

National Park Service
U.S. Department of the Interior
Glacier National Park
Waterton-Glacier International Peace Park
Montana



Apgar Transit Center Parking Lot Expansion Environmental Assessment

April, 2012



Apgar Transit Center
NPS photo

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Environmental Assessment

Apgar Transit Center Parking Lot Expansion

Summary

Glacier National Park proposes to expand the parking lot at the Apgar Transit Center. As a preliminary step toward implementing the decision in the *Final General Management Plan* (NPS 1999) to replace the interim visitor center in Apgar Village with a visitor center and museum north of the Going-to-the-Sun Road and Camas T-intersection, the park plans to relocate visitor center operations from Apgar Village to the Apgar Transit Center in the near future. The transit center parking lot was designed to provide parking for visitors using the transit system and is too small to accommodate additional parking once visitor center operations are moved.

This environmental assessment (EA) evaluates two alternatives: a no action alternative and an action alternative. The no action alternative describes the current condition if the transit center parking lot was not expanded, and the action alternative addresses the proposed expansion of the existing parking lot.

This EA has been prepared in compliance with the National Environmental Policy Act (NEPA) to provide the decision-making framework that 1) analyzes a reasonable range of alternatives to meet the objectives of the proposal, 2) evaluates potential issues and impacts to Glacier National Park's resources, and 3) identifies mitigation measures to lessen the degree or extent of these impacts. Resource topics analyzed include vegetation and plant species of concern, soils, wildlife, natural soundscapes, visitor use and experience, and visual resources. All other resource topics were dismissed because the project would result in negligible or minor effects to those resources or because the resource is not found in the analysis area, the issue is not applicable to the proposal, and the resource would not be affected by the project. No major effects are anticipated as a result of this project. Public scoping was conducted in accordance with the NEPA, and the majority of the comments received were in support of the proposed project.

How to Comment

Comments on this environmental assessment can be provided directly through the park's planning website at <http://parkplanning.nps.gov/ApgarTransitParking>. Or write to: Superintendent, Glacier National Park, Attention: *Apgar Transit Center Parking Lot EA*, PO Box 128, West Glacier, Montana 59936. This environmental assessment will be on public review for 30 days. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. Although you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

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Purpose and Need

The purpose of Glacier National Park is to:

- preserve and protect natural and cultural resources unimpaired for future generations (1916 Organic Act);
- provide opportunities to experience, understand, appreciate, and enjoy Glacier National Park consistent with the preservation of resources in a state of nature (1910 legislation establishing Glacier National Park); and
- celebrate the on-going peace, friendship, and goodwill among nations, recognizing the need for cooperation in a world of shared resources (1932 International Peace Park legislation).

The significance of Glacier National Park is explained relative to its natural and cultural heritage:

- Glacier's scenery dramatically illustrates an exceptionally long geological history and the many geological processes associated with mountain building and glaciation;
- Glacier offers relatively accessible, spectacular scenery and an increasingly rare primitive wilderness experience;
- Glacier is at the core of the "Crown of the Continent" ecosystem, one of the most ecologically intact areas remaining in the temperate regions of the world;
- Glacier's cultural resources chronicle the history of human activities (prehistoric people, Native Americans, early explorers, railroad development, and modern use and visitation) and show that people have long placed high value on the area's natural features; and
- Waterton-Glacier is the world's first international peace park.

Introduction

Glacier National Park is located in northwestern Montana along the United States-Canadian border. The park is in the Northern Rockies, straddling the rugged mountains of the Continental Divide. Together with Canada's Waterton Lakes National Park, it forms the Waterton-Glacier International Peace Park, the world's first international peace park. The parks are listed together as a World Heritage Site and separately as International Biosphere Reserves. Outstanding natural and cultural resources are found in both parks. Glacier National Park's primary mission is the preservation of natural and cultural resources, ensuring that current and future generations have the opportunity to experience, enjoy, and understand the legacy of Waterton-Glacier International Peace Park.

