat is marginal in comparison to the approximate 183,860-acre corridor management area, which will continue to support populations of these species. In addition, while rare plants may occur in proximity to construction zones, known occurrences of these plants, including the proposed for listing as threatened whitebark pine will be delineated and avoided during construction, and erosion and sediment controls will be implemented to reduce the potential for sediment to enter nearby vegetated habitat.

The use of new trails, future implementation of adaptive management actions, and the associated temporary and increased levels of noise, in combination with continued high traffic volume and human

activity, including increased use during the shoulder seasons, may alter the behavior of bears, Canada lynx, and wolverine causing increased levels of displacement or habituation of individual animals, increased risk of vehicle-animal collisions, and additional impacts to foraging habitat. In addition, because species such as grizzly bears and Canada lynx require solitude, increased shoulder season visitation may also displace some individuals from potential spring, summer, and fall habitats due to wildlife tendencies to avoid areas where humans and loud machinery are present. Although the increased displacement will result in adverse impacts to these sensitive species, the 183,860-acre corridor management area provides ample habitat to accommodate displaced species. Additionally, some populations of rare plants occur near hiking trails or climbing routes and will continue to be subject to hiker trampling, which can damage individual plants, cause soil compaction, and reduce flowering potential. Despite their susceptibility, rare plant surveys conducted in the park in recent years have not shown a measurable decline in the populations most vulnerable to trampling and therefore impacts are expected to be minimal.

Overall, the selected alternative will contribute relatively small increments of beneficial and adverse impacts on the overall low level of adverse cumulative effects on species of management concern. When the effects of the selected alternative are combined with other past, present, and reasonably foreseeable future impacts, the total cumulative impact on species of special management concern will continue to be minimally adverse.

Taking into account the potential effects described in the biological assessment (BA) and letter submitted to the USFWS in compliance with section 7 of the Endangered Species Act (ESA), the National Park Service determined that the selected alternative may affect, but is not likely to adversely affect grizzly bear, Canada lynx and Canada lynx habitat; will not jeopardize the continued existence of the wolverine; and will have no effect on bull trout, bull trout critical habitat, meltwater lednian stonefly, western glacier stonefly, Spalding's campion (or catchfly), and water howellia. The USFWS concurred with park's determinations on September 23, 2019.

Wildlife

Impacts under the preferred/proposed alternative will include disturbance and displacement of black bears, coyotes, wolves and mountain lions, bighorn sheep, mountain goats, other ungulate species and small mammals. Implementation of shuttle improvements, including changes to schedules, additional stops, and increased rider parking, combined with implementation of a phased day use parking permit system will aim to disperse visitor use and activities along the corridor. In addition, established group sizes and numbers of commercially guided hikes along the Avalanche and Highline Trails and use of a timed-entry permit system on the Highline Trail (if thresholds are reached) will also aim to reduce the number of PAOT in these high use areas. While the dispersal of visitor use will result in a slight benefit to these species in high use areas during the peak summer season, individuals residing in or near the corridor will continue to be locally affected by high traffic volumes in the GTSR corridor as a result of noise levels, visitor activity, impacts to safe movement across the road, and an increased potential for vehicle collisions. In addition, individuals residing in or near current low-use areas that could see increased visitation could experience an increase in adverse impacts as described above.

Under the preferred/proposed alternative, construction and modifications of trails, overlooks, restrooms, roads, and parking lots will occur mostly in the highly developed, frontcountry areas where these species are less likely to reside or den. A few will occur in previously undisturbed backcountry areas (three backcountry toilets and one potential new trail). While the design and placement of these facilities would be done to minimize impacts, several acres (estimated to be approximately 3 backcountry acres and approximately 6 frontcountry acres) of potential foraging habitat would be temporarily disturbed or permanently removed. While small in comparison to the approximate 183,860-acres in the corridor management area, the increased displacement caused by increasing

visitation together with a slight increase in development will result in adverse impacts to wildlife species. These impacts will be greater in backcountry areas where one new trail and three backcountry toilets are proposed in areas where they are currently absent. Future implementation of adaptive management actions, and the associated temporary and increased levels of noise, in combination with continued high traffic volume and human activity, including increased use during the shoulder seasons, may alter the behavior of wildlife causing increased levels of displacement or habituation of individual animals, increased risk of vehicle-animal collisions, and additional impacts to foraging habitat. If thresholds were exceeded and the one new trail proposed as potential adaptive management options were initiated, there would be new areas of disturbance to these species and the impacts noted above will extend further into their habitat. Further consultation with the US Fish and Wildlife Service under Section 7 of the Endangered Species Act will be conducted for this trail.

Based on the known wildlife use patterns, travel corridors, behavior and habitat requirements, the impacts to wildlife resources from all these actions will occur to individual species, rather than populations.

Birds. Birds that occur in the vicinity of the various construction zones, could be temporarily displaced from the immediate vicinity due to noise, human presence and removal of a total of approximately 9 acres of vegetation of the total 83,442 acres in the GTSR corridor. However most but not all project activities will occur in existing developed and disturbed areas that do not provide high-quality nesting habitat, partly because most birds tend to avoid disturbed high-use areas. Conservation/mitigation measures (see appendix A of the FONSI) to protect birds during the breeding season will be implemented to avoid adverse impacts. For example, during further design of proposed actions, efforts will be made to limit the removal of vegetation suitable for bird nesting.

The preferred/proposed alternative will contribute relatively small increments of beneficial and adverse impacts on the overall low level of adverse cumulative effects, until trigger points are reached that will initiate management actions such as construction of a new trail. When these trigger points are met and construction projects are initiated, three additional acres of undisturbed wildlife habitat will be disturbed, animals displaced, and long-term adverse impacts will result. In summary, when the effects of the preferred/proposed alternative are combined with other past, present, and reasonably foreseeable future impacts, the total cumulative impact on wildlife will continue to be minimally adverse and affect individuals rather than populations.

Character of Recommended Wilderness

During the four to six-month construction period in any given year, the continued presence of work crews, new ground and human disturbance, and noise associated with construction will degrade the undeveloped wilderness quality and opportunities for solitude. However, any trail and restroom work in recommended wilderness will be conducted mostly with hand tools, which will limit noise to localized areas (e.g., contained to the narrow trail corridor), and the use of mechanized equipment will be infrequent and will only occur after a minimum tool analysis. Although visual intrusions and noise from construction could extend many miles, the sights and sounds of construction will vary depending on topography, vegetation, and other site conditions, and effects will diminish as one moves away from the construction site.

Following construction, the presence of up to three backcountry toilets, the potential increase in trail mileage (three miles) in the recommended wilderness of the GTSR management area, and hardening of some trails for higher use levels will degrade the undeveloped character (due to the new structures), natural character (from changes in viewsheds, and earthwork that may be necessary for trails), untrammeled character (due to weed control activities), and opportunities for solitude and primitive and unconfined recreation (from increased visitor use, and maintenance and weed control for the new

structures). While these will be permanent changes to recommended wilderness, the impacts will be slight and localized and will not affect the potential for future designation of the area as wilderness. Additionally, improving or adding trails and adding new restroom facilities in heavily used areas will limit off-trail use, help reduce the footprint of informal trails, and promote recovery of native vegetation in disturbed areas leading to improvements in the natural quality of wilderness in some areas. These effects from the selected alternative will contribute a small, localized, incremental contribution to adverse impacts of other cumulative actions and will not substantially change the overall adverse cumulative effects already occurring now and in the future.

The selected alternative is consistent with the minimum requirement concept for the administration of Glacier's recommended wilderness. Actions described for implementing the selected alternative have been identified as the minimum necessary to minimize impacts on wilderness resources as much as possible. Methods to implement these actions have not yet been identified and will be further analyzed to identify the minimum tool once funding is approved and the design process begins.

Cultural Resources

The direct, indirect and cumulative impacts of the selected alternative on cultural resources will have small adverse impacts to cultural resources from the under-road crossing for pedestrians and bicycles and adding an asphalt bike trail to the 1913 Ranger Station; the new Avalanche shuttle stop, the expanded Hidden Lake Overlook, development of a vault toilet at Siyeh Bend adjacent to the GTSR and backcountry toilets in up to three locations. These changes will add localized, non-historic elements to historic settings, including the GTSR Road (a national historic landmark) that will diminish the integrity of an individual contributing resource. In addition, visual impacts associated with these intrusive elements will be confined mainly to the West Entrance and St. Mary Visitor Center areas. However, none of these changes will affect the eligibility of these resources for listing on the national register. All efforts will be made to avoid an adverse effect under Section 106 of the NHPA, from the development of an under-road crossing at St. Mary and the placement of one vault toilet on the GTSR. All other development will not occur within sight of the area of national significance of the GTSR. Mitigation, including surveying for archeological sites prior to siting backcountry toilets will avoid impacts.

By eliminating the adaptive management option to convert the Avalanche Campground, to parking from the selected alternative, this national register property will not be adversely affected. Instead, restoring the historic exit from the campground will result in a beneficial effect. Additionally, hardening the Avalanche Lake Trail and improving a trail partially around Avalanche Lake will not have an adverse impact to the historic setting of the Avalanche Campground and Picnic Area Historic District because it would not alter the design, location, or setting of the district. While this action could have an impact to the trail itself, the trail has not been assessed for eligibility, and the details of that potential impact will not be known until further design, completion of a cultural resource assessment, and conducting consultation under Section 106 of the NHPA.

Plans to expand parking at the St. Mary Visitor Center and Entrance Station by 10 spaces (approximately 10%) will be coordinated with the Blackfeet Tribe to avoid impacts to the medicine wheel installed in 2009; and will not have an adverse impact on the historic setting of the national register property because the parking area does not contribute to the national register eligibility of this historic property and therefore, the relatively small expansion will not meaningfully effect the character of the overall landscape in which this facility is located, and the changes will not affect the national register eligibility. When the small, adverse incremental effects of the selected alternative are combined with other past, present, and reasonably foreseeable future impacts, the total cumulative impact on cultural resources will continue to be beneficial.

On December 7, 2018 a letter was sent to the SHPO asking them to sign a MOA on the GTSR Corridor Plan. On December 13, 2018 in a conference call with the Montana SHPO, they agreed to the following

for the GTSR Corridor Plan. (1) When actions are triggered, additional NHPA consultation will occur. The SHPO and ACHP (on 12.13.18) agreed that a MOA was not the route to resolve adverse effects at this time due to the lack of specific detail and did not sign the MOA. On March 18, 2019 the park met with the Confederated Salish and Kootenai THPO's office. The THPO agreed that section 106 would be conducted once thresholds are triggered as described in the plan. They had no other comments. On February 7th, 2019, the park met with the Blackfeet Tribe THPO's office. The THPO did not have any comments. No comments were received from the Blackfeet THPO or CSKT THPO during the comment period on the plan and environmental assessment that began in September 2019.

CONCLUSION

As described above, the selected alternative will not have a significant effect on the human environment in accordance with Section 102(2)(c) of NEPA. Based on the foregoing, it has been determined that an EIS is not required for this project and, thus, will not be prepared.

APPENDIX A: MITIGATION MEASURES

Mitigation includes those measures and actions taken to reduce the anticipated environmental effects of the proposed action. These measures may include actions to minimize or mitigate potential impacts. Mitigation measures are an integral component of the proposed action and will be implemented as part of the project.

GENERAL CONSTRUCTION MEASURES

A number of mitigation measures for construction-related activities will be incorporated into the project design to reduce natural and cultural resource impacts. An overview of construction-related mitigation measures is provided below. These measures will be applied to actions like redesign of the Avalanche developed area, additional new parking areas, and trail construction.

Construction zones will be identified and fenced with appropriate materials to confine activity to the minimum area required for construction. All protection measures will be clearly stated in construction specifications, and workers will be instructed to avoid conducting activities beyond the construction zones.

- A safety plan will be developed prior to initiation of construction work to ensure the safety of park visitors, workers, and park personnel.
- Construction staging areas will be identified and limited to existing areas of disturbance or within the specific work zone for each project.
- No material borrow sources (other than native rock collection) or asphalt batch plants will be located in the park.
- Equipment servicing or refueling within 100 feet of streams or water bodies will be prohibited. Contract specifications will include restrictions on the location of fueling sites, requirements for spill containment, and other measures to safeguard aquatic and terrestrial habitat from construction-related contaminants.
- All chemicals and petroleum products will be stored and contained away from water sources.
- All hazardous material use will require contractor compliance with applicable federal and state laws.
- No chemicals will be used for dust abatement.
- Vehicle traffic will be managed in the construction zone, and contractor hauling of materials, supplies, and equipment will be controlled to minimize disruptions in visitor traffic.
- Traffic delays and other limitations in visitor access will be disclosed in advance of construction.

Resource specialists, including landscape architects, biologists, botanists, historians, environmental specialists, and archeologists, will be involved in inspections and monitoring and will provide recommendations prior to specific project implementation and as needed throughout the project area.

SUSTAINABLE DEVELOPMENT

New construction projects (buildings, facilities, utilities, roads, bridges, trails, etc.) or reconstruction projects (e.g., road reconstruction, building rehabilitation, utility upgrade, etc.) will be designed to blend with the surroundings, including in areas prone to erosion. Projects will reduce, minimize, or eliminate air and water point and nonpoint source pollution. Projects will be sustainable whenever practicable by recycling and reusing materials, minimizing materials, minimizing energy consumption during the project, and minimizing energy consumption throughout the life span of the project.

NATURAL RESOURCE MITIGATION

Mitigation and conservation measures will be incorporated into the selected alternative to minimize potential impacts on wildlife, aquatic life, and other sensitive plant and wildlife species. Measures applicable to protecting resources and minimizing impacts are described below.

WILDLIFE, AQUATIC, AND SENSITIVE RESOURCES

- Design projects to avoid prime nesting time and times when the area will be used for prime foraging or other habitat use.
- Avoid removing snags, cavity nest trees, and other high-value natural features to the extent possible. If clearing is necessary, remove cavity trees during the nonbreeding season.
- Surveys for sensitive and listed bird species nests will be conducted prior to design activities, as necessary.
- Where existing informal trails are formalized, actions will be taken to prevent creation of new informal trails.
- Locate construction activities to minimize interference with wildlife foraging and movement patterns by time of day and season.
- Evaluate habitat prior to construction activities and take steps to minimize impacts on species likely to occur and those species determined to be especially vulnerable.
- Install and maintain temporary fences or other barriers to protect sensitive resources adjacent to construction sites (as defined by wildlife-friendly fence specifications).
- Alert construction crews to follow contract stipulations related to food storage and bear-aware policies.
- Maintain routes of escape for animals that might fall into excavated pits and trenches and cover post holes and other narrow cavities or crevices.
- Take appropriate measures to reduce the potential for human-bear conflicts. All contractors and employees will be trained and required to comply with the park's bear management plan and food storage regulations during construction and rehabilitation activities. All project staff, trainees, and other personnel will be briefed about food storage needs and bear safety protocols.
- Bear-resistant garbage containers will be required. Food, fuel, and other attractants will be stored and handled to minimize potential conflicts (i.e., no food, garbage, drink, trash, or food and drink containers will be placed outside vehicles, trailers, or bear-resistant containers except during times when they are being attended). Equipment, materials, and supplies in the staging area(s) will be secured by hard-sided storage containers. Work will be temporarily halted if bears approach within 100 yards of an unfenced work area. Workers will allow the bear(s) to pass through the work area before starting or resuming mobilization, construction, or demobilization activities. All bear sightings will be reported to resource management staff. Any human-bear conflict will be reported to Glacier Dispatch immediately. The handbook *Bear Safety, Site Sanitation and Other Requirements While Working in Glacier National Park: a Handbook for Construction Contractors* will be provided to all contractors and work crews.

- Use wildlife volunteers to inform visitors about the possible presence of wildlife before, during, and after construction projects are completed to minimize immediate and long-term impacts on wildlife and wildlife habitat.
- Define boundaries of developed areas to confine human use and limit radiating impacts. Avoid use of roadway development and maintenance features that would present a barrier or hindrance to wildlife movement and migration.
- Limit the effects of light and noise on adjacent habitat through control of sources during construction activities.