In the *Final General Management Plan/Final Environmental Impact Statement and Record of Decision*, the park decided to replace the interim visitor center in Apgar Village with a West Side Discovery Center and Museum north of the Going-to-the-Sun Road (GTSR) and Camas T-intersection (NPS 1999). As the first step toward implementing this decision, the park plans to shift visitor center operations from Apgar Village to the Apgar Transit Center. The action proposed in this environmental assessment (EA) is to expand the Apgar Transit Center parking lot to better accommodate visitor center parking needs.

This EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, regulations of the Council on Environmental Quality (CEQ) (40 CFR § 1508.9), and the National Park Service Director's Order (DO)-12 (*Conservation Planning, Environmental Impact Analysis, and Decision-Making*).

Background

In the *Final General Management Plan and Final Environmental Impact Statement and Record of Decision*, (NPS 1999), the NPS decided to construct a West Side Discovery Center and Museum north of the GTSR and Camas Road T-intersection and move visitor center operations from the existing visitor contact station – a small, converted house in the center of Apgar Village – to the new facility. Lack of funding has prevented the NPS from building such a facility.

In 2007, the Apgar Transit Center was constructed north of the T-intersection as part of the GTSR Rehabilitation Project. The facility serves as a transit staging area and facilitates visitor

access and orientation along the GTSR during road rehabilitation. Open only during the summer and closed for the remainder of the year, the transit center building is not being fully utilized. Therefore, the park intends to relocate existing west side visitor center operations from Apgar Village to the Apgar Transit Center. The relocation of visitor center operations will be a first step toward implementing the *Final General Management Plan* decision to develop a visitor center and museum at the site.

The transit center parking lot was designed to provide parking for visitors using the transit system, but is also used for parking and staging by tour concessions customers and visitors to Apgar Village. During the busy summer season, thousands of visitors may use the transit center and associated parking lot. The parking lot is often full in July and August, as has often been observed by NPS staff. The existing transit center parking lot is therefore too small to accommodate additional parking once visitor center operations are moved; the NPS is therefore proposing to expand the Apgar Transit Center parking lot.

Purpose and Need

Visitor use of the Apgar Transit Center is expected to increase once visitor center operations are relocated from Apgar Village to the Apgar Transit Center. The existing transit center parking lot already reaches full capacity during the peak visitor use period. The purpose of this project is therefore to provide for increased visitor use at the Apgar Transit Center once visitor center operations are relocated. The following objectives would be met by this project:

- Accommodate increased visitor use of the Apgar Transit Center following the relocation of visitor center operations.
- Provide for a quality visitor experience at the Apgar Transit Center.
- Minimize impacts to park resources while providing for visitor use and enjoyment.

Relationship to Other Plans and Policies

Current plans and policies that pertain to this proposal include Glacier National Park's *General Management Plan/Final Environmental Impact Statement and Record of Decision* (NPS 1999), the *Going-to-the-Sun Road Rehabilitation Plan/Final Environmental Impact Statement and Record of Decision* (NPS 2003), and the *2006 Management Policies* (NPS 2006). Following is more information on how this proposal meets the goals and objectives of these plans and policies.

- The proposed action would support the upcoming relocation of visitor center operations from Apgar Village to the Apgar Transit Center, which will be a preliminary step toward implementing the decision from the park's *General Management Plan* to develop a visitor center and museum north of the GTSR and Camas Road T-intersection.
- The project is in keeping with the *Going-to-the-Sun Road Rehabilitation Plan/Final Environmental Impact Statement and Record of Decision*, which reiterates the *General Management Plan's* decision to develop a visitor center and museum north of the T-intersection, and called for the development of the Apgar Transit Center in the same location. The parking lot expansion would accommodate parking for both the transit system and relocated visitor center operations.

- The project is consistent with the objectives of the 2006 *NPS Management Policies*, which state that parking areas should be located so as to avoid unacceptable intrusion on park resources and values, and that major facilities within park boundaries should be located in areas “identified in an approved general management plan”, where alternative transportation, including pedestrian walkways, will be encouraged. The parking lot expansion would be constructed at the existing Apgar Transit Center, which includes associated parking, roads, and trails. Resource impacts would be minimized due to the largely developed nature of the site. The *General Management Plan* identified the location as the site for a visitor center and museum. The transit center is the staging area for the GTSR transit system, and provides access to bicycle and pedestrian pathways that link the area to a nearby campground, picnic area and village.

Identification of Impact Topics

The NPS takes a “hard look” at all potential impacts by considering the direct, indirect, and cumulative effects of the proposed action on the environment, along with connected and cumulative actions. In the environmental consequences section of this EA, impacts are described in terms of context and duration. The context or extent of the impact is described as localized or widespread. The duration of impacts is described as short-term or long-term. The intensity and type of impact is described as negligible, minor, moderate or major, and as beneficial or adverse. The NPS equates “major” effects as “significant” effects. The identification of “major” effects would trigger the need for an environmental impact statement (EIS). Where the intensity of an impact could be described quantitatively, numerical data is presented; however, most impact analyses are qualitative and use best professional judgment in making the assessment.

The NPS defines “measurable” impacts as moderate or greater effects. It equates “no measurable effects” as minor or less effects. “No measurable effect” is used by the NPS in determining if a categorical exclusion applies or if impact topics may be dismissed from further evaluation in an EA or EIS. The use of “no measurable effects” in this EA pertains to whether the NPS dismisses an impact topic from further detailed evaluation in the EA. The reason the NPS uses “no measurable effects” to determine whether impact topics are dismissed from further evaluation is to concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail in accordance with CEQ regulations at 1500.1(b).

Impact Topics Retained for Further Analysis

Impact topics for this project were identified on the basis of federal laws, regulations, and orders; 2006 *NPS Management Policies*; and NPS knowledge of resources at Glacier National Park. Impact topics that are carried forward for further analysis in this EA include:

- **Vegetation and Plant Species of Concern**
- **Soils**
- **Wildlife**
- **Natural Soundscapes**
- **Visitor Use and Experience**
- **Visual Resources**

Impact Topics Dismissed from Further Analysis

This section provides a limited evaluation and explanation as to why the following impact topics are not evaluated in more detail. Impact topics are dismissed from further evaluation if:

- they do not exist in the analysis area, or
- they would not be affected by the proposal or the likelihood of impacts are not reasonably expected, or
- through the application of mitigation measures, there would be minor or less effects (i.e. no measurable effects) from the proposal, and there is little controversy on the subject or reasons to otherwise include the topic.

Due to there being no effect or no measurable effects, there would either be no contribution towards cumulative effects or the contribution would be low. For each issue or topic presented below, if the resource is found in the analysis area or the issue is applicable to the proposal, then a limited analysis of direct and indirect, and cumulative effects is presented.

Threatened and Endangered Species, Candidate Species, and Species of Concern

The NPS analyzes impacts to federally listed species in accordance with NEPA and the Endangered Species Act. Section 7 of the Endangered Species Act requires all federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued existence of listed species or critical habitats. In addition, the 2006 *Management Policies* and Director's Order-77 *Natural Resources Management Guidelines* require the NPS to examine the impacts of projects on federal candidate species as well as state listed threatened, endangered, candidate, rare, declining, and sensitive species (NPS 2006).

Water Howellia and Spalding's Catchfly. While present in Flathead County, there are no known locations of the threatened water howellia (*Howellia aquatilis*) or the threatened Spalding's catchfly (*Silene spaldingii*) within Glacier National Park. Habitat for water howellia, a wetland-dependent species, may be present in the park, but habitat for Spalding's catchfly has not been identified. There are no recorded observations or suitable habitat in the vicinity of the Apgar Transit Center that could potentially support water howellia or Spalding's catchfly. Consequently, there would be no effect to Spalding's catchfly or water howellia from the proposed project. However, if locations of listed plant species become known within the vicinity of the project area, the plants would be avoided.