GEOLOGY, SOILS, AND WATER RESOURCES

Geologic features will be protected to the extent possible. Excavation for trails and parking areas will be selectively used to complete the project or necessary rehabilitation around construction sites. Care will be taken to avoid damaging geologic features and remaining rock.

Erosion and sediment control measures from the “Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects” (FHWA 1996 and updates) will be used for rehabilitation work along with other best management practices that include those generally accepted technical measures that are considered most effective and practicable for controlling pollutants and minimizing impacts to the environment. In addition, a stormwater and sediment control plan will be prepared prior to construction to protect soil resources, minimize erosion, and prevent sediment-laden water from reaching nearby streams. Components of this plan include implementation of measures to minimize the loss of soil material before, during, and after construction. General erosion control best management practices typically will include the following:

- Minimize the area of disturbance to defined construction zones and limit the time of soil exposure.
- Conduct site-specific geotechnical and drainage monitoring.
- Install filter barriers as necessary (silt fences, certified weed seed-free straw bales, coir logs).
- Construct sediment retention structures on a site-by-site basis (temporary and permanent sediment traps, sediment basins).
- Provide culvert outlet protection on a site-by-site basis (riprap aprons or basins to reduce water velocity and prevent scour) and provisions for fish passage.
- Revegetate disturbed areas.
- Conduct periodic water quality monitoring in nearby streams.

Topsoil will be removed prior to road and parking lot construction and stored for use in revegetation rather than importing topsoil from outside the park. Selective topsoil redistribution to soil-deficient areas will be used as needed, but topsoil would not be stockpiled over the winter. Long-term soil protection will come from prompt revegetation of disturbed areas following construction as described below.

FEDERALLY LISTED CANDIDATE SPECIES AND OTHER WILDLIFE SPECIES OF MANAGEMENT CONCERN

The US Fish and Wildlife Service will be consulted on the frequency required for surveys prior to commencement of construction activities. Site and design facilities/actions will be applied to avoid adverse effects on rare, threatened, and endangered species.

- Develop and implement restoration and/or monitoring plans, as warranted. Plans will include methods for implementation, performance standards, monitoring criteria, and adaptive management techniques.
- Inform construction workers and supervisors of the potential for special status species in the work vicinity. Contract provisions will require the cessation of construction activities if a special status species is discovered in the project area until park staff reevaluates the project. This will allow modifications of the contract for any measures determined necessary to protect the discovery.

Grizzly Bear (in addition to those measures described above for bears in the "Wildlife, Aquatic and Sensitive Resources" section)

- Enforce speed limits on the road to reduce vehicle-related injuries of bears and other wildlife whose carcasses could attract bears to the road, further increasing risk of injury.
- Implement measures to reduce the potential for human-bear conflicts. Specifications for storage and disposal of food, refuse, construction materials, petroleum products, human waste, and other attractants would be incorporated into the construction contract to minimize the potential for impacts.
- Construction personnel will be trained in how to behave in the presence of bears. Should a habituated bear frequent the area, construction activities may be temporarily suspended while management actions are implemented.
- Timing and location of construction activities will be considered when planning specific projects to minimize disruption of wildlife foraging and movement patterns.
- The park's resource management staff will monitor the activity of grizzly bears and other wildlife. Law enforcement rangers will enforce requirements for storage of food, garbage, petroleum products, and other attractants, and enforce regulations that prohibit feeding wildlife during construction activities.

Bald Eagle

- Timing and location of construction activities will be used to minimize disruption of bald eagle foraging and movement patterns in consultation with resource management staff.
- Establish buffer zones of at least 328 feet surrounding bald eagle forage sites to reduce human disturbance to foraging eagles (NPS 1999).
- Most construction activities will not occur in the winter, reducing impacts on bald eagle winter locations at St. Mary Lake.
- If a nest is found to be active within 328 feet of a project site, the contractor may be required to implement noise reduction mitigation depending on the date, time, type, and duration of work to ensure bald eagle nesting success.

Canada Lynx

- Plan the timing and location of construction activities to minimize disruption of wildlife foraging and movement patterns.

- Any observation of Canada lynx in a project area will be reported to resource management staff and appropriate action would be taken to reduce potential impacts.

Bull Trout

- Involve resource specialists in inspections and monitoring and provide recommendations during relevant project work.
- Locate any proposed facilities (shuttle stops or vault/backcountry toilets) at least 100 feet from the stream channel outside the riparian area to avoid adversely modifying bull trout critical habitat.
- All hazardous material use will require contractor compliance with applicable federal and state laws.
- Store chemical and petroleum products away from water sources. Avoid servicing and refueling equipment within 100 feet of streams or water bodies. Contract specifications will
- include restrictions on the location of fueling sites, requirements for spill containment and other measures to safeguard aquatic and terrestrial habitat from construction-related contaminants. Draining oil, hydraulic fluids, anti-freeze, or other chemicals in the park would be prohibited.
- Minimize the areas of disturbance to defined construction limits.
- Conduct site-specific geotechnical and drainage monitoring.
- Install filter barriers as needed.
- Construct sediment retention structures (temporary and permanent sediment traps, sediment basins) as needed.
- Provide culvert outlet protection. If culverts are added or replacements are needed, oversized culverts would be considered in order to address fish passage concerns where appropriate. Park culverts have a minimum diameter of 19 inches for permanent stream crossings and cross drains to enable fish passage.
- Implement best management erosion and sediment control measures to prevent sediment introduction into wetlands and waterways. The National Park Service will provide contractors with acceptable locations, amounts, and timing of water withdrawals from streams and lakes to minimize impacts to aquatic life and spawning habitat. Pumps for water withdrawals will be required to have screens to prevent fish entrainment.
- Construction activities such as culvert or trail work in perennial streams will be conducted outside spawning season to avoid impacts to native fish.

VEGETATION AND PLANT SPECIES OF CONCERN

Impacts to native vegetation in and adjacent to proposed work sites will be minimized by limiting the area of disturbance and using temporary barriers to define the work zone. NPS staff restoration biologists and landscape architects will work closely with construction contractors to minimize impacts to vegetation and ensure acceptable reclamation and revegetation of disturbed areas.

Mitigation to reduce impacts on vegetation resources and ensure revegetation areas will include the following:

- Implement best management practices to prevent wind and water erosion (FHWA 1996 and updates).
- Salvage topsoil with existing seed sources along with suitable plant material for transplanting.

- Implement landscaping design features, such as slope rounding, to minimize visual impacts and to aid in creating suitable site conditions for revegetation.
- Apply topsoil and native seed according to site-specific conditions and vegetation communities.
- Apply soil amendments, mulches, organic matter, and other measures, as appropriate, to facilitate revegetation.
- Revegetate to restore native vegetation to areas disturbed during construction.
- Reseed and replant using native species from genetic stocks originating in the park. Plant species density, abundance, and diversity would be restored as nearly as possible to pre-construction conditions for nonwoody species.
- Monitor to evaluate vegetation cover and develop contingency and maintenance plans if vegetation cover is not similar to original ground cover.
- Plan projects for periods when vegetation is less susceptible to damage.
- Conduct rare plant surveys of site areas as appropriate.
- Prepare vegetation management plan for the entire GTSR corridor.

Additional measures to prevent the introduction and spread of noxious weeds during construction include the following:

- Continue current weed management practices in accordance with the park's Exotic Vegetation Management Plan (NPS 1991) and including preventive measures in all construction contracts.
- Conduct weed control measures prior to ground-disturbing activities.
- Minimize the area of disturbance and the length of time that soils are exposed.
- Avoid using topsoil currently supporting nonnative plants.
- Require that all construction vehicles be pressure washed to remove mud and weed seed prior to entering or reentering the park.
- Limit fertilizer use that may favor weeds over native species.
- Use periodic inspections and spot controls to prevent weed establishment. If weeds invade an area, an integrated weed management process to control specific weed species will be used.

Wetlands

- Conduct a wetland survey by qualified NPS staff or certified wetland specialists to certify wetlands in or adjacent to project areas. Clearly mark delineated wetlands before construction work begins and apply protection measures before any ground disturbance.
- Through consultation with the NPS regional wetland ecologist, determine if a wetlands statement of findings is needed for any future project implementation that could affect wetlands and produce wetlands statement of findings documents where necessary.
- Perform construction activities in a careful manner to prevent damage caused by equipment, erosion, siltation, etc.
- As appropriate, protect wetland resources by avoiding wetlands during construction. Use bridge crossings or retaining walls wherever possible, exercising increased caution to protect wetland resources from damage caused by construction equipment, erosion, siltation, and other activities with the potential to affect wetlands. Take measures to keep construction materials from escaping work areas, especially near streams or natural drainages. Use elevated pathways over wetland sections where it is not feasible to avoid the wetland.

Wilderness

- If helicopter flights are necessary for projects in recommended wilderness, they will be combined with other administrative helicopter flights whenever possible. They will be part of the 50-flight annual quota.
- Flights will only occur May 1 to October 1 in accordance with the conservation measures in the park's programmatic biological assessment for administrative flights.
- Guided day hike group sizes will be limited on some trails.
- A permit system for day hikers will be implemented on some trails if wilderness character deteriorates.

Air Quality

- Implement a dust abatement program. Standard dust abatement measures may include the following elements: water spraying or otherwise stabilizing soils, covering haul trucks, employing speed limits on unpaved roads, minimize vegetation clearing, and revegetate after construction.
- Reduce or eliminate idling of construction and public vehicles.
- Assure all construction equipment complies with EPA emission standards in effect at the time of manufacture.
- If needed, locate asphalt batch plants outside the park and sited in compliance with Montana Department of Environmental Quality requirements.

Night Skies

- Use artificial light only where needed and only at times when needed. Controls that automatically dim or switch outdoor lights may be used to mitigate environmental impacts and conserve energy.
- Select the most efficient lamps and fixtures that minimize negative impacts and use the minimum amount of light necessary.
- Shield and direct downward all artificial light to prevent any up-light and minimize glare.

Visual Resources

- Site and design trails to route people away from sensitive natural and cultural resources while still allowing access to important viewpoints.
- New construction will be designed to blend with existing structures to the extent practicable through similar architectural features, materials, and color.
- Use existing vegetation and additional landscaping to screen new infrastructure to the extent possible.

Natural Sounds

- Select quiet technology options for park equipment and installations, including but not limited to pavement, engines, and machinery.
- Schedule projects to avoid creating noise intrusions during important wildlife activity times or key visitation times.
- Conduct periodic noise monitoring at key locations.

Cultural Resource Mitigation

Construction will be conducted in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (USDI 1997) and recommendations from the cultural landscape inventory (RTI 2001) and cultural landscape report (RTI 2002, 2003). The National Park Service will consult with the SHPO and Advisory Council on Historic Preservation on a project by project basis. If during the course of final design, circumstances occur that result in an unavoidable adverse effect, the National Park Service will work with the SHPO and Advisory Council on Historic Preservation according to section 106 procedures to determine mitigation requirements. The type and level of mitigation required will vary depending on the resource involved and the level of damage. Historic documentation, public interpretation, and restoration of related historic resources are among potential mitigation steps.

General measures applicable to protecting cultural resources and minimizing impacts are described below.

Historic Structures, Sites, Cultural Landscapes, and Visual Resources

- Design all new construction within or adjacent to historic sites, districts, and cultural landscapes to be compatible in terms of architectural elements, scale, massing, materials, and other character-defining features.
- Landscaping and revegetation will be implemented to reduce the visual impacts of new construction on historic sites, districts, and cultural landscapes.
- Any proposed additional signage will be designed and placed in a way that does not detract from cultural resources, their historic character, or viewsheds.

Archeological and Ethnographic Resources

- Tribes hold a body of knowledge that may result in the identification of ethnographic resources in the area in the future. If ethnographic resources are identified later, consultation will occur in accordance with federal law, regulation, and NPS policy.
- As appropriate, conduct archeological surveys or monitoring prior to any ground disturbance.
- Should construction unearth cultural resources, work will stop immediately in the area of discovery and the park will consult with the State Historic Preservation Office(r) and the Tribal Historic Preservation Officer. In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act of 1990 will be followed.
- All contractors and subcontractors will be informed of the penalties for collecting artifacts or intentionally damaging paleontological materials, archeological sites, or historic properties.
- Follow site-specific planning and compliance procedures for all projects with the potential for ground disturbance. Adverse impacts to cultural resources will be avoided to the extent possible in accordance with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation.

Quality of the Visitor Experience

- Implement measures to reduce adverse effects of construction on visitor experience. Measures may include, but are not limited to, noise abatement, visual screening, and directional signs so visitors are able to avoid construction activities.
- Conduct construction work to avoid peak visitor use times (i.e., weekends, holidays, and peak season/times of day) to minimize inconveniences to visitors to the extent practicable.
- Make information available to the public regarding implementation of projects in public areas.
- Continue to collect and use visitation data and other information to identify user conflicts.
- Implement an interpretation and education program to promote visitor understanding of the history and character of the corridor, changes being made to corridor management, appropriate uses of the corridor, and avoidance of potential resource impacts.
- Improve directional signs and interpretive media at waysides and other visitor service areas.

Access and Opportunities

Make every reasonable effort to ensure that National Park Service and partner facilities, programs, and services are accessible to and usable by all people, including those who are disabled. This policy is based on the commitment to provide access to the widest cross-section of the public and to ensure compliance with the intent of the Architectural Barriers Act (42 USC 4151 et seq.) and the Rehabilitation Act (29 USC 701 et seq.).

Appendix B – Non-impairment Determination

The NPS Organic Act of 1916 directs the NPS to "conserve the scenery, natural, and historic objects, and wild life in the System units and to provide for the enjoyment of the scenery, natural and historic objects, and wild life in such manner and by such means as will leave them unimpaired for the enjoyment of future generations" (54 USC 100101). NPS Management Policies 2006, Section 1.4.4, explains the prohibition on impairment of park resources and values:

"While Congress has given the Service the management discretion to allow impacts within parks, that discretion is limited by the statutory requirement (generally enforceable by the federal courts) that the Park Service must leave park resources and values unimpaired unless a particular law directly and specifically provides otherwise. This, the cornerstone of the Organic Act, establishes the primary responsibility of the National Park Service. It ensures that park resources and values will continue to exist in a condition that will allow the American people to have present and future opportunities for enjoyment of them."

An action constitutes impairment when its impacts "harm the integrity of park resources or values, including the opportunities that otherwise will be present for the enjoyment of those resources or values" (NPS 2006, Section 1.4.5). To determine impairment, the NPS must evaluate the "particular resources and values that will be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts. An impact on any park resource or value may constitute impairment, but 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 to opportunities for enjoyment of the park; or
- identified in the park's general management plan or other relevant NPS planning documents as being of significance (NPS 2006, Section 1.4.5).

Fundamental resources and values for Glacier National Park are discussed in the 1999 General Management Plan and 2016 Foundation Plan. Resources that were carried forward for detailed analysis in the EA and are considered necessary to fulfill specific purposes identified in the establishing legislation; are key to the natural or cultural integrity of the park; and/or identified as a goal in relevant NPS planning documents include: vegetation, recommended wilderness, Species of Management Concern (ESA and State Listed species), wildlife and cultural resources. Accordingly, a non-impairment determination is made for each of these resources. The non-impairment determination does not address impacts to visitor use and experience as this does not constitute a resource or value subject to the non-impairment standard.

Vegetation The selected alternative will permanently remove up to 9.0 acres of common vegetation from constructing of new shuttle stops, widening 1.25 miles of road, adding or expanding three parking lots in high visitor use areas, adding a bike path and improving one trail. This acreage also includes adaptive management actions including construction of three miles of one backcountry trail and construction of backcountry toilets in the backcountry. Impacts will be minimized by locating staging areas in previously disturbed or developed areas, best management practices will be implemented (see Appendix A of this FONSI). Adverse impacts will not affect plant species at the population level because the disturbance will be localized to project areas and plants species are more wide ranging. Tree removal will be avoided as much as possible and limited to hazard trees. Because impacts will largely occur in areas already disturbed and or will be revegetated, there will be no change in species abundance, distribution and no population level effect. Overall, the selected action would contribute very small adverse and beneficial increments to the cumulative effects on vegetation from other past, present, and reasonably foreseeable future actions, and will remain minimally adverse.

Character of Recommended Wilderness During the four to six-month construction period in any given year, construction activities will degrade the undeveloped wilderness quality and opportunities for solitude. However, work in recommended wilderness will be conducted mostly with hand tools, which will limit noise to localized areas (e.g., contained to the narrow trail corridor); the sights and sounds of construction will vary depending on topography, vegetation, and other site conditions; and effects will diminish as one moves away from the construction site. In addition, the use of mechanized equipment will be infrequent and will only occur after a minimum tool analysis. Following construction, the presence of up to three backcountry toilets, the potential approximate 3.0 increase in trail mileage in the recommended wilderness of the GTSR management area, and hardening of some trails for higher use levels will introduce permanent changes in recommended wilderness that would affect the undeveloped character, natural character, untrammeled character, and opportunities for solitude and primitive and unconfined recreation (from increased visitor use, and maintenance and weed control for the new structures). However, these impacts will be slight and localized and the vast majority of the wilderness in the GTSR corridor will be unaffected. Overall because these changes are localized and site specific and affect approximately up to three acres or approximately 3% of the total 927,550 the selected alternative will not affect opportunities to experience the recommended wilderness or the potential for future designation of the area as wilderness.

Wildlife The selected alternative will adversely disturb and affect approximately nine additional acres of foraging, nesting, travel corridors, denning, movement and cover habitat within the total 183,860 acres (4%) in the GTSR Corridor. Three of these acres are in backcountry which make them more valuable for wildlife habitat. Six acres are in developed areas that are already impacted. Impacts to wildlife will include disturbance, displacement and habituation. While the dispersal of visitor use would result in a slight benefit to these species in high use areas during the peak summer season, individual animals residing in or near the corridor will continue to be locally affected by high traffic volumes in the GTSR corridor as a result of noise levels, visitor activity, impacts to safe movement across the road, and an increased potential for vehicle collisions. In addition, individuals residing in or near current low-use areas that could see increased visitation could experience an increase in adverse impacts as described above. The selected alternative will adversely affect wildlife from continued high visitor use of trails in certain locations but will have beneficial impacts by managing some trails in the corridor for lower levels of visitor use. Wildlife will be temporarily affected by the construction of backcountry toilets and long-term impacts from development in an undeveloped area. However, there will also be beneficial impacts from removing the attractants and social trails that result from human waste. Construction of one new trail will adversely affect wildlife species by formalizing trail use in a travel corridor used by bears and others. This will result in displacement and increased encounters between visitors and bears, however species will not be affected at the population level because the disturbance will be mostly localized and predictable for wildlife. And, there is ample available in the GTSR corridor to support any individual animals that may be displaced as a result of the plan. Thresholds and triggers will also mitigate impacts to these species. Overall, the selected action will contribute very small adverse and beneficial increments to the cumulative effects on wildlife from other past, present, and reasonably foreseeable future actions, which will remain minimally adverse.

Species of Management Concern (ESA Listed, Proposed and Candidate Species and State Listed Species)

The selected alternative will adversely disturb and affect approximately nine additional acres of foraging, nesting, travel corridors, denning, movement and cover habitat for species of management concern within the total 183,860 acres (4%) in the GTSR Corridor. Three of these acres are in backcountry which make them more valuable for some of these species. Six acres are in developed areas that are already impacted. The selected alternative will adversely affect species of special management concern from continued high visitor use of trails in certain locations but will have beneficial impacts by managing some trails in the corridor for lower levels of

visitor use. Federally listed species and wildlife will be temporarily affected by the construction of backcountry toilets and long-term impacts from development in an undeveloped area. However, there will also be beneficial impacts from removing the attractants and social trails that result from human waste. Construction of one new trail will adversely affect species of special management concern by formalizing trail use in a travel corridor used by grizzly bears. This will result in displacement and increased encounters between visitors and bears, however overall, these impacts will be minimally adverse because they are site specific and will not adversely affect species of concern at the population levels.

In a biological assessment (BA) and letter submitted to the USFWS in compliance with section 7 of the Endangered Species Act (ESA), the National Park Service determined that the selected alternative (with the exception of the new trail from Big Bend to the Highline) may affect, but is not likely to adversely affect grizzly bear, Canada lynx and Canada lynx habitat. The selected alternative will have no effect on bull trout, bull trout critical habitat, meltwater lednian stonefly, western glacier stonefly, Spalding's campion (or catchfly), and water howellia. The USFWS concurred with park's determinations on September 23, 2019. If the new trail from Big Bend to the Highline is triggered by use levels on the Highline Trail, formal consultation will be conducted with the US Fish and Wildlife Service.

Cultural Resources— The under-road crossing for pedestrians and bicycles and new bike trail at the 1913 Ranger Station, development of a toilet at Siyeh Bend, and a new toilet at the Avalanche shuttle stop, the Hidden Lake Overlook, and near Haystack on the Highline Trail, will add localized, non-historic elements to historic settings, including the GTSR Road (a national historic landmark). The adverse impacts will be localized mainly due to the physical addition of non-historic elements to historic settings. These additions will be designed to blend in and incorporate historic design elements. The visual impacts will be confined mainly to the St. Mary Visitor Center area and therefore will be localized and site specific. All efforts will be made to avoid an adverse effect under Section 106 of the NHPA from the development of an under-road crossing at St. Mary, the bike trail at the 1913 Ranger Station and the placement of one vault toilet on the GTSR at Siyeh Bend. This new development will diminish the integrity of an individual contributing resource but will not render any of the resource's ineligible for listing in the national register. Overall, the small, adverse incremental effects of the selected alternative combined with other past, present, and reasonably foreseeable future impacts on cultural resources, will be beneficial.

Conclusion

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 the above-noted resources will continue to be available for enjoyment by current and future generations, and there will be no impairment of park resources and values from implementation of the selected alternative.

Appendix C – Errata Sheets (Text Changes)

The 2015 NPS NEPA Handbook defines substantive comments as 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.

Five hundred and thirty comment letters and numerous phone calls were received during public review of the EA, some of which resulted in text changes to the EA. The text changes are identified below. No comments warranted development and detailed analysis of an additional alternative or reconsideration of alternatives that were considered but dismissed. No changes were made in the assessment of environmental consequences that resulted in significant impacts.

Text Changes – Strikeout shows what has been removed; bold text is new text added

Text changes have been made for the following reasons:

- Correct errors and make minor editorial changes for clarification
- Clarify
- Remove
- Provide additional description

Page 5: Figure 2: The Vicinity Map incorrectly showed Flathead National Forest on the east side of Marias Pass. Helena, Lewis and Clark National Forest is east of Marias Pass to the boundary of the Blackfeet Reservation.

Page 10: Desired Conditions for Selected Fundamental Resources and Values and Other Important Resources and Values.

5th Bullet:

The historic Red Bus ~~and Sun Tours Interpretive Bus Tours and GTSR~~ shuttle service can easily circulate on the GTSR and throughout the park.

Page 11 Alternative Transportation

Last bullet

- Continue to allow guided **interpretive** driving tours through concessioners and other **businesses approved commercial visitor services** with commercial use authorizations.

Page 12 Trails and Trailhead Facilities

3rd bullet

- Allow guided hiking tours through concessioners-and or commercial use authorizations ~~with no restrictions to daily visits or group sizes. according to their contracts, with limits on group sizes and trails.~~

Page 17 Indicators and Thresholds

4th paragraph

Initially, data from 2012 **was used as the baseline to informed....**

Page 18, Alternative Transportation—Expanded Shuttle System and Related Projects

3rd paragraph,

Under this alternative, visitors would continue to have ~~free~~-access to the shuttle after entering the park.

2nd bullet

- Continue to operate the system seasonally depending on snow removal operations each year.
~~Continue to run shuttles in both directions between local West Glacier businesses and local St. Mary businesses and Expand hours to 6:30 a.m. to 9:00 p.m. daily.~~

2nd dash

-West Side Construction Staging Area: Add a shuttle stop with an approximately 200-square-foot concrete pad waiting area, a shelter, related signage, and a vault ~~or a backcountry~~ toilet.

Page 19, Alternative Transportation—Expanded Shuttle System and Related Projects continued.

Third dash

1913 Ranger Station: ~~Adaptive Management Option~~-Add a shuttle stop with an approximately 1200 square foot concrete pad waiting area, ~~if conditions exceed thresholds and/or capacity.~~

2nd bullet

- **Modify other shuttle drop-off schedules at other trail locations to distribute use levels.**
- ~~Sun Point Adaptive Management Option: The National Park Service would consider establishing a new transfer point at Sun Point on the east side so that larger buses would operate between St. Mary's Visitor Center and Sun Point; then visitors would transfer to smaller passenger vans that can navigate the narrow mountainous corridor. These passenger vans would operation from Sun Point to Logan Pass.*~~

Access by Private Vehicle Including Traffic Management and Parking

4th bullet

- **Continue to allow private vehicles 21 feet in length and less to access the entire length of the GTSR corridor.**

9th bullet

- Restrict overnight parking in the corridor during peak season for visitors with **backcountry overnight permits while the shuttle is in operation. During peak season, all parking lots (except for those associated with overnight hotels/motels) in the corridor will be designated for day use parking only with signage. The area of restriction could change depending on conditions.**

Page 20 Access by Private Vehicle Including Traffic Management and Parking

First bullet:

3rd dash - Timed-entry parking permits will only be valid for entry parking during a specified time and when accompanied by an entrance pass. Provide opportunities to purchase entrance passes in tandem with parking permits, separately online, and at locations including visitor information centers.

5th dash: *-Adaptive Management Option:* Monitor vehicles numbers at other sites such as Avalanche, Big Bend, and St. Mary Visitor Center to ensure these areas are meeting desired conditions. If conditions exceed thresholds, to assure that desired conditions are maintained, a parking permit system will be implemented at these locations ~~as the second phase.~~

2nd bullet

- West Side Construction Staging Area. Widen the 0.25-mile segment of Quarter Circle Bridge Road to the **old Ball Field** approximately 8 feet to accommodate increased traffic. Convert the site to an **approximately 100-space** parking area for passengers and oversized vehicles and install two electric vehicle solar powered charging stations.

3rd bullet

Apgar Visitor Center and Transit Center ~~Developed Area~~. Add two hard-wired electric vehicle charging stations.

Page 23 top of page Access by Private Vehicle Including Traffic Management and Parking

- Adaptive Management Option: To allow the park to respond to changes in visitation levels and the need for additional parking, ~~the park would continue to use the Avalanche Campground for parking in the shoulder seasons before it opens and closes for camping. following dynamic parking configurations and uses would be implemented seasonally, resulting in a range of 128–269 available parking spaces (see figure 5):~~
- **Implement a phased day use parking permit system using the following parameters. Hold a percentage of permits aside for short-term purchase (i.e., day of, day before, week of). Add leftover advance reservations and no-shows to the short-term reservation pool.**
- **Provide opportunities to obtain permits online and in locations throughout the park and local community.**
- **Timed-entry permits would only be valid for entering during a specified time and when accompanied by an entrance pass. Provide opportunities to purchase entrance passes in**

tandem with parking permits, separately online, and at locations including visitor information centers.

- Fund operation of the parking permit system through a fee associated with the reservation. The fee would be tied to the cost of operating the reservation system.
- Adaptive Management Option: After initial implementation of the day use parking permit system, monitor the number of permits, allocations of permits (between types of users), or the length of time a parking permit is valid. Adjust these up or down to ensure the highest possible use of the existing available parking while achieving and maintaining desired conditions.
 - ⊖ Maintain 10 existing spaces for oversized vehicle parking and turnaround. Maintain picnicking in the existing area as either walk-in or drive-in, dependent on the level of visitation. As parking demand increases, move picnicking to the middle of loop A and use the ~~existing picnicking area for parking (adding approximately 35 to 40 parking spaces for both regular and oversized vehicles)~~.
 - ⊖ ~~If parking demand warrants during peak season, temporarily close a portion of campground loop A to accommodate approximately 125 vehicles.~~
 - ⊖ ~~If parking demand during peak season increases, close the campground to camping during peak season only and use all the sites for parking. Use the currently abandoned campground loop for parking and construct a secondary road segment to connect the abandoned loop to loop A. This would provide approximately 57 parking spaces in the abandoned loop; an additional approximately 100 parking spaces in the remainder of campground loop A; and approximately 120 parking spaces in loop B. Parking in these loops would only occur within the existing footprint.~~

St. Mary Visitor Center. Add **approximately** 10 additional parking spaces on undisturbed flat ground.

Collectively, these proposed actions would add up to approximately **400-150** additional parking spaces in the corridor, for a total of approximately **2,400-2250** spaces.

Page 23 Trails and Trailhead Facilities

Collectively, the proposed actions include up to **7.5-3** miles of new trail, as follows:
first bullet:

- Avalanche Developed Area. Construct a vault toilet near the new shuttle shelter. Do not allow commercially guided hikes and large organized group hikes during peak season (currently July and August), and limit them to two trips per day and **25-35** people per trip per operator during other seasons.

of the trail in appropriate locations to accommodate high-use levels. **Improve existing trail from the foot to the head of Avalanche Lake. Formalize trail extension for 0.5 mile around a portion of the lake.**

First bullet:

- Big Bend. ~~Add a removable vault or backcountry toilet during peak season.~~ Adaptive Management Option: If conditions exceed thresholds **and to ensure that desired conditions are maintained and/or capacity**, designate one-way travel along the Highline Trail (from Logan Pass to the Big Bend cutoff) during peak season **and during peak travel hours on the trail. The Big Bend cutoff would also be one-way travel only from the Highline to the Big Bend pullout. This trail would be open only for part of the season, opening mid to end of July and closing around Labor Day. Exceptions would be made in the event of wildlife encounters or other emergency type situations.** Construct an approximately 3-foot-wide and 3-mile-long exposed soil footpath from Big Bend to the Highline Trail for **one-way travel during peak season.** Due to wildlife concerns, upon further design of this trail, consultation under the Endangered Species Act would be required and a determination would be made regarding the need for any additional environmental compliance.
- Logan Pass. Assign volunteers during peak season **and peak travel hours daily** to conduct foot traffic control at the cliff area on the Highline Trail. Designate one-way travel on the Highline Trail to Big Bend and implement a timed-entry permit system for hiking this trail to manage use levels **and for safety. Exceptions for one-way travel would be made in the event of wildlife encounters or other emergencies.** Establish a group size of 25 people for commercially guided hikes and a maximum of two trips per day per operator along the Highline Trail (exempt concessioner-guided hikes from this hiking permit requirement). Construct a backcountry toilet near Hidden Lake Overlook and another at Haystack Butte on the Highline Trail. Enlarge Hidden Lake Overlook by approximately 15 square feet.
- ~~Lunch Creek. Adaptive Management Option: If conditions exceed thresholds and/or capacity, reestablish an approximately one-mile-long footpath from Lunch Creek to Logan Pass along a historic construction road used to build the GTSR corridor. Due to wildlife concerns, consultation under the Endangered Species Act would be required and a determination would be made regarding the need for any additional environmental compliance.~~
- Siyeh Bend. ~~Construct a backcountry vault toilet at the pullout in the first mile of the trail and a backcountry toilet another at Preston Park if new toilet at Siyeh Bend doesn't resolve the human waste issue.~~ Adaptive Management Option: If conditions exceed thresholds and/or capacity, construct a one-mile trail from Siyeh Bend to Lunch Creek (4 foot wide soil footpath) using an existing unmaintained horse trail. Due to wildlife concerns, consultation under the Endangered Species Act would be required and a determination would be made regarding the need for any additional environmental compliance.
- Gunsight Pass Trailhead at Jackson Glacier Overlook. Manage the trail for a lower level of use to offer opportunities for solitude in the corridor. Promote use of the trail from Jackson Glacier Overlook to Sun Point during peak season and consider implementing a day hike permit system **to maintain desired conditions, if use increases.**
- St. Mary and Virginia Falls Trail. ~~Construct a backcountry vault toilet along the trail about 0.5 mile from the trailhead.~~ Establish a group size of 25 people for commercially guided hikes **and all organized groups** and a maximum of two trips per day per operator along the St. Mary Falls Trail.