Bull Trout (*Salvelinus confluentus*). Bull trout are listed as threatened under the Endangered Species Act and are also a state listed Species of Concern. No streams or other waters are in the project area, and there would be no impacts to bull trout. The species is therefore not analyzed.

Grizzly Bear (*Ursus arctos horribilis*). Federally listed as Threatened. Grizzly bears have been observed in the vicinity of Apgar and the GTSR and Camas Road T-intersection. Grizzlies may move through the area while travelling around the foot of Lake McDonald or between adjacent drainages, and temporary noise and increased human activity during the construction period for the parking lot expansion could displace or disturb some individual bears. These disturbances would be short-term, occurring only during the construction

period, estimated at approximately 8 weeks, total, during fall and spring. Grizzly bear habitat values in the project area are low during summer and autumn and moderate in the spring as indicated by grizzly bear habitat modeling by the Cumulative Effects Model (CEM) Working Group (CEM 2004, based on findings from Mace et al., 1999). Therefore, no high value bear foraging habitat would be lost as a result of the parking lot expansion. While an increased number of people using the transit center could slightly increase the level of human-caused disturbances for the long-term, as well as the potential for bear-human conflicts, the project area is within Management Situation 3, where grizzly bear habitat maintenance is not a management consideration and grizzly bear presence and factors contributing to their presence are actively discouraged (NPS 2010). Therefore, because the project would occur in an area of lower value, non-essential grizzly bear habitat within Management Situation 3, and because construction activity would be temporary and localized to the transit center, impacts to grizzly bears would be negligible. Under Section 7, the project would have no effect to grizzly bears. Impacts to grizzly bears are therefore not further analyzed.

Canada Lynx (*Lynx canadensis*). Federally listed as Threatened. Preliminary lynx habitat modeling for the park defined moist conifer forests above 4,000 feet elevation as most likely to support lynx. But little is known about lynx habitat use in the park and these criteria are general. The modeling indicates moderately valuable lynx habitat in the vicinity of the Apgar Transit Center, but the area does not likely provide optimal lynx habitat due to the low elevation (approximately 3170 feet) and proximity to human developments. Park records contain only two lynx sightings in the Apgar area, including one from 1966. The proposed parking lot expansion would not affect critical lynx habitat, construction would be localized to the transit center, and any disturbances to lynx from construction would be temporary. Combined effects to lynx from this project and ongoing disturbances and existing development are unlikely, given the small likelihood that lynx use the area with any regularity. Impacts to lynx would be negligible; under Section 7, the project would have no effect to lynx, and impacts to the species are not further analyzed.

Wolverine (*Gulo Gulo*). Candidate Species. The USFWS defines a candidate species as a species for which there is “sufficient information on their biological status and threats to propose them as endangered or threatened under the Endangered Species Act, but for which development of a proposed listing regulation is precluded by other higher priority listing activities” (USFWS 2011). Park records contain one observation of wolverine tracks and two reports of sightings near the Apgar Campground and the GTSR and Camas Road T-intersection; one of the sightings dates back to 1962. Wolverines may use the area surrounding the transit center very occasionally and sporadically, possibly during winter and early spring in search of ungulate carrion. But the low elevation lodgepole pine forest is not prime habitat for the species, especially during summer and fall. Wolverines are a highly mobile, wide ranging species and would not be measurably affected by short-term, localized construction activity associated with the parking lot expansion, or by the incremental long-term increase in human activity from this project combined with existing developments. Wolverines are therefore dismissed from further analysis.

Meltwater Stonefly (*Lednia tumana*). Candidate Species. The Apgar Transit Center is not located near or within meltwater stonefly habitat, and it is highly unlikely that the species is present. The meltwater stonefly would not be impacted by the project and is not analyzed.

Species of Concern. Bald eagles (*Haliaeetus leucocephalus*), a state listed species of concern, nest each year on lower Lake McDonald and forage at the outlet at lower McDonald Creek. The proposed project would be highly unlikely to affect bald eagles. It would occur within a habitat type that is not typically used by the species, and the project area is over 2 kilometers (approximately 1.2 miles) from the nest and 900 meters (approximately 0.5 mile) from the lower McDonald Creek outlet. Other bird species of concern that may be occupying the lodgepole pine forest near the transit center would not likely be measurably impacted by the project, since the most intrusive construction work, such as ground disturbance and/or tree removal, for example, would occur in the fall, well after the sensitive nesting period. By the time construction begins, many migratory bird species would have either left the area or be close to leaving. Lower intensity work activity in the spring (such as paving and curb construction, for example) would be short-term and would not result in additional habitat loss. Impacts to bird species of concern would be negligible to minor, and the topic is not further analyzed.

State listed mammalian species of concern that occur or may occur in Glacier National Park include the Townsend's big-eared bat (*Corynorhinus tonsendii*), hoary bat (*Lasiurus cinereus*), northern bog lemming (*Synaptomys borealis*), and fisher (*Martes pennanti*) (MNHP 2011a). Townsend's big-eared bats have not been detected in the park. If they are present, they would be moving toward subterranean hibernacula by the time the project is underway and would not likely be using habitat in the vicinity of the project area. The hoary bat would also not likely be present, due to the absence of trees with features that are favored by bats and other wildlife; the project would therefore not impact bat species of concern. There is one verified record of a northern bog lemming from the park, collected in the Camas drainage in 1949 (Wright 1950), and two unverified, more recent reports from east of the Continental Divide. The area surrounding the transit center does not contain suitable habitat for the species, and the northern bog lemming would not be impacted by the project. Fishers have not been recently detected in the park. They are not likely to be present in the project area, since the habitat type is not preferred fisher habitat due to the lack of horizontal structure. If fishers do occasionally visit the project area, they would be negligibly affected by the loss of 1.2 acres of lodgepole pine forest and by short-term human activity during the construction period for the parking lot expansion, which would occur primarily outside the denning period. Mammalian species of concern are therefore not further analyzed.

There are no known records of the northern leopard frog (*Rana pipiens*) in Glacier National Park. Park records contain one report of several hundred tadpoles and juvenile western toads (*Bufo boreas*) in the settling ponds at the sewage treatment site near lower McDonald Creek, over 1 kilometer from the transit center. Transient use of the project area by amphibians is possible, especially at the transit center parking lot stormwater detention area. But any

amphibians that are present are likely to be at very low abundance, and the proposed action would not measurably impact any known local populations or their habitat. Amphibian species of concern are therefore dismissed from further analysis.

While distribution and abundance of invertebrate species of concern within the park are not well known, impacts are expected to be non-existent to negligible. Invertebrate species of concern are not further analyzed.

Recommended Wilderness

Ninety-five percent of Glacier National Park is recommended wilderness. Wilderness in the park is defined as lands that are essentially undeveloped or are natural in character and lie at least 200 feet (60.96 meters) from the centerline of paved roads, 50 feet (15.24 meters) from unpaved roads, and 300 feet (91.44 meters) from developed areas. NPS policy requires that proposed or recommended wilderness be managed as designated wilderness until the land is either formally designated or rejected. The Apgar Transit Center is not located within recommended wilderness. The facility lies within the visitor service zone. The backcountry zone boundary (and thus the recommended wilderness boundary) lies approximately 400 meters (0.25 mile) away. The backcountry zone abuts the visitor service zone throughout the park, and because the visitor service zone often contains developed areas and is managed for higher levels of noise, it is reasonable to expect that some noise from developed and roaded areas would be audible inside the backcountry zone boundary, and therefore inside the recommended wilderness boundary. Artificial noise from the GTSR and the Apgar developed area is therefore likely audible within the nearby recommended wilderness boundary. Some intermittent noise from the project would also be temporarily audible inside the recommended wilderness boundary, but the vast majority of the park's recommended wilderness would not be affected. The project would be consistent with uses allowed within the visitor service zone and would be of short duration. It would not appreciably affect the defining attributes of wilderness, and the topic is dismissed from further analysis. The impacts analysis for natural soundscapes provides a comprehensive analysis of the noise-related effects anticipated from the project.