An exception to the group size would be for the boat tour concessioner who would be permitted to continue offering NPS led Ranger hikes twice a day on the trail, limited to 49 people (the capacity of the boat). These individuals arrive by boat and no parking is required.

- Other new trail opportunities would be explored, subject to additional compliance.

Page 25 Figure 5 is modified to show revised site design and labeled as Selected Action.

Page 28 Technology

4th bullet

- At the West Entrance Station, redesign the station within its current footprint to include automated technology and the addition of two or more kiosks in each lane to enable one lane to provide entry for two or more cars. This action would be subject to additional compliance.

Page 29 Table 3, Preferred/Proposed Alternative Elements by Location

Location 1:

Location on Figure 4	Location	Proposed Actions
+	West Entrance Station	Redesign the entrance within its current footprint to include automated technology. Add two or more kiosks in each lane to enable one lane to provide entry for two or more cars. This action would be subject to additional compliance.

Location 2:

2	West Side Construction Staging Area (Old Ball Field)	Widen the 0.25-mile segment of Quarter Circle Bridge Road to the old Ball Field to 8 feet to accommodate increased traffic. Add one shuttle stop with an approximately 200- square-foot waiting area with shelter and related signage and a vault or backcountry toilet. Convert the old Ball Field to an approximately 100-space parking area for passengers and oversized vehicles. Install two electric vehicle solar-powered charging stations in the new paved lot.
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Page 30, Table 3, Location 6, Proposed Actions

To allow the park to respond to changes in visitation levels and the need for additional parking, the following dynamic parking configurations and uses would be implemented, as needed, resulting in a range of 128-269 available parking spaces. Maintain 10 spaces for oversized vehicle parking and turnaround. Maintain picnicking in the existing area. As either walk in or drive in, dependent on the level of visitation. As parking demand increases, move picnicking to the middle of loop A and use the existing picnicking area for parking (adding approximately 35-40 parking spaces for both regular and oversized vehicles). If parking demand warrants during peak season, close a portion of Campground Loop A to accommodate approximately 125 vehicles. If parking demand during peak season increases, close the campground to camping during peak season and use all the sites for parking. Use the currently abandoned campground loop for parking and construct a secondary road segment to connect the abandoned loop to loop A, providing approximately 57 parking spaces.

~~Provide approximately 100 additional parking spaces in the remainder of campground loop A and approximately 120 parking spaces in loop B. Parking in these loops would only occur within the existing footprint.~~

Do not allow commercially guided hikes **and organized group hikes** during peak season (currently July and August), and establish a group size of ~~25~~ 35 people per trip per operator during other seasons.

Page 30, Table 3, Location 8 Proposed Actions

Adaptive Management Option: Add signs to designate the area as a shuttle stop and..... Construct a removable vault toilet during peak season. ~~If conditions exceed thresholds and/or capacity,~~ If conditions exceed thresholds and to insure that desired conditions are met, manage with timed parking permits.

Page 31, Table 3, Location 10, Proposed Actions

~~If conditions exceed thresholds and/or capacity...~~ If conditions exceed thresholds and to ensure that desired conditions are met,

Page 31, Table 3, Location 11 Proposed Actions:

Adaptive Management Option: If conditions exceed thresholds and /or capacity, reestablish an approximately one-mile-long footpath from Lunch Creek to Logan Pass along a historic construction road used to build the GTSR.

Page 31, Table 3, Location 12, Proposed Actions

Adaptive Management Option: If conditions exceed thresholds and/or capacity, construct a one mile trail from Siyeh Bend to Lunch Creek (4 foot wide soil footpath) using an existing unmaintained horse trail. Construct a **vault toilet along the GTSR in the vicinity of Siyeh Bend** and a backcountry toilet in the first mile of the trail and another at Preston Park if the new toilet at Siyeh Bend doesn't resolve the human waste issues.

Page 31, Table 3, Location 14, Proposed Actions

- During peak season, designate the parking lot for day use parking only and implement a day use parking permit system (described above) to more effectively manage the desired resource and experiential conditions of the site. Install bicycle racks to support increased bicycle use. Construct a **vault toilet adjacent to the parking area.** ~~backcountry toilet along the trail about 0.5 miles from the trailhead.~~ Establish a group size limit of ~~35~~ 25 people per group and two trips per day per operator for commercially guided hikes **and all organized group hikes** along the St. Mary Trail. **An exception to the group size would be for the boat tour concessioner who would be permitted to continue offering NPS led Ranger hikes twice a day on the trail, limited to 49 people (the capacity of the boat).** These individuals arrive by boat and no parking is required.

Page 41, Impacts on Visitor Use Analysis

4th paragraph Line 13.

If thresholds were exceeded, **to maintain desired conditions**, the adaptive management option would be applied.....

Page 41-42, Impacts on Visitor Use Analysis

6th paragraph beginning on page 41. 3rd line.

~~If thresholds were exceeded and adaptive management options at the Avalanche Developed Area were implemented, the seasonal conversion of picnic and camping areas to day use parking would decrease visitors' ability to find a campsite. The dynamic parking configurations would reduce and could completely eliminate the availability of campsites at Avalanche Campground. Visitors would then less likely to find a first come, first served campsite in the park because the decreased number of available campsites would likely fill earlier in the day. Campsites would also likely be full during more days of the peak season. If implemented, these adaptive management options would result in an adverse impact to some campers but would provide a beneficial impact for day users as a result of expanded parking areas, increased parking opportunities, increased access, and reduced congestion in other parking areas.~~

Page 42 Impacts on Visitor Use Analysis

2nd paragraph

Restricting overnight parking in the GTSR corridor **during peak season**, and restriping.....

5th paragraph

If conditions exceed thresholds and/or capacity **and desired conditions cannot be met**, implementation of adaptive management options to further designate travel directions on the Highline Trail and the construction of **three-one new section of trail** totaling approximately 5-3 miles in length at Big Bend, Lunch Creek and Siyeh Bend would result in

Page 43, Impacts on Visitor Use Analysis

1st paragraph:

~~This would include improving visitor access at the East and West Entrance Stations by installing automated technology that would increase the efficiency of cars entering the park.~~

Page 46, Impacts on Vegetation, Preferred Proposed Alternative

The preferred/proposed alternative would permanently remove up to **approximately 9.0 6.13-acres** of vegetation....

9th paragraph

Construction of ~~six~~ five restroom facilities at ~~two~~ three frontcountry and three backcountry locations **and enlarging the Hidden Lake Overlook** would have..... Assuming each facility would not exceed approximately 150 square feet, the total acreage of disturbance for ~~five~~ the overlook expansion and ~~six~~ vault or backcountry toilets is estimated to be less than **.03** acres.

Assuming each facility would not exceed approximately 150 square feet, the total acreage of disturbance for the ~~five~~ ~~six~~ vault or backcountry toilets is estimated

Page 47 Impacts on Vegetation

3rd paragraph

If implemented under adaptive management options, the construction and reestablishment of ~~three~~ one additional new trails-totaling approximately ~~5.0~~ **3.0** miles would require additional permanent vegetation removal for the new trail segments. Trail widths ~~are~~ ~~is~~ anticipated to be approximately 3 to 8 feet, plus additional cut and fill depending on the cross slope, but compliance based on additional design would be undertaken if these actions are implemented. Based on these assumptions, up to approximately ~~4.85~~ **2.4** acres of vegetation would be permanently removed. Vegetation types that would be impacted are described below. Along the approximate 3.0-mile Big Bend to Highline Trail, the majority of the trail would traverse mixed conifer and avalanche chute deciduous shrubland. A small portion of the trail would traverse conifer (Engelmann spruce) woodland and an even smaller portion through dwarf- shrub herbaceous complex. ~~Along the approximate 1.0-mile Lunch Creek to Logan Pass Trail, the majority of the trail would traverse dry mesic herbaceous shrubland. Much of the remainder would traverse conifer (Engelmann Spruce) woodland. Along the approximate 1.0-mile Siyeh Bend to Lunch Creek Trail, the majority of the trail would traverse mixed conifer woodland and avalanche chute deciduous shrubland. Two of the proposed trails from Lunch Creek to Logan Pass and Lunch Creek to Siyeh Bend (totaling 2.0 miles) would use previously disturbed areas along a historic construction road and unmaintained horse trail; the trail from Big Bend to the Highline is already an informal climbers trail. Therefore, formalization and development of these 5-3.0 miles of trail would require less disturbance to vegetation than those sections of trail in previously undisturbed areas. In all locations, design efforts would be made to minimize the removal of individual trees.~~

5th paragraph

~~The redesign of the West Entrance Station to include automated technology would occur within the existing footprint of the facility. While there could be temporary impacts to vegetation in spot locations during construction, there would be no permanent vegetation removal.~~

Wildlife Resources

Affected Environment

Over 300 species of terrestrial wildlife and 279 species of birds occupy the park, either seasonally or year-round. As described in the previous vegetation section, the GTSR Management Area has a high diversity of plant and animal habitats. The park is one of the few places in the contiguous 48 states that support natural populations of all indigenous carnivores and most of their prey species.

Mammals. The park contains supports self-sustaining populations of wide-ranging large carnivores because the park is linked to other large expanses of undeveloped lands managed by the US Forest Service, State of Montana, province of Alberta and British Columbia and Federal Canadian. It lies at the center of the Crown of the Continent ecosystem and plays a key role in maintaining biological diversity and conservation of native species throughout. In addition to species of special concern, the GTSR Management Area provides excellent reproduction habitat, forage and cover for a variety of other large carnivores including black bears, mountain lions, coyotes, and gray wolves.

Black bears and mountain lions are common along the entire length of the GTSR. Wolves tend to be more common on the western side of the Continental Divide but can occur anywhere along the GTSR at any time of year. Coyotes are more common along the grassland areas of the GTSR on the East side of the Divide but, again, can occur anywhere along the road corridor at any time of the year. (personal communication, Mark Biel, Park Wildlife Biologist, November 2020).

Mountain goats and bighorn sheep are commonly found on rock slopes and cliffs in the management area. They forage on grassy slopes and occasionally along the road and trail shoulders, which can cause traffic congestion along the road and attract visitors near trails. The east side of the GTSR management area provides excellent winter range for bighorn sheep and mountain goats because the strong winds and sparse vegetation leave the south facing slopes relatively snow-free in winter.

Research conducted for this planning effort confirmed that some mountain goats in the management area have become habituated in areas of high visitor use because they are attracted to salt and predator-free zones created by humans (Sarmento, Berger, 2017). Goats normally occupy rocky ledges, but habituated goats demonstrate different behavior in habitat use and herding. The habituated goats display less vigilance than non-habituated goats, show less migratory behavior, and exhibit smaller group size. They also tend to prefer the meadows near popular hiking trails and backcountry campgrounds instead of cliff areas. Further observations have noted that during times the alpine section of the GTSR and or Logan Pass is closed to traffic, the bears have returned to the meadows and the goats and bighorn sheep move back up into the cliff areas. The deer, elk, and moose winter range are present from West Glacier, around Lake McDonald, and throughout the McDonald Creek drainage. Elk use the Apgar Mountain area in spring for calving and foraging. The Apgar to West Glacier area is also a major wildlife travel corridor. The St. Mary elk herd, the largest elk herd in the park, has historically spent most winters (excepting the harshest) inside of the park in the St. Mary Valley. More recently, elk have been leaving the St. Mary Valley in late fall to winter out on the plains east of the park as habitat security levels on the Blackfeet Reservation have risen. An important spring elk calving area lies northeast of the St. Mary campground, on the Blackfeet Reservation. Each year the Blackfeet Tribal Fish and Game Department place an access closure on this area to protect elk from human disturbance at this

sensitive time. Elk calving also occurs between Rising Sun and the St. Mary campground inside the park. In summer, the St. Mary elk herd disperses along the east side of Glacier from Marias Pass north to the Canadian border inside and outside the park.

Other mammals common to the area include the Columbian ground squirrel, hoary marmot, golden mantled ground squirrel, red squirrel, fisher, and pine marten. Muskrat, beaver, mink, and river otters use the highly productive aquatic and riparian habitats along McDonald Creek, Baring Creek and Rose Creek. Population trend data has not been collected on these species, although park biologists see them regularly. It is notable that these are some of the species found on the GTSR after being hit by vehicles.

Birds. In addition to birds listed under Species of Special Management Concern, the management area contains feeding and nesting habitat for a variety of other birds including pileated woodpecker, ruffed grouse, barrow's goldeneye, raven, ptarmigan, American pipit, gray jays, mountain chickadees, a number of owl species and Clark's nutcracker. Owls, jays, pileated woodpeckers and nutcrackers all nest early in forested habitats, starting as early as March or April. The other species don't nest until May or June.

Park biologists have seen all of these species in the Corridor; however, the park does not have the resources to collect population trend data on all of them. Barrow's Goldeneyes are seen along upper McDonald Creek, but in small numbers. Any waterfowl nesting along upper McDonald Creek are at increased risk of human disturbance with increased visitors. Park biologists believe it becomes challenging for the females to move their broods up and down the creek due to the disturbance.

Traffic noise is a very real concern for breeding birds along GTSR (Zollinger, Dorado-Cooreea, Goymann, Forstmeier, Knief, BastidasUrrutia, Brumm, 2019). Breeding Bird Surveys have been conducted annually on the GTSR since 2009, beginning at Wild Goose Island heading west. Between Wild Goose Island and the Loop, researchers stop approximately 50 times for 3 minutes each time recording bird presence. Once the survey teams reach the Loop, the traffic noise is so loud, that the number of detections significantly drops (personal communication, Lisa Bate, Park Biologist, November 2020).

Park biologists also report it is not unusual to find bodies of Dusky Grouse killed by vehicles on the upper stretches of the GTSR and Ruffed Grouse on the lower sections. Bodies of smaller birds such as chickadees are also found on the road showing evidence they were hit by vehicles. White tailed ptarmigan numbers at Logan Pass have declined over the past decades. (Benson, Wann, Aldridge, 2015, Benson, Cummins, 2011) Some of this is thought to be associated with climate change. Incidental observation of Clark's nutcrackers indicates a decline over the years (personal communication, Lisa Bate, Park Biologist, November 2020). Research has begun on this species.

Impacts on Wildlife

No-Action Alternative.

Mammals— Black bears, coyotes, wolves and mountain lions, bighorn sheep, mountain goats and small mammals would continue to be killed or injured, displaced and habituated as visitation and traffic volumes in the corridor increase over time. The impacts of increasing human presence and vehicle traffic on these species include mortality, road avoidance or habituation behaviors (Adams et al. 1981). Wildlife resource impacts are a result of physical presence as well as the noise associated with individuals and vehicles. The effects of road avoidance behavior may include lower reproductive rates, changes in movement and feeding patterns, patchy population distribution, and lowered immune system function. Alternatively, species may become habituated which can increase vulnerability to vehicle collisions (Etter et al. 2002), disrupt predator-prey dynamics (Isabell et al. 1993), increase rates of disease transmission (Steere 1994) or alter social dynamics. Additionally, high traffic volume on the GTSR can act as a barrier to wildlife movements. High traffic volumes and growing congestion when wildlife is spotted block movement of larger mammals requiring the assistance of park staff to stop traffic and allow individual crossing (Lisa Bate, Park Biologist, personal communication.)

Increased vehicle density would increase vehicle wildlife collisions resulting in injury or mortality. In 2012, three black bear mortalities were attributed to vehicle collisions (GNP, 2012). In 2014, there was only one black bear collision reported; the bear survived the initial collision, but the extent of its injuries was unknown (GNP, 2014). There were approximately 100 roadkill mortalities reported on the GTSR in 2012 and approximately 30 in 2015 (GNP unpublished data). This data is collected anecdotally from NPS staff travelling the road and is understood to be biased extremely low due to trouble identifying smaller species after they have been run over several times as well as the low priority of reporting during increasingly busy field seasons. Additionally, carcasses left on park roadways attract opportunistic species which can result in a secondary mortality when individuals feeding on roadkill are struck by vehicles. Traffic volume and time spent on or near roadways are determining factors that affect wildlife vehicle collisions in the region (Waller et al. 2006).