Water Resources (including ground water)

The Clean Water Act was enacted to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” The US Army Corps of Engineers (COE) has been charged with evaluating federal actions that result in potential degradation of waters of the United States and issuing permits for actions consistent with the Clean Water Act. The US Environmental Protection Agency (EPA) also has responsibility for oversight and review of permits and actions which affect waters of the United States. NPS policies require protection of water quality in accordance with the Clean Water Act. There are no streams or water bodies within or near the project area, and no evidence of ground water was encountered from test pits dug prior to construction of the Apgar Transit Center. Based on a 10-year and 100-year storm event, additional stormwater runoff from the parking lot expansion is expected to be approximately 2.6 cubic feet per second for a 10-year event and 4.0 cubic feet per second for a 100-year event. The existing stormwater detention area north of the parking lot would

accommodate additional runoff from the expansion. There would be no additional impacts to water resources from the parking lot expansion, and the topic is dismissed from further analysis.

Wetlands

The definition of wetlands under the Clean Water Act is “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.” Executive Order 11990 Protection of Wetlands requires federal agencies to avoid, where possible, adversely impacting wetlands. Further, Section 404 of the Clean Water Act authorizes the United States Army Corps of Engineers to prohibit or regulate the discharge of dredged material, fill material, or excavation within US waters. NPS policies for wetlands as stated in 2006 *Management Policies* and Director’s Orders 77-1 *Wetland Protection* strive to prevent the loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands. In accordance with DO 77-1, the potential adverse impacts of proposed actions must be addressed in a separate SOF. The project area was surveyed for wetlands in 2001 and no evidence of wetland hydrology was observed. This was reconfirmed in 2011. Therefore, according to the defining criteria for wetlands under the 1987 Corps of Engineers Wetlands Delineation Manual, there are no wetlands in the project area, and this impact topic is eliminated from further study.

Floodplains

Executive Order 11988 Floodplain Management requires all federal agencies to “avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative”. The NPS is guided by the 2006 *Management Policies* and Director’s Order 77-2 *Floodplain Management*, which provides guidance on how to implement Executive Order 11988. The Service will strive to preserve floodplain values and minimize hazardous floodplain conditions. There are no floodplains within the project area; therefore, floodplains would not be affected and are dismissed from analysis.

Air Quality

The Clean Air Act provides for special protection of air quality and air resources in all National Park Service units. Section 118 of the Clean Air Act requires parks to meet all federal, state, and local air pollution standards. Glacier National Park is classified as a mandatory Class I area under the Clean Air Act, where emissions of particulate matter and sulfur dioxide are to be restricted. Air quality is considered good in Glacier National Park. There are no metropolitan areas within 125 miles of the park, and no regional smog typical of highly populated areas with a high amount of vehicle traffic.

The proposed expansion of the Apgar Transit Center parking lot could possibly result in a slight increase in localized emissions at the immediate site. This combined with emissions from nearby vehicle traffic and campfire smoke from

the campground could result in a slight overall increase in emissions for the long-term. However, the increase would be too slight to quantify, it would be localized to the immediate vicinity of the parking lot, visibility would not likely be affected, and air quality standards would not be exceeded. Increased vehicle traffic in the area would also likely only occur during the two high visitation months of July and August, when weather patterns and conditions would be more conducive to dispersing any increases in vehicle emissions. Adverse impacts to air quality would therefore be negligible to minor and not measurable, and are not further analyzed.

Night Skies

In accordance with 2006 *Management Policies*, the NPS strives to preserve natural night skies and will “minimize light that emanates from park facilities, and also seek the cooperation of park visitors, neighbors, and local government agencies to prevent or minimize the intrusion of artificial light into the night scene of the ecosystems of parks”. Glacier National Park considers the impacts to night skies in all projects within developed areas and when lights and light fixtures require replacing, is striving to replace them with night sky-friendly fixtures and energy efficient bulbs. If night work occurs during construction of the proposed parking lot expansion, night skies would be temporarily impacted by artificial lighting. But no permanent area lighting or lampposts of any kind would be installed as part of this action, and there would be no impacts to night skies beyond the construction period. Short-term artificial lighting would be localized to the Apgar area, and impacts to night skies would be negligible to minor. Night skies are therefore dismissed from further analysis.

Cultural Resources

All cultural resource topics were dismissed from further analysis. For Section 106 purposes, the park will document a “no historic properties affected” finding in its annual report to the State Historic Preservation Office in accordance with the *Programmatic Agreement among the National Park Service (U.S. Department of the Interior), the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers for Compliance with Section 106 of the National Historic Preservation Act*.

Historic Structures and Cultural Landscapes. There are no historic buildings, structures, or cultural landscapes in the project area. The area of potential effect has been adequately surveyed; no identified and/or unevaluated historic properties exist, and the probability of discovering historic properties within the area of potential effect is highly unlikely.

Archeological Resources

The Area of Potential Effect of the proposed action has been surveyed for archeological resources and none were identified (NPS, Riley 2004a and NPS, Riley 2005). If archeological resources are identified during construction, consultation with the State Historic Preservation Office and Tribal Historic Preservation Offices would occur in accordance with federal legislation and regulations and NPS policy. Archeological resources are therefore dismissed.

Ethnographic Resources

Ethnographic resources are defined by the NPS as "the cultural and natural

features of a park that are of traditional significance to traditionally associated peoples” (NPS 2006). The proposed action is not expected to impact ethnographic resources. Neither the Blackfoot Tribe nor the Confederated Salish and Kootenai Tribes raised concerns about the proposed action during scoping for this project or when the transit center was constructed. Therefore, ethnographic resources have been dismissed from further evaluation. However, Glacier National Park recognizes that the 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 legislation and regulations and NPS policy. During a meeting in April 2011, Confederated Salish and Kootenai Tribal Historic Preservation Department staff asked the park to explore opportunities for expanded interpretation of Salish, Pend d’Oreille, and Kootenai presence in the area. That request will be explored in consultation with the tribal preservation department when the park undertakes further planning for improving traffic, parking, and pedestrian circulation in Apgar Village and/or new exhibits in the visitor center.

Museum Collections

According to the NPS *Management Policies* (2006) Director’s Order 24 *Museum Collections*, the NPS requires consideration of impacts on museum collections (historic artifacts, natural specimens, and archival and manuscript materials). NPS policy defines museum collections management including policy, guidance, standards, and requirements for preservation, protection, documentation, access, and use. Museum collections would not be affected by this project.

Climate

The Intergovernmental Panel on Climate Change (IPCC) predicts “impacts of climate change will vary regionally but, aggregated and discounted to the present, they are very likely to impose net annual costs which will increase over time as global temperatures increase” (IPCC 2007). The proposed project is of a small scale, would only slightly change visitor use patterns, is not likely to result in measurable increases or reductions in greenhouse gas emissions, and therefore is not expected to measurably impact the global climate. Impacts to the climate have therefore been dismissed from further analysis.

Socioeconomics

Additional parking at the Apgar Transit Center could influence visitor circulation in Apgar Village and therefore have some effects on the local business community. It is possible that local businesses could lose opportunities to attract visitors who only visit the relocated visitor center and do not also visit Apgar Village. However, this is highly unlikely due to the proximity of Apgar Village to the transit center site, and because the services offered at the visitor center and transit center do not compete with businesses in Apgar Village. Also, some visitors to Apgar may currently be unable to frequent local businesses because of the lack of parking. Additional parking at the transit center would enable more visitors to park and visit the entire area, including Apgar Village, which is only a short walk from the transit center along a well designated and heavily used path. This would directly benefit local businesses. Therefore the addition of only 66

(approximately) more parking spaces at the transit center would result in impacts that are minor or less, whether beneficial or adverse, to socioeconomics in the area. Socioeconomics are therefore dismissed from further analysis.

Environmental Justice

Executive Order 12898 – General Actions to Address Environmental Justice in Minority Populations and Low-income Populations requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. Disproportionate health or environmental effects on minorities or low-income populations or communities as defined in the *Environmental Protection Agency's Environmental Justice Guidance (1998)* would not occur from actions proposed in the preferred alternative. Therefore, environmental justice was dismissed from further analysis.

Prime and Unique Farmlands

The Farmland Protection Policy Act of 1981, as amended, requires federal agencies to consider adverse effects to prime and unique farmlands that would result in the conversion of these lands to non-agriculture uses. There are no prime and unique farmlands located within Glacier National Park (NPS 1999).

Human Health and Safety

The *NPS Management Policies (2006)* states the safety and health of all people are core Service values. Public health is addressed in Director's Order 83 *Public Health and Vector-borne and Zoonotic Disease* and employee health is addressed in Director's Order 50 B *Occupational Health and Safety Program*. These policies call for risk recognition and early prevention for a safe work and recreational environment, and the NPS is committed to eliminating and reducing health and safety risks when they are identified. There would be no impacts to human health and safety from either alternative and the topic is dismissed from further analysis.

Park Operations

A number of park operations are ongoing at the Apgar Transit Center and within the Apgar area, especially during the summer when visitor use is high. These include interpretation and education, law enforcement/visitor and resource protection, facility maintenance, and natural and cultural resources management. The proposed expansion of the parking lot would not require additional staff or change existing park operations. Therefore this topic is dismissed from further analysis.

Alternatives

An interdisciplinary team of Glacier National Park staff has identified two alternatives, action and no action, which have been carried forward for further evaluation. Two design options for the proposed parking lot expansion and suggestions from public scoping that were considered but dismissed are discussed under *Alternatives Considered but Eliminated from Detailed Study* and *Alternatives, Suggestions, and Concerns from Public Scoping*.

Alternatives Carried Forward

Alternative A: No Action Alternative

Under Alternative A, visitor center operations would still be relocated to the transit center from the interim visitor contact center in Apgar Village, but the transit center parking lot would not be enlarged to accommodate additional parking needs.

Alternative B: Preferred Alternative

Under the preferred alternative, the existing parking lot at the Apgar Transit Center would be expanded. The existing parking lot contains 132 passenger car spaces (including 5 accessible spaces) and 15 RV or oversized vehicle spaces. The parking lot would be extended approximately 90 feet (27 meters) to the north and 90 feet (27 meters) to the east (Figure 1). The northern expansion would accommodate approximately 60 passenger cars, including 4 accessible spaces, and the eastern expansion would provide parking for approximately 6 RV's and oversized vehicles. With some possible minor changes to the number of existing spaces, the expanded parking lot would provide approximately 190-195 spaces for passenger vehicles, including 9 accessible spaces, and 21 RV or oversized vehicle spaces.

A small island would separate the north expansion from the existing parking lot. The expanded parking lot would be designed to accommodate park snow removal operations, and spaces for government vehicles and possibly short-term parking would be designated. Existing paths would be modified as necessary to access the expanded parking area. All paths would continue to accommodate bicycles and meet requirements of the Architectural Barriers Act (ABA).

Approximately 1.2 additional acres of ground would be disturbed, including approximately 0.3 acre of temporary disturbance that would be restored with salvaged soils and native vegetation. Hazard trees outside of the expansion's perimeter that have fallen or are in danger of falling onto the new parking areas may be selectively removed in accordance with the park's *Hazard Tree Management Plan*. Native vegetation, including trees, would be retained within the island between the north expansion and the existing parking lot; the island would be vegetated with supplemental plantings depending on how many hazard trees are removed. A vegetation inventory would be completed prior to the start of the project. Following project completion, native species from the site would be utilized for revegetation seeding and restoration efforts. Plant species density, abundance, and diversity would be restored as nearly as possible to prior conditions for non-woody species. The existing stormwater detention area north of the parking lot is large enough to accommodate additional runoff from the expansion, and no upgrades would be required. Night work would probably occur, which would require temporary lighting; no