Visitor interactions with these species would continue to increase in relation to unmanaged visitor volumes on trails and continue to result in habituation. Habituation occurs when wildlife become comfortable to human presence while engaging in natural behaviors such as feeding or bedding. Habituation often leads to more dangerous habituation interactions when a food reward has been received. Both conditions occur in areas of high visitor use where animals can acquire food or shelter more safely as a result of this predator-free zone created by large numbers of visitors. Habituation can lead to dangerous wildlife behavior as they become food conditioned and/or reliant on human presence. These behaviors are well documented in several wildlife species in the GTSR corridor (most notably mountain goats, bighorn sheep, black bears, and grizzly bears), especially in areas of high visitor use such as Logan Pass. The existing impacts of habituation on mountain goat populations in the GTSR corridor are described in the Affected Environment. These impacts would continue and would increase along with increasing visitation rates.

Park management addresses habituated and conditioned wildlife on a case by case basis. Management actions vary from hazing, to physical and/or lethal removal depending on the species, circumstance, and danger posed by the situation. Wildlife management staff would continue to address wildlife human interactions on a case by case basis as staffing allows. While this results in the loss of individual species, it does not affect overall populations of wildlife in the corridor.

Birds— During peak summer months, all types of birds that occur in the vicinity of the road corridor would continue to be displaced and/or disturbed from foraging and nesting activity as a result of increasing noise, human presence and habitat degradation associated with high and increasing levels of visitors and associated use. Human activity in the GTSR corridor could affect their foraging, nesting locations and survival and movement.

As the No-Action Alternative would not construct additional infrastructure, including no additional trails, trail improvements or restrooms; no permanent habitat removal would result. Intact habitats provide a benefit to wildlife resources as they would continue to provide forage and cover while facilitating natural processes and movements.

Preferred/Proposed Alternative

Mammals— Impacts under the preferred/proposed alternative would include increasing incidence of roadkill, disturbance, displacement and habituation of black bears, coyotes, wolves and mountain lions, bighorn sheep, mountain goats, other ungulate species and small mammals. Implementation of shuttle improvements, including changes to schedules, additional stops, and increased rider parking, combined with implementation of a phased day use parking permit system would aim to disperse visitor use and activities along the corridor. Foraging, wildlife travel corridors, denning, and cover habitat would be affected. In addition, established group sizes and numbers of commercially guided hikes along the Avalanche and Highline Trails and use of a timed-entry permit system on the Highline Trail (if thresholds are reached) would also aim to reduce the number of PAOT in these high use areas. While the dispersal of visitor use would result in a slight benefit to these species in high use areas during the peak summer season, individuals residing in or near the corridor would continue to be locally affected by high traffic volumes in the GTSR corridor as a result of noise levels, visitor activity, impacts to safe movement across the road, and an increased potential for vehicle collisions. In addition, individuals residing in or near current low-use areas that could see increased visitation could experience an increase in adverse impacts as described above.

Under the preferred/proposed alternative, construction and modifications of trails, overlooks, restrooms, roads, and parking lots would occur mostly in the highly developed, frontcountry areas where these species are less likely to reside or den, while several would occur in previously undisturbed backcountry areas (three backcountry toilets and one potential new trail). While the design and placement of these facilities would be done to minimize impacts, several acres (estimated to be approximately 3 backcountry acres and approximately 6 frontcountry acres) of potential foraging habitat would be temporarily disturbed or permanently removed. While small in comparison to the approximate 183,860-acres in the corridor management area, the increased displacement caused by increasing visitation together with a slight increase in development would result in adverse impacts to wildlife species. These impacts would be greater in backcountry areas where one new trail and 3 backcountry toilets are proposed in areas where they are currently absent. Wildlife in these areas are accustomed to noise and human activity, but construction-related activity and noise from the temporary operation of heavy equipment and power tools would differ from other daily and seasonal customary activities and sounds. Avoidance and minimization measures (see appendix E in the EA) would be implemented during construction activities to reduce the potential for and magnitude of temporary adverse effects on wildlife and their habitat. Future implementation of adaptive management actions, and the associated temporary and increased levels of noise, in combination with continued high traffic volume and human activity, including increased use during the shoulder seasons, may alter the behavior of wildlife causing increased levels of displacement or habituation of individual animals,

increased risk of vehicle-animal collisions, and additional impacts to foraging habitat. If thresholds were exceeded and the one new trail proposed as potential adaptive management options were initiated, there would be new areas of disturbance to these species and the impacts noted above would extend further into their habitat.

Based on the known wildlife use patterns, travel corridors, behavior and habitat requirements, the impacts to wildlife resources from all these actions would occur to individual species, rather than populations.

Birds— Birds that occur in the vicinity of the various construction zones, could be temporarily displaced from the immediate vicinity due to noise, human presence and removal of a total of approximately 9 acres of vegetation of the total 83,442 acres in the GTSR corridor. However most but not all project activities would occur in existing developed and disturbed areas that do not provide high-quality nesting habitat, partly because most birds tend to avoid disturbed high-use areas. Conservation/mitigation measures (see appendix E in the EA) to protect birds during the breeding season would be implemented to avoid adverse impacts. For example, during further design of proposed actions, efforts would be made to limit the removal of vegetation suitable for bird nesting.

Human activity in the GTSR corridor could continue to affect their foraging and movement; however, flight allows some birds to safely cross and easily avoid areas of the corridor. As described under the mammals' section above, dispersing visitors and implementation of adaptive management actions that would introduce visitors to low-use or previously unused areas could further contribute to impacts caused by human activity.

Based on the known foraging, nesting and flight patterns, the impacts to birds from all these actions would occur to individual species, rather than populations.

Cumulative Effects. Past, present, and reasonably foreseeable future actions that could have cumulative effects on wildlife in the GTSR management area include shuttle system implementation, Apgar Transit Center parking lot construction, past and ongoing rehabilitation of the GTSR and improvements to the West Glacier Entrance Station. These previous actions modified relatively small areas of habitat and intermittently disturbed and/or displaced species of concern. Conservation measures and best management practices associated with past construction projects continue to be implemented to avoid or minimize impacts on sensitive species and their habitat. Future construction projects have the potential to disturb prime habitat for mammals including mountain goats, bighorn sheep, black bears, other ungulate species and small mammals as well as result in the long-term displacement of these species as a result of habitat fragmentation and increasing visitor numbers in areas where visitors previously did not venture.

Past facilities improvement projects indirectly increased visitation levels that elevated the potential for disturbing or interacting with sensitive species and fragmenting their habitat. Disturbance associated with visitor use has and would continue to disrupt foraging patterns, migration dynamics, and breeding behavior of several species at the local level. Park staff continues to ensure that mitigation measures are enforced to minimize impacts to listed species such that the cumulative effects from other actions have not affected wildlife at the population level or measurably changed overall species distribution and abundance. The collective effects of past construction activities are negligible because a relatively small area of habitat has been affected. In addition, the National Park Service would continue to carry out avoidance and minimization measures to protect wildlife and bird species. The no-action alternative would contribute an adverse increment to the overall low level of adverse cumulative effects as a result of increasing use of informal trails, over-used trails, and the associated disturbance. When the effects of the no-action alternative are combined

with other past, present, and reasonably foreseeable future impacts, the total cumulative impact on wildlife would continue to be minimally adverse.

The preferred/proposed alternative would contribute relatively small increments of beneficial and adverse impacts on the overall low level of adverse cumulative effects, until trigger points are reached that would initiate management actions such as construction of a new trail. When these trigger points are met and construction projects are initiated, additional, albeit, small and limited undisturbed areas of wildlife habitat would be disturbed, animals displaced, and long-term adverse impacts would result in a greater adverse contribution. In summary, when the effects of the preferred/proposed alternative are combined with other past, present, and reasonably foreseeable future impacts, the total cumulative impact on species of special management concern would continue to be minimally adverse.

Page 55, Impacts on Species of Special Management Concern

4th paragraph

While the design and placement of these facilities would be done to minimize impacts, several acres (estimated to be **approximately 3.0** 4.85 backcountry acres and approximately **6.0** 6.18 more frontcountry acres) of potential foraging habitat would be temporarily disturbed or permanently removed.

Page 56, Impacts on Species of Special Management Concern

3rd paragraph: Birds of Special Management Concern: Migratory birds, including birds of conservation concern that occur in the vicinity of the various construction zones, could be temporarily displaced from the immediate vicinity due to noise, human presence, and removal of a total of approximately **11** 9 acres of vegetation.

Page 57 Impacts on Species of Special Management Concern

2nd and 3rd paragraph

~~If thresholds are exceeded and the trails proposed as potential adaptive management options near Siyeh Bend were initiated, there could be potential for impacts to whitebark pine in the Preston Park area although the trails would be designed to minimize these impacts and avoid tree removal if possible. Several other plants listed by the State of Montana as species of concern (see table 5 and appendix J) could occur near the trail segments proposed as potential adaptive management options between Lunch Creek and Logan Pass and between Big Bend parking and the Highline Trail. These rare plants are mostly limited to the alpine and subalpine zones. While many of them are limited to moist or wet habitats in tundra or fen environments, several, such as the alpine glacier poppy, require stony soils on exposed slopes and ridgetops. During trail design and construction, efforts would be made to avoid routing the trail through these sensitive vegetation types. If implemented, use of these ~~this~~ trails—could subject adjacent plant communities to increased hiker trampling along the new trails. However, as mentioned under the no-action alternative, despite their susceptibility, rare plant surveys conducted in the park in recent years have not shown a measurable decline in the populations most vulnerable to trampling and therefore impacts are expected to be minimal.~~

A biological assessment was prepared and shall be sent to the US Fish and Wildlife Service for actions that would be taken upon implementation of the plan. Consultation is ongoing. If implemented, adaptive

management options triggered by future conditions (including the three one new trails) would require separate consultation with the US Fish and Wildlife Service prior to construction. Additional biological assessments would be prepared and submitted to the US Fish and Wildlife Service, as appropriate.

Page 58, Character of Recommended Wilderness

2nd paragraph

As a result, over 90% of the park, totaling 9663,155-927,550

Page 61 Character of Recommended Wilderness

2nd paragraph

Preferred/Proposed Alternative. The proposed trail work would entail human manipulation in recommended wilderness, with the objective of reestablishing and/or maintaining sustainable ecological conditions. This would result in impacts to the untrammeled wilderness quality in these locations. During the four- to six-month construction period, improvements to the Avalanche Lake Trail, installation of three backcountry toilets, and, if implemented, construction of 5.0 three miles of new trails proposed as adaptive management options, would degrade the undeveloped wilderness quality and opportunities for solitude due to the continued presence of work crews and new ground and human disturbance. If implemented, adding approximately 5.0 three miles of new trails in, or immediately adjacent to recommended wilderness would increase the total wilderness trail miles by 3.4% in the GTSR management area, which would have the potential to degrade the natural quality of the park's recommended wilderness by introducing nonnative plants, introducing noise, and displacing wildlife; however, best management practices would be implemented to minimize this potential.

3rd paragraph

Hardening of the existing Avalanche Lake Trail would occur primarily in the footprint of the existing trail, although some earthwork may be necessary outside the footprint to meet trail design standards.

Page 62 Cumulative Effects

first paragraph

Improving or adding a trails and adding new restroom facilities in heavily used areas would have beneficial effects on recommended wilderness by limiting off-trail use and helping to reduce the footprint of informal trails.

2nd paragraph

Cumulative Effects. Past, present, and reasonably foreseeable future actions that could have cumulative adverse effects on recommended wilderness in the GTSR management area have primarily occurred as a result of unprecedented high visitor use, overflights, and park operations such as trail, road, and facility maintenance. Impacts on wilderness qualities from these activities include soil erosion and loss of vegetation, introduced noise and visual disturbance from commercial air tours, administrative aircraft use, vehicles traveling on adjacent park roads, and reduced water flows availability caused by increasing water demands. existing water uses.

Page 64, Impacts on Cultural Resources

3rd paragraph

No-Action Alternative. Under the no-action alternative, there would be no changes to existing park facilities and only routine maintenance activities would be performed. There would be no noticeable impacts to the Headquarters Historic District, West Entrance Station, the Lake McDonald Lodge Historic District,.....

5th paragraph

At the Avalanche Developed Area, restoring the exit and converting the current entrance to the exit, converting the east side to one way would restore the historic design and circulation pattern in the Avalanche Campground Historic District and would be beneficial. ~~If the dynamic parking configurations proposed as potential adaptive management options in the Avalanche Developed Area were seasonally implemented for parking, the dynamic conversion of the picnic area, loop A, loop B, and the abandoned loop would alter the historic use of the campground. However, the proposed changes would be designed and implemented to ensure they would not permanently alter the location, design, setting, and workmanship of the historic district; the campground would revert back to its historical seasonal use prior to and following peak season parking demand. In order to allow temporary additional parking in the campground loops, new aggregate would be placed in the original campground loop configuration. This material is both removable and in keeping with existing materials in the campground. However, if implemented, the construction of a secondary road segment to connect the abandoned loop to loop A would change the historic design and circulation pattern in the district.~~

Page 65, Preferred/Proposed Alternative

paragraphs 4 and 5

The addition of a ~~removable vault toilet at Big Bend~~ **new vault toilet in the vicinity of the road at Siyeh Bend** would be placed to avoid an adverse effect on the cultural landscape of the GTSR Historic District at that location. The addition of vault and backcountry toilets at the ~~new~~ Avalanche shuttle shelter, Hidden Lake Overlook, ~~and~~ along the Highline Trail ~~at Haystack, the Siyeh Bend Trail, and the St. Mary and Virginia Falls Trails~~ would be placed to avoid an adverse effect on the eligibility of the historic trail routes or the GTSR Historic District.

~~The addition of two or more kiosks at the West Entrance Station could adversely impact the setting of this historic building due to the addition of these nonhistoric elements. Prior to construction, consultation with the SHPO would be initiated and mitigation for any adverse impacts would be agreed upon.~~

Page 66, Preferred/Proposed Alternative

1st and 2nd paragraph

intrusive elements would be confined mainly to the ~~West Entrance and St. Mary~~ Visitor Center areas. These impacts are localized, site specific, and permanent. Careful siting and design of these new additions in consultation with the SHPO would be used to minimize adverse impacts; however, any adverse impacts would be mitigated in consultation with the SHPO.

Cumulative Effects. Past, present, and reasonably foreseeable future projects that could have cumulative

adverse or beneficial effects on cultural resources include the GTSR rehabilitation project, which consisted of extensive repairs to the roadway, retaining walls, guard walls, drainage features, and tunnels. Although some individual historic features of the road needed to be modified or reconstructed due to their deteriorated condition; overall, the project had a beneficial impact on the GTSR because it improved the condition of the road and its associated historic features and will preserve it for future use. A Lake McDonald properties management plan, ~~currently underway~~, **recently completed**, will provide guidance to the park in the preservation and maintenance of these **other** historic properties

Appendix A,

Page A-1

Benson, D. P., Wann, G. T., Aldridge, C. L., Braun, C. E.

2015 A comparative study of white-tailed ptarmigan densities and survival from monitored populations in Montana and Colorado. International Grouse Symposium, Reykjavik, Iceland.

Benson, D., and M. Cummins.

2011. Move, Adapt, or Die: *Lagopus leucura* changes in Distribution, Habitat, and Number at Glacier N.P, MT. In R. T. Watson, T. J. Cade, M. Fuller, G. Hunt, and E. Potapov (Eds.). Gyrfalcons and Ptarmigan in a Changing World. The Peregrine Fund, Boise, Idaho, USA. DOI 10.4080/gpcw.2011.0121

Page A-11

Sarmento, W. M., and J. Berger

2017. Human visitation limits the utility of protected areas as ecological baselines. Biological Conservation 212:316-326.

Page A-14

Zollinger, Sue Anne, Dorado-Currea, Adriana, Goymann, Wolfgang, Forstmeier, Wolfgang, Knief, Ulrich, BastidasUrrutia, Ana Maria, Brumm, Henrik.

2019 Traffic noise exposure depresses plasma corticosterone and delays offspring growth in breeding zebra finches. *Conservation Physiology*, 2019; 7 (1) DOI: 10.1093/conphys/coz056

Appendix D Page D-27, Limiting Attribute(s)

6thrd paragraph, 3rd sentence

However from 2012 to 2017, trail use on the ~~Hidden Lake Trail~~-Avalanche Lake Trail, surpassed its indicator.....

Appendix F Page F-2, Table F-2 Private

Park Concessions, Activity: **Winter Commercial Use Authorizations for x-c skiing and snowshoe tours.** Time Schedule: **November – May.**

Expanding Apgar Business Community: Activity: An increasing number of business ventures **on private lands** in Apgar Village.

Appendix D----- NPS Responses to Comments

PROJECT SCOPE & PURPOSE AND NEED

1. **CONCERN STATEMENT:** Commenter expressed need to expand the scope of the plan to areas outside of the GTSR corridor that are also experiencing increases in visitation. Commenters also suggested adding shuttle services outside of the GTSR corridor (i.e. Many Glacier, Two Medicine).
RESPONSE: Given available resources and the scope of the issues within the GTSR, the NPS has prioritized planning for this part of the park at this time. Additionally, commercial providers already offer transportation to other parts of the park, and while we understand the concerns about increased visitation in these areas, courts have routinely ruled that it is up to the agency when drawing lines about decisions that need to be made; how to handle potentially related, yet discrete, issues; and whether or not to explore potentially related subjects in more detail (see Grunewald v. Jarvis, 776 F.3d 893 (D.C. Cir. 2015)).

DESIRED CONDITIONS

2. **CONCERN STATEMENT:** Commenters expressed a need for the EA's desired conditions to be defined in greater detail, to include clarity on how often desired conditions are met currently, and how desired conditions will be measured/evaluated moving forward. Other commenters suggested the desired conditions should be expanded to include general wildlife (not just iconic species) and ethnographic resources. Another commenter suggested that the park could not set meaningful desired conditions for wildlife until it developed a comprehensive natural resource management plan.
RESPONSE: Desired conditions are aspirational statements that articulate what areas of the park would look, feel, sound, and function like in the future. Desired conditions were brought forward from previous planning efforts as described in Chapter 1 of the plan. Because desired conditions aim to provide high-level guidance for the suite of actions contained in the plan, they do not necessarily need to be highly detailed or aimed at specific resource types or concerns. If more detailed guidance is needed, the park may further develop desired conditions or point to previously developed ones from other guidance or planning. It is also important to note that desired conditions are one element within the larger visitor use management framework being applied in this planning effort.

MANAGEMENT PLAN INDICATORS AND THRESHOLDS

3. **CONCERN STATEMENT:** Commenters suggested the plan should include detailed current environmental conditions data and indicators and thresholds related to land development (i.e., conversion of natural areas to developed areas) and key performance indicators (e.g., visitor satisfaction, shuttle wait times, and parking availability/wait time, especially at Logan Pass), and trails/visitor use at Johns Lake. Another commenter suggested that indicators and thresholds for trail/visitor use should be set at 2012 levels.
RESPONSE: Indicators translate the broad description of desired conditions into measurable attributes that can be tracked over time. They support an iterative practice of monitoring, implementing corrective strategies, and then continuing to monitor to gauge the effectiveness of those actions. The selected indicators are connected to the management actions contained within the plan and are ones deemed most noteworthy for purposes of this planning effort. Park managers can research and monitor additional resource conditions as implementation of this and other decision documents occurs. Salient existing conditions are located within Chapter 3 of the plan.
4. **CONCERN STATEMENT:** Commenter noted that the "People at One Time" (PAOT) measure does not account for acceptable carrying capacities of a specific resource/place, such as Logan Pass. The

commenter requested that the park: 1) cite data used to establish carrying capacities to provide for positive visitor experiences and protection of natural resources; 2) provide information on when the capacities were determined; 3) provide comparative data relative to current conditions. Once provided, then GLAC can set a daily visitor limit to a specific place.

RESPONSE: The Visitor Use Management Interagency Council defines visitor capacity as the maximum amounts and types of visitor use that an area can accommodate while achieving and maintaining the desired resource conditions and visitor experiences that are consistent with the purposes for which the area was established. Indicators translate the broad description of desired conditions into measurable attributes (e.g., people at one time at key locations, number of visitor-created trails) that can be tracked over time to evaluate change in resources or conditions that relate to visitor experience. The People at One Time (PAOT) measures for locations are found in table 2 on page 18. Data used to establish PAOT are found in Appendix D.

5. **CONCERN STATEMENT:** Commenter noted thresholds and indicators for vehicles at one time and roadway level of service were difficult to interpret and without defined numbers, not useful; that the EA lacked transportation baseline data to compare against these thresholds and indicators; and that the EA does not present an analysis of how roadway level of service would change.

RESPONSE: The vehicles at one time (VAOT) indicator, included in Appendix D, is used to quantify vehicle congestion in parking lots. References to baseline parking data collected are found on page two. No actions were included in the plan that would affect roadway level of service (LOS) so no analysis was included. Appendix K includes baseline data collected. The park will continue to collect new data, monitor and evaluate the need for adaptive management actions that may be subject to environmental analysis if further actions are proposed.

6. **CONCERN STATEMENT:** Commenters expressed need to identify existing specific wildlife-human impact indicators and thresholds related to vehicle wildlife collisions and human-wildlife encounters and implement a monitoring program.

RESPONSE: A Wildlife Affected Environment and Impact Analysis was added to the Errata. Impacts from vehicle collisions and human/wildlife encounters are discussed. While the park keeps records of some of the encounters, not all are reported, so the park does not have complete records on the total amount of wildlife/human encounters that have occurred. Furthermore, most vehicle encounters with wildlife are not reported. NPS learns of these when staff find dead or injured wildlife on the road. More research is needed before the park can identify thresholds for wildlife/human encounters on trails.

7. **CONCERN STATEMENT:** Commenter questioned the source of the average people per vehicle number used in Appendix D: Indicators, Thresholds and Capacity, and suggested it should be based on data specific to Glacier National Park.

RESPONSE: The National Park Service Visitor Use Statistics Office does periodic studies to determine the average people per vehicle (PPV) for each park to calculate visitation statistics. The results of Glacier NP's PPV study, last conducted in 1994, were used for this analysis. Compared to other park areas, this is relatively recent according to the NPS Visitor Use Statistics Office. The park is making plans to conduct a study in 2021 or 2022 to update this average. It will be dependent on when the entire park is able to open again due to the Covid pandemic.

VISITOR CAPACITY, USE LIMITS, AND RESERVATIONS

8. **CONCERN STATEMENT:** Commenters suggested the NPS should define visitor carrying capacity for park resources as part of the plan.

RESPONSE: The IVUMC visitor use management framework has been leveraged in development of this plan. This framework follows best practices and lessons learned from multiple other well-established frameworks. It has been applied in this plan as the issues and actions identified are often related to visitor use. The plan, and the identified indicators and thresholds described within it, is not intended to be an exhaustive representation of all monitoring and assessment activities conducted at the park. Visitor capacities have been developed for key analysis areas identified as salient to the scope of the plan. Visitor capacities would be used to inform and implement the management strategies selected as part of the plan. The suite of visitor use management elements, including indicators and thresholds and visitor capacity, support an iterative practice of monitoring, implementing corrective strategies, and then continue to monitor to gauge the effectiveness of those actions. As adaptive management actions are pursued, the NPS would look at additional capacity assessments as needed. The NPS uses guidance from the Interagency Visitor Use Management Council when planning for visitor access but is open to considering best practices from other organizations, such as the toolkit noted by commenters. See Appendix D for details.

9. **CONCERN STATEMENT:** Another commenter expressed concern regarding potential adverse impacts on the adjacent Blackfeet Indian Reservation's ability to practice reserved traditional cultural activities in the park due to overcrowding.

RESPONSE: These activities are typically carried out in areas that are not usually visible and or occupied by visitors. Furthermore, if the park receives requests from Tribal Members, these are granted under Special Use Permits and arrangements are made for this activity to take place without interruption.

10. **CONCERN STATEMENT:** Commenters made suggestions on alternative methods of closures and reservation/permits, including initiating a reservation system for private vehicle entry, shuttles, and parking and having contingency plans

- Create a lottery system for entry based off Lake O'Hara, Canada
- not closing the park due to number of cars without advance notice
- not closing the park to Montanans and Native Americans at all
- initiating a day use pass with a percentage of passes for Montanans and out of state visitors

RESPONSE re: Reservation/Lottery System: Based on recent experience with proposed reservation systems at other NPS units, the NPS determined a reservation system for the GTSR corridor was not ripe for decision at this time. While the current EA does not analyze a reservation system for the GTSR corridor, as noted on page 16 of the EA, this does not preclude the park from pursuing planning and compliance for such a system in the future if implementation of the plan is not successful in managing desired conditions for the GTSR corridor or management actions described in draft plan fail to address the issues described in Chapter 1 of the EA. Based on guidance and intent on managing access in general, the other methods are not ripe for decision at this time as well.

11. **CONCERN STATEMENT:** Commenter requested more specific information about, and provided recommendations for details on, a variety of topics including:

- Day-use parking permit systems (e.g., number and duration of permits, how to obtain, fees, enforcement, managing unused permits, locations where permits would be required, etc.)
- Shuttle type/physical characteristics (e.g., fuel types, size, window design, etc.), shuttle operations (e.g. operating hours, frequency, routes), and locations for shuttle stops.
- Interpretation, education, and signage (e.g., additional interpretive rangers at visitor centers and during shoulder seasons; additional signs/materials to inform visitors park is full, highlight other destinations, facilitate use of the shuttle, encourage cycling, highlight opportunities for persons with disabilities, etc.)

- Partnering with entities outside of the park (e.g., local hotels, Montana Trolley Company, Eagle Transit, Flathead County, State of Montana, tribes, Glacier National Park Conservancy, etc.) to provide additional services inside or outside the park (e.g., shuttle services, additional parking, visitors centers, etc.)
- Location, design, and maintenance of new toilets (e.g., alternatives locations for toilets, pit toilets, porta-potties, use of motorized vehicles)
- Costs and staffing to implement the plan (e.g., for expanded shuttle operations and operating hours, monitoring, enforcement, maintenance, etc.)

RESPONSE: Many of these details and recommendations are already captured in the EA. Others are operational details not subject to NEPA analysis in an EA and which will be addressed through implementation planning. With regards to some of the specific topics raised:

- The NPS expects to make day-use parking permits available for a variety of times and duration, and through a variety of platforms that would likely include online and in-person options for all visitors, including those from Flathead Valley. Other details would be addressed through implementation planning.
- Many of the suggestions regarding shuttle types, operations, and shuttle stops are within the range of what is described in the EA. It is important to note that the park is very limited in its ability to change the bus models because many bus models developed are too long or wide to travel on the GTSR. Suggestions to use Lake McDonald as a new transfer are not feasible because of the other activities that take place in this area. Regarding shuttle stops specifically, it is important to note that some stops will serve multiple locations, and some of the stops suggested by commenters are not at locations conducive to lengthy visits. Many details of shuttle operations will be determined during the implementation planning phase and will likely be adjusted as the park learns more during implementation.
- The NPS has and will continue to explore partners for the shuttle service. Some of the proposals have been tried and are not financially feasible while others involve partners who do not have the capacity or resources, or partners that are not interested. Other ideas, such as the Mountain Climber, proposed by Flathead County, are being explored. The Glacier National Park Conservancy is already established as the park's friends' group and their primary purpose is to raise funds from private donors for park projects
- Ideas such as building a regional visitor center near West Glacier, or working with the Glacier Conservancy to accomplish this, are ideas that will be explored once this planning effort is completed. Additional compliance will be done if necessary, at that time.
- Neither Council on Environmental Quality or Department of the Interior NEPA regulations require an analysis of costs to the government in a NEPA document; therefore, they are not included in the EA. Instead, costs are one consideration when decision-makers identify a preferred alternative and/or select an action for implementation.

SHUTTLE

12. CONCERN STATEMENT: Commenters questioned why the NPS did not use data and recommendations from the Carnegie Mellon University study regarding shuttle system and parking expansion, but instead referenced older University of Montana data.

RESPONSE: Glacier NP appreciates the work of Carnegie Mellon University and is using the study results to understand feasibility of various shuttle options and inform the implementation of future transportation operations at the park. The information from the CMU studies was received too late to analyze and not in a form that we could incorporate and include in the GTSR Corridor Management Plan.

13. CONCERN STATEMENT: Commenters suggested the plan should have a more thorough analysis on the cost of an expanded shuttle and should consider:

- a shared lease with other NPS units
- combination of buying, sharing, and leasing shuttles
- outsourcing the shuttle system

RESPONSE: As the cooperative shuttle agreement has ended, the NPS will be pursuing new ways of operating and funding shuttle operations and will seek the most cost-effective options. However, neither Council on Environmental Quality nor Department of the Interior NEPA regulations require an analysis of costs to the government in a NEPA document; therefore, they are not included in the EA. Instead, costs are one consideration when decision-makers identify a preferred alternative and/or select an action for implementation.

PRIVATE VEHICLE ACCESS

14. CONCERN STATEMENT: Commenters made several suggestions for private vehicle access in the GTSR corridor, including:

- eliminating access altogether, eliminating access during peak season, or
- limiting access to:
 - certain portions of the corridor
 - certain times of day
 - what the current infrastructure can support
 - only people with disabilities
 - only those that have camping/hotel reservations
 - non-oversized vehicles only (create additional weight and length limits for use between Avalanche and Logan Pass)
 - motorcycles only
 - homeowner and park employees that live in the park
 - vehicles with 4 or more visitors
 - one vehicle out, one in policy between Lake McDonald and Rising Sun
 - West side entrance only for buses/motorcycles/bicycles and private vehicles can only use East side
 - uncongested areas only

RESPONSE: Eliminating private vehicles would not meet Purpose and Need for the Plan. Additionally, this was also considered in the 1999 General Management Plan and a decision was made to not remove private vehicle access to the GTSR. Limiting private vehicles only to some sections of the road is not feasible due to the lack of parking available for the number of visitors the park receives daily during peak season. For example, restricting private vehicles between Avalanche and Rising Sun for would require parking at Avalanche and Rising Sun for all the visitors who want to leave their vehicle there and ride a shuttle. Neither location has the capacity for the number of visitors the park receives daily.

15. CONCERN STATEMENT: Commenters suggested the following phased or sequenced openings of the GTSR corridor:

- Open the east side in the following increments after winter: open to 1.5 mile gate, then Rising Sun Gate, then Wild Goose Island gate (to be added), then Sun Point gate (to be added), then Jackson Glacier Overlook, then Siyeh Bend (to be added). Reverse this progression in the late fall.
- Close road to traffic two days a week from Avalanche campground to Rising Sun: with one day for bicyclists only and other day closed to all traffic.

- Sequenced access to the GTSR corridor by concession, private, and commercial vehicles and restriction of delivery trucks to before 7am in July and August.
- Open corridor three days a week with permits (with shuttles running) and one day without (with limited shuttles).
- Alternate one-way private vehicle traffic access going east and west from Avalanche to Rising Sun during peak season from 7am-7pm.
- allow for visitors to drive up to Big Bend before GTSR is fully open to Logan
- expedite snow removal to increase visitor use days and utilize local government equipment and personnel

RESPONSE: The snow removal operation was recently improved with the purchase of new equipment and additional staffing and operation changes. However, the plowing operation is still dependent on snowfall and avalanche conditions. Many days plow operators are re-plowing what was already cleared the previous day, and avalanche conditions dictate when plow operators can safely work on the alpine sections of the road. Guard rails cannot be put in place until all the avalanche paths have run and are cleared. Otherwise, guard rails will be taken out by avalanches, which is why they are removed every fall. The road already opens in phases as plowing is completed on both the east side and the west side. The plow operation begins in April on both sides of the road. Car free days is included in the Plan to provide bicyclist opportunities on the GTSR. Other suggestions could be considered since the plan is adaptable and additional compliance and planning would be completed.

PARKING MANAGEMENT

16. CONCERN STATEMENT: Commenters suggested alternative ideas/methods for parking management along the GTSR corridor such as:

- timed and daily parking
- reservation parking
- enforced parking
- fee parking
- designated overnight vs. day-use vs. hourly parking
- increased/doubled parking in the park
- limiting tour buses, RV's, trailer parking in certain areas (i.e., Apgar) or eliminating completely
- limiting Red bus parking
- redesigning parking to accommodate oversized vehicles
- allow Class B motorhomes and vans under 25' to park at Sun Point
- variations on striping
- priority parking
- encourage use of smaller vehicles
- removing private vehicle parking at Logan Pass and St. Mary's Glacier
- restricting private vehicle parking to shuttle riders only
- designate parking for carpools
- reserved parking for tribal members at Logan Pass
- working with tribes to establish parking outside the park in Babb
- working with Glacier Conservancy to create parking area on the westside
- purchase land to create parking in neighboring towns
- create major parking facilities near park entrances (Apgar & St. Mary)
- parking only for those with camping reservations
- limit parking to under 2 or 4 hours

RESPONSE: Many of the suggestions above are considered in the Plan either for immediate action or as an Adaptive Management Option. Others such as closing Logan Pass to vehicles was determined not to be feasible because there is not enough parking available at this time outside the park or in the lower sections of the road. Furthermore, funding is not available to purchase the number of buses that would be required to carry the high numbers of visitors to the Pass. The park is in discussions with the communities surrounding the park to link up with any future transportation systems.

TRAIL MANAGEMENT

- 17. CONCERN STATEMENT:** Commenter expressed a concern that adding new trails does not comply with the Wilderness Act or managing 90% of the park as wilderness.

RESPONSE: Although recommended wilderness at Glacier National Park has not been designated, NPS policy requires that recommended wilderness be managed as if designated and to preserve wilderness character. While the potential addition of 3 miles of trails will affect the undeveloped character of recommended wilderness, as well as opportunities for solitude and primitive and unconfined recreation, this represents a small (3.4%) increase in trail mileage and is considered a tool necessary to provide opportunities for a variety of visitors to experience and enjoy the recommended wilderness, consistent with the park's general management plan. Also, the addition of such a small number of trails will not preclude the future designation of the wilderness area, and before any trails are built, the NPS will prepare a minimum requirements analysis.

- 18. CONCERN STATEMENT:** Commenters recommended reopening decommissioned trails and creating new trails in the following areas: Sun Point, Heaven's Peak Lookout, Triple Falls, Logan Pass double waterfall, Hidden Lake to Dragon's Tail, Hidden Lake to Sperry Trail, Lunch Creek to Piegan Pass, Siyeh Pass to Otokomi Lake, Lake MacDonald, Ole Creek, Harrison Lake, Alder Trail and Lost Lake.

RESPONSE: Two new trails were considered in the Plan/EA but removed after public review due to resource concerns. Re-opening previously closed trails is beyond the scope of this plan but could be considered in the future. However, a number of the trails identified above were closed for resource reasons, including protecting habitat for grizzly bears. Conditions would have to change for reopening closed trails. Other trails listed above are informal "climber's" trails that while use is not encouraged, it is allowed. Additional compliance and planning would be needed to reopen, reestablish or create new trails as well as increased funding for construction and maintenance. Currently the park maintains over 700 miles of trails.

- 19. CONCERN STATEMENT:** Commenters questioned why the NPS would introduce more visitors to the Highline and Avalanche trails, expressing concerns that the trails are already above capacity thresholds and additional parking would exacerbate overcrowding. One commenter suggested the NPS build erosion control features (i.e. water bars, retaining walls) instead of hardening the Avalanche trail, while another suggested NPS consider building a return trail so Avalanche would become a loop. Another commenter was concerned that the proposal to extend the McDonald Creek Trail would lead to overcrowding on that trail.

RESPONSE: These are popular trails that the NPS determined should continue to support high visitor use levels as called out in the 1999 GMP. However, after public review, adding additional parking in the Avalanche area by converting camping sites was removed from this plan. See Errata. Extending the McDonald Creek Trail was not considered in this Plan. The Avalanche Trail already has erosion control features on it and the concern is the continued widening of the trail by the amount of use. Hardening the trail will contain that use like what has been the result of the boardwalk on the Hidden Lake Trail at Logan Pass. Constructing a return trail from Avalanche Lake could be considered in the future and additional compliance would be required.

20. CONCERN STATEMENT: Commenters suggested implementing variations of hiking permit/reservations:

- permit for off-trail hiking
- metered entrance to trailheads by enforcing that only those on shuttles can use the trail
- trail reservation system that aligns shuttle service to hiking demand by tracking hiker volume, trail route and estimated hike duration and alerts the park to potential emergency situations when hikers miss pickups.

RESPONSE: Permits for day hiking either on trails or off trails, as a way of managing visitor experience is part of the adaptive management options available once thresholds are reached as described in Appendix D. Counting day hikers dropped off by shuttles for safety purposes has been considered outside of this planning effort and could be implemented without needing to be addressed in this plan.

21. CONCERN STATEMENT: Commenters expressed concern that tour groups are taking advantage of the shuttle system and deliver large groups of people to trails that diminish the visitor experience by impeding traffic flow, crowding facilities, creating safety hazards, and increasing noise pollution.

Commenters also expressed the following needs for restrictions/management of commercial groups:

- further limit tour/commercial group size and require permits
- limit commercial tours to no more than 7 people and one tour per day during peak season
- limit hiking group size to 15 and make no exceptions for concessionaires
- eliminate large group commercial tours on Avalanche and Highline Trails and at Iceberg Lake, Grinnell Glacier, Siyeh Pass, Piegan Pass, Scenic Point, Cobalt Lake and Logan Pass

RESPONSE: See response above regarding numbers permitted in tour groups. Concessioner led hikes cannot be eliminated as this is permitted in their current contracts with the National Park Service. It could be considered in the future when the contracts expire. Concession led hikes do not use the shuttle system for transportation. They provide their own transportation to and from the trailheads for their clients. This is done because the shuttles could be easily filled up by one group. However, large family or otherwise groups of people hiking together are permitted to use the shuttle. However, they don't use the shuttle very often as it is difficult to get more than 2 -3 seats during peak season and peak hours. Large groups end up frequently getting split up into multiple buses on different schedules, thereby discouraging them from using the shuttle system.

22. CONCERN STATEMENT: Commenter requested more detailed information and expressed concerns with the proposed action effects on concession permits:

- would the hiking concession GLAC006 have to get permits for the day hike permitting system and from Jackson Glacier Overlook to Sun Point
- what is the definition of operator and Commercially Guided Hiking and does it include the CUAs such as photo workshops or Glacier Institutes "Glacier Discovery Week".
- what is the definition of concessioner and does this include GLAC006, GLAC001, GLAC002 and GLAC004
- why is the EA setting limits on commercial services (specifically only Commercially Guided Hiking) when the Commercial Service Plan already has set limits and regulates Commercially Guided Hiking in the GTSR corridor
- does the Avalanche Developed Area commercial guided hike restriction refer to GLAC002 and hiking the Trail of the Cedars
- to limit to two trips per day and 25 people per trip per operator forces the operator to create one group which is 25 people instead of 2 or 3 smaller groups
- who does the exempt concession-guided hikes for Highline Trail restrictions refer to (GLAC006 or CLA004)

RESPONSE: Concessioners would not be required to obtain permits for hiking. CUA's would be subject to restrictions. Existing CUA's would follow their contracts. The Corridor Plan proposed different limits for commercially guided hiking due to the unprecedented increase in visitation that the park was not experiencing when the Commercial Services Plan was developed. However, after considering public comment and further discussion it was decided to change the numbers back to what is currently in the CSP. See errata sheet for the change. The exempt concessioner guided hikes for the Highline refers to Glacier Guides and Belton Chalets.

BICYCLES

23. CONCERN STATEMENT: Commenters expressed alternatives to limit bicycle use, such as:

- total closure to bicycles, either year-round, during the busy season or on specific days of the week/month
- only allowing bike use during special occasions
- limits on bicyclist numbers
- only bikes with shuttles along the GTSR corridor
- no commercial bike events when road is open
- do not install new bike racks
- no bikes in higher elevations

Commenters also provided alternatives to increase biking opportunities along the GTSR corridor such as:

- opening Inside North Fork Road to bikers only
- not widening the road at Quarter Circle Bridge
- separating bikers from hikers
- allowing only bicycles during certain times of the day and days of the week
- converting to one-way vehicle traffic from Lake McDonald Lodge to Rising Sun
- reducing vehicle traffic numbers
- providing bike lanes that connect to other park roads and attractions
- opening bike trails, building e-bike charging stations, and promoting e-bike use, including rental opportunities and more information on the park website
- changing bicycle use restrictions to recommendations
- provide information on camping policy for touring bicyclists
- paint fog lines on road edges
- addition of a greenway bike route into the park
- increased bike racks throughout the corridor and on all shuttles
- creation of bike trail from Apgar to Avalanche Creek area

RESPONSE: The park needs to gather additional information about use levels of bicyclists and alternatives to managing use due to safety concerns. A Bicycle Safety Study has been funded for 2021. After completion of the study the park will propose some new bicycle regulations and recommendations that will be subject to additional environmental compliance. The Plan does call for installation of bicycle racks in the GTSR. Fog lines are being considered under separate compliance. A bicycle trail from Apgar to Avalanche could only be located within recommended wilderness and wheeled vehicles are not permitted in wilderness by law. NPS policy requires that recommended wilderness be managed as if it is designated. The park is considering the future of the inside North Fork Road. Turning that into a bicycle trail is one option. Reducing vehicle numbers is not permitted at this time. Additional planning and compliance would be required. Converting the GTSR to one way was considered but dismissed in Appendix G of the EA. Constructing bike trails along the GTSR is not considered because it would be an adverse effect to a National Historic Landmark.

24. CONCERN STATEMENT: Commenter requested clarification on the meaning of bicycle only events in the EA.

RESPONSE: Bicycle only events would be days when the GTSR is closed to motor vehicles and only bicycles are permitted.

25. CONCERN STATEMENT: Commenters requested that electric bicycles

- not be allowed on the GTSR when it is closed to motorized vehicles
- limited to 15mph
- be excluded during certain bicycle-only times

RESPONSE: Decisions about the use of e-bikes at Glacier National Park have been made through the Superintendent's compendium. A categorical exclusion was signed for e-bikes. As needed, the park would update the compendium for consistency with the selected action and would conduct related compliance, if necessary, that time.

INFRASTRUCTURE TO BE ALTERED

26. CONCERN STATEMENT: Commenters made the following alternative suggestions related to road infrastructure and road management:

- make GTSR traffic west to east only with a return tunnel
- improve road to Polebridge and other areas to draw visitors away from GTSR
- schedule roadwork for non-peak season

RESPONSE: Making the road one way was considered but dismissed in Appendix G. Building new roads in National Parks requires a substantial amount of federal funding. The NPS just spent \$170 million to rehabilitate the GTSR. Approximately \$1.27 million is spent annually on road maintenance and repair for all the roads in Glacier National Park. Additionally, the environmental impacts to construct a new road and or tunnel would be significant and likely result in impairment. Improving the inside North Fork Road would attract more visitors up to the North Fork. The area is already congested and cannot accommodate more vehicles without additional development which would require planning, compliance and funding and amending the 1999 GMP. Some road work is able to be done in June and November, but the winter conditions and temperatures do not allow for the majority of construction to be done outside of June-November except in very rare circumstances. This was explored and addressed in the GTSR Rehabilitation Plan/EIS.

27. CONCERN STATEMENT: Commenters expressed the following concerns and alternative suggestions on the proposed actions related to new toilets:

- at St. Mary Falls install a vault toilet at the roadside rather than a backcountry toilet
- will backcountry toilets be serviced without the use of motorized vehicles
- how and by whom will the new toilets be maintained and what impacts will this have on resources
- build a new toilet before Haystack Butte
- rather than a toilet at Haystack build one mile south toward Logan Pass
- do not build pit toilets at Haystack Butte, Preston Park, trail to Preston Park and Hidden Lake Overlook
- rather than building Hidden Lake toilet install signs indicating where closest one is located
- add new backcountry toilets at St. John's, Avalanche Lakes, Gunsight, and Lunch Creek
- can more sewage be accommodated at Logan Pass with rising visitor numbers
- what will happen once pit toilets fill and what will be done with them in the winter
- install porta-potties near parking areas at Lake McDonald
- install pumpable pit toilet at Siyeh Bend, rather than the proposed toilet at Preston Park

RESPONSE: The park already installs seasonal port a potties where necessary. These are good temporary solutions but are subject to high winds and require emptying sometimes multiple times during the day. Therefore, larger vault toilets are preferable. The GTSR Rehabilitation Plan/EIS and ROD called for vault toilets at Big Bend and St. Mary Falls. These are currently being designed. Visitors are encouraged to use facilities before they begin hikes, but this has not been successful and the amount of human waste that is found each year indicates that pit toilets are needed on the more popular trails. The backcountry pit toilet at Preston Park is an adaptive management option if thresholds are reached. The plan does call for a vault toilet at Siyeh Bend which may negate the need for something at Preston Park. However, due to the ever-changing visitor use environment and the Park's desire to ensure the best possible visitor use experience, other suggestions regarding potential toilet locations throughout the GTSR corridor and associated management could be considered in the future and additional compliance would be conducted at that time if necessary. Pit toilets will not require emptying by helicopter. Vaults or toilets like what is installed at Sperry and Granite will require helicopter trips to empty. However, the park is always looking for advanced technology in this area and will continue to do so.

28. CONCERN STATEMENT: Commenters expressed the following concerns and alternatives on the proposed actions related to electric vehicle charging stations:

- only have charging stations at entrances
- have station at Rising Sun rather than Logan
- do not have charging stations in the park, rather designate “green vehicle” parking spots

RESPONSE: As discussed on Page 1 of the EA, the GTSR corridor contains approximately 2,100 parking spaces, which includes parking lots and pullouts along the corridor. Under the proposed action, the corridor will contain approximately 2250 parking spaces. Six of these spaces in three parking locations will be converted to electric vehicle charging stations. This represents less than 1 percent (0.28 percent) of total parking availability in the corridor. This will not impact overall parking availability within the corridor. Additionally, alternate or additional locations for electric charging stations within the park will be explored in future planning efforts with additional compliance conducted at that time.

29. CONCERN STATEMENT: Commenters made suggestions for the following new or altered park recreation facilities/programs:

- IMAX theater
- more camping in West Glacier and St. Mary
- more backcountry campsites along current and/or new trails
- more non-motorhome camping sites
- make all campgrounds reservation based only
- trail, pier and fishing gear rental at St. Mary Lake
- gondola to Logan Pass

RESPONSE: As described in chapter 1 of the EA, this plan is intended to address a number of transportation and access issues related to increasing visitation, congestion from vehicles, alternative transportation options, trail use, and impacts to natural and cultural resources. Therefore, infrastructure such as campgrounds, a gondola, and opportunities for gear rental are outside the scope of the proposed plan and EA. These ideas could be considered in future planning and compliance processes.

VISITOR USE, EXPERIENCE, INTERPRETATION & EDUCATION

30. CONCERN STATEMENT: Commenter requested that the EA project the expected number of visitors over the life of the plan and subsequently analyze the impacts of this number of visitors on visitor experience and resources.

RESPONSE: A number of variables make it difficult to project the expected number of visitors over the life of the plan, including changing travel patterns, pandemics as we are currently experiencing, economic conditions, gas prices, etc. Early in the planning process as noted in the scoping brochure, alternatives were initially designed around varying levels of increase in visitation. However, before we could complete a draft plan, we reached the 50% increase, which was the highest level projected. The socio-economists and others working on the plan had projected we would not reach that level for years if ever. Therefore, actual visitation has increased faster than past projections. As a result, instead of attempting to project increases in visitation, the NPS shifted to assessing the number of people at one time (PAOT) as a guide for managing visitor use (see appendix D). As such, where appropriate, the EA acknowledges potential resource and visitor experience impacts based on a general assumption that an increase in visitation is likely to continue.

NATURAL LANDSCAPE SOUNDSCAPE PROTECTION

31. CONCERN STATEMENT: Commenters expressed concerns related to natural soundscape protection from motorized vehicles and suggested the following alternative actions:

- ban motorcycle use in the park
- regulate motorcycle and shuttle noise
- develop sound standards for all vehicles entering the park and post these standards on the park website

RESPONSE: Eliminating motorcycles from the GTSR corridor would be inconsistent with desired conditions for providing a variety of recreational opportunities, including providing a variety of options to access the GTSR corridor, which is a fundamental value of Glacier National Park (see page 10 of the EA). Regulations already exist for vehicles in national parks and can be found at 36 CFR 2.12. In addition, as noted on page 29 of the EA, the park will conduct noise monitoring, continue education and outreach, and promote best management practices to reduce noise from all vehicles. This would include pursuing quieter technology for shuttles, however, given the grade of the road, quieter, electric shuttles are not viable until the technology further develops.

32. CONCERN STATEMENT: Commenter requested that wildlife mitigation measures be identified to limit vehicle impacts, including lower speed limits and reducing the number of cars in the corridor at one time.

RESPONSE: More wildlife crossings were built at identified locations on the GTSR during the GTSR rehabilitation work that was just completed in 2018. Crossings were put in as a result of a study done to identify where wildlife were crossing the GTSR. This included all sizes and species of wildlife. Reducing the number of cars is beyond the scope of this plan and would require additional planning and environmental compliance. Lowering speed limits has been considered in previous plans.

APGAR VISITOR CENTER

33. CONCERN STATEMENT: Commenters made several suggestions for how to improve visitor access and experience in the Apgar area, including:

- extending parking;
- adding a new tent only campground loop;

- adaptively re-using the old Apgar Visitor Center for Transportation Planning Services or Glacier Park Conservancy Sales (the latter to reduce congestion in the new visitor center); and
- adding a bike path from Apgar to Avalanche.

RESPONSE: Apgar is a congested location and it was hoped that removing the Visitor Center function in the village would reduce congestion. However, that has not been the case. Congestion in Apgar needs to be addressed in a separate planning effort, at which time alternative uses for the old Visitor Center, expanded camping and expanded parking will be explored. Funding is being sought to develop a plan for Apgar. Adding a bike path would require widening the road prism. The width of the Going-to-the-Sun Road is one of the contributing elements to its designation as a National Historic Landmark. If in the future a bike path is proposed, additional planning and compliance would be required.

AVALANCHE DEVELOPED AREA

34. CONCERN STATEMENT: Commenters requested the following clarifications for the proposed closing of portions of Avalanche Campground to create additional parking:

- why is the park proposing to close the campground during peak season, and
- what is the “abandoned loop” described in the EA, has it been reclaimed and if so, would it require development and what resources would this impact?

Commenters also expressed the following concerns with and alternatives to the proposed closure action:

- converting a campground to a parking lot would decrease visitors’ ability to find camping and increase crowding issues
- only convert the camping area if adding other replacement camping
- adding more parking will lead to more visitors using the Avalanche Trail, which is already beyond capacity
- increasing parking at Avalanche may encourage people to drive further into the park before boarding the shuttle
- utilize the Avalanche Picnic Area for parking and move the picnic area to a new location
- only convert the camping area to parking during non-peak season

RESPONSE: After reviewing public comment about the proposed changes at the Avalanche developed area, the following changes were made:

- Prohibit parking along the campground entrance road. To facilitate better traffic flow, make the current entrance one way and restore the historic exit just west of the entrance road.
- Adaptive Management Option:
 - Maintain 10 existing spaces for oversized vehicle parking and turnaround.
 - Maintain picnicking in the existing area as either walk-in or drive-in, dependent on the level of visitation.
 - Continue to use the campground for parking during early and late season, before the campground opens and after it closes.

Other ideas included in the Draft Plan/EA were removed including using the abandoned loop as parking and converting a loop in the campground to parking.

35. CONCERN STATEMENT: Commenters suggested the following alternatives to the campground road entrance access, shuttle stop location, oversized vehicle access, time limited parking, and management of through traffic within the Avalanche Developed Area:

- make the current campground entrance road one-way and restore the historic exit just west of the entrance road
- relocate shuttle stop from picnic area access road to the new one-way campground access road

- do not allow oversize vehicle parking in picnic area and limit parking time in picnic area to 2 hours
- close Avalanche area to through traffic unless visitors have a pass
- all visitors wanting to stay at Avalanche for more than 2 hours must ride shuttles or be dropped off
- do not restore the historic exit at the Avalanche Campground as this will result in an increase in motor vehicle accidents at that location

RESPONSE: See above.

BIG BEND

36. CONCERN STATEMENT: Commenters expressed concerns that adding a shuttle stop in the Big Bend area will lead to congestion. A commenter also suggested the following alternatives for the proposed trail from Big Bend to Highline:

- build a vault toilet
- make the trail one way down from Highline Trail
- close the trail early and late in the season for wildlife

RESPONSE: Adding a comfort station to the Big Bend area was a decision made in the Rehabilitation of the GTSR Plan/FEIS and Record of Decision signed in 2004. Design is underway to construct this new comfort station. Adding a connector trail from the Highline Trail to Big Bend was intended to be used as a one-way trail during the time that the Highline Trail would be one-way travel only. This would allow visitors to hike a shorter section and not have to commit to 14 miles. Furthermore, the one-way restriction was intended to be only in place during peak times during the day only, during peak season. It would likely be open from July 1 through Labor Day, but these dates have not been determined. Finally, construction of a shuttle stop, and trail are triggered by thresholds as explained in Appendix D of the EA. Additional consultation will be required under Section 7 of the Endangered Species Act before a trail can be built.

GUNSIGHT PASS TRAILHEAD

37. CONCERN STATEMENT: Commenters expressed the following concerns over proposed actions for the Gunsight Pass area:

- what is the rationale for managing the Gunsight area for “lower use” if the goal is to reduce utilization of the Highline Trail
- the EA provides no indication of the level of use that would trigger moving the trail to a permit only system, nor what the design and enforcement of the system will be
- the EA proposal to promote a portion of the trail for more use appears both contradictory and arbitrary
- The EA’s PAOT number for the Gunsight Drainage is 34, but there are two backcountry campgrounds in the drainage that have a maximum occupancy of 36. Does this mean these campgrounds will be reduced in capacity? If not, will day hikers be allowed if the campgrounds are full?

RESPONSE: One of the goals of managing use levels on trails was to provide a range of visitor experiences throughout the GTSR corridor. Some trails would be managed for higher levels of use (such as Avalanche, the Highline and Hidden Lake Overlook for visitors who either prefer or don’t mind hiking with a lot of other people) while other trails would be managed for lower levels of use to provide trails in the corridor for visitors who are looking for a less congested hiking experience (such as Gunsight). This was discussed under the Preferred Alternative description. The preferred alternative and Appendix D of the EA reference around 140 PAOT on the Gunsight Trail. Overnight users are not considered in these trail numbers as their use levels are already managed by a backcountry permit system. The trigger for

the Gunsight trail was identified in Appendix D as 127 and a list of actions that the park would take was also listed if the trigger was reached.

LOGAN PASS

38. CONCERN STATEMENT: Commenters expressed concerns and requested more information on the proposed actions for Logan Pass and made alternative suggestions such as the following:

- limiting parking time and number of vehicles
- additional shuttles
- removing bus parking
- implementing a one car in – one car out approach
- fees for parking
- additional parking
- one-way traffic flow
- eliminating overnight parking
- closing visitor center store
- adding more seating and using natural materials for the deck at Hidden Lake Overlook and hardening trails

RESPONSE: Limiting parking time was discussed in the Plan. Additional shuttles are also discussed subject to funding. Currently a one car in and one car out approach is used when the parking lot at Logan Pass is full. At this time charging parking fees is not permitted, but this can continue to be explored. Closing the visitor center store was considered but dismissed in the park's General Management Plan. Nothing has changed that would make the park reconsider this action. Removing bus parking at Logan Pass is not feasible due to the two different tour bus operations (Sun Tours and the Red Buses) and the shuttle buses that all require temporary parking. Materials for construction of the Hidden Lake Overlook expansion are considered during design. These comments to use natural materials and or construct additional seating will be considered during design.

LUNCH CREEK

39. CONCERN STATEMENT: Commenters expressed concern that a new trail at Lunch Creek is unnecessary to connect Lunch Creek with Logan Pass when adding a shuttle stop would achieve this goal. Others expressed concern that if a new trail is constructed, it should be designed in a way to discourage people from walking along the creek causing resource damage, much like the existing paths above the road, gravel, and rock enable people to travel off trail in nearby meadows and scree.

RESPONSE: This action was removed from the Plan. See Errata.

WEST SIDE CONSTRUCTION STAGING AREA

40. CONCERN STATEMENT: Commenters expressed concern about the lack of a discussion in the EA regarding potential parking benefits, justification, and corresponding analysis of converting the west side construction Staging Area to parking; including associated environmental impacts; congestion on Quarter Circle Bridge and Glacier Institute Field Camp; and site access. Some commenters suggested either adapting the existing area to accommodate large vehicles or use other areas including closer to the Transit Center near the four-way intersection and outside the Park.

RESPONSE: Analysis of impacts in the EA for conversion of this site from a construction staging area for the GTSR project to a parking lot and shuttle stop for visitors was adequate given that the site is already very disturbed, compacted, trampled and de-vegetated. Both the Apgar Visitor Center and the village of Apgar have become extremely congested and there are no alternative locations for parking nearby. This

site would be connected by trail to both the Apgar VC and the village of Apgar. Furthermore, providing a shuttle stop will enable visitors to take advantage of alternative transportation if they choose. The park determined that using an already disturbed area to build a parking lot was more environmentally appropriate than disturbing a forested area near the four-way intersection or expanding the Apgar Visitor Center parking lot. Additionally, that parking lot has already been expanded once and any other expansion would place it too close to the Apgar Campground, disturbing campground users, and not retain a large enough buffer between the campground and the visitor center parking lot. Development of the site as a parking lot will not necessarily result in more visitors driving to Quarter Circle Bridge and the Glacier Institute Field Camp as these are located past the current staging area.

AFFECTED ENVIRONMENT/ ENVIRONMENTAL CONSEQUENCES FOR WILDLIFE, NATURAL RESOURCES, AND SPECIAL STATUS SPECIES

41. CONCERN STATEMENT: Commenters suggested the NPS should have relied on available information to describe wildlife in the corridor and assess potential impacts of the plan on wildlife, including park-specific wildlife observation reports, data on wildlife-vehicle collisions and displacement (especially for grizzly bears along Highway 2), and surveys for cliff-nesting raptors, mountain goats, bighorn sheep, road-killed wildlife, and small mammals.

RESPONSE: See Errata for an affected environment and environmental consequences section for wildlife.

42. CONCERN STATEMENT: Commenters expressed concern that the EA did not adequately address the potential effects to wildlife and other natural resources from proposed action.

RESPONSE: An Affected Environment and Environmental Consequences section was added for Wildlife. See Errata.

43. CONCERN STATEMENT: Commenters made several comments about the affected environment and impacts analysis related to birds, suggesting the NPS should:

- use Breeding Bird Survey data to characterize the affected environment for birds;
- acknowledge the potential for bird-vehicle strikes;
- analyze impacts to nesting and foraging birds, including bald and golden eagles;
- use data from harlequin duck studies in the park to understand impacts of the plan on this species; and
- use white-tailed ptarmigan research at Logan Pass to understand impacts of the plan on birds.

RESPONSE: An affected environment and environmental consequences section was added. See Errata

AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES FOR VISITOR USE AND VISITOR USE EXPERIENCE

44. CONCERN STATEMENT: Commenter expressed concern that that the EA did not adequately address the likelihood of the proposed shuttle actions creating an increase in trail traffic, reducing opportunities for solitude, and increase in safety concerns, thereby degrading visitor use experience.

RESPONSE: The plan proposes to manage the GTSR Corridor and the trails within it in such a way to provide diverse experiences. High use levels would be experienced on some of the trails. Other trails, once thresholds are reached would be managed so visitation levels do not continue to increase. The shuttle system would be used to help achieve this by limiting the number of stops at certain trails.

45. CONCERN STATEMENT: Commenters requested the following additional details be added to the EA's analysis of parking management related proposed actions:

- provide a full analysis of how a parking permit system would be implemented, the monetary costs of implementing and enforcing that system, and how a permit system would affect visitor experience and visitor capacities-especially as it relates to increased parking competition
- analyze the effect of having more parking in re-striped locations, including impacts to park resources, trail congestion, road congestion, and visitor experience
- more explanation of the potential effects of the conversion of park areas to parking on parking availability and congestion.

RESPONSE: The costs of implementing a parking permit system are not required as part of NEPA. Furthermore, it would require design of a system which was beyond the scope of this planning document. During design additional compliance would be completed. Parking permit systems are a way to manage congested parking areas. The impacts to visitor experience were discussed in the EA on page 41. The proposal to convert camping at Avalanche to parking has been removed from the Plan. See Errata.

46. CONCERN STATEMENT: Commenters requested the following additional details be added to the EA's description of proposed actions and analysis of trail management related proposed actions:

- define what is meant by the proposed action "Manage use levels on trails to provide a range of experiences in the GTSR corridor"
- provide information on current trail conditions, in order to show whether triggers/thresholds have been surpassed and allow for meaningful comparisons to be made
- analyze whether the proposed actions will reduce the numbers of users
- analyze implementing a hiker permit system, a timed entry system, or other actions that limit trailhead use
- identify actions in response to triggers and thresholds, and fully evaluate the impacts/tradeoffs of those proposed actions
- analyze how creation of a new trail at Big Bend would affect the shuttle system

RESPONSE: The goal of the proposed action is to provide for a diverse range of experiences for visitors throughout the GTSR corridor from high use to low use areas. Current use levels on trails were provided in Appendix D in the EA. While the park has 2018 and 2019 data it is not statistically different than 2017 and furthermore, 2017 was the highest year of visitation on record. Impacts of actions in response to triggers and thresholds were discussed in the Environmental Consequences Section of the EA. Analysis of impacts on the shuttle system is not required under NEPA as it is not considered a "resource." Additionally, the trails that would be managed for use levels were identified in the Plan/EA. Appendix D of the EA contained specific actions on how use levels would be managed.

47. CONCERN STATEMENT: Commenters requested the EA analyze the impact modifying shuttle service to Siyeh Bend may have on visitor crowding, visitor experience, and safety issues.

RESPONSE: Impacts were presented in the EA in general terms and include Siyeh Bend and other applicable areas within the GTSR corridor.

48. CONCERN STATEMENT: Commenters requested the EA analyze the effects of the West Entrance redesign on increased congestion and competition leading to negative impacts (including cumulative) on visitor experience.

RESPONSE: The proposed redesign was removed from the Plan/EA. The entrance station was already redesigned a few years ago, including adding lanes and improved conditions for employees. It was redesigned to improve efficiency of getting visitors through the gates but getting people through the entrance station faster only contributes to congestion further up the road. The intent will be to still use the entrance station to pulse movement of visitors into the park. If additional redesign of the entrance

station occurs, additional compliance will be done since this building is listed in the national historic register.

AFFECTED ENVIRONMENT FOR WILDERNESS

49. CONCERN STATEMENT: Commenter noted that the EA indicates 90% of the park is recommended wilderness while the 1999 GMP and 2004 Commercial Services Plan indicate 95% of the park is recommended wilderness.

RESPONSE: It has been determined that since the GMP was not identified as a Wilderness Study, it cannot be used to expand the park's recommended wilderness. In the event that the park is asked for a new map the updates that the park prepared over the years at the request of the Regional Office will be shown, but legally the 1974 Wilderness Plan is the only plan that identifies recommended wilderness. Because this error was not realized until 2018, the Commercial Services Plan contained incorrect information.

MAPS AND TABLES

50. CONCERN STATEMENT: Commenters noted the need for the following edits or more explanation for tables and maps in the management plan:

- map on page 5 of EA incorrectly shows Flathead National Forest on east side of the Continental Divide-should be Lewis and Clark National Forest
- is Table 2 (Visitor Capacity) depicting actual use or thresholds

RESPONSE: The map was incorrect and has been corrected as an erratum. Table 2 is depicting visitor capacity for the site. How this was determined is described in Appendix D of the EA and current use levels are in Appendix D as well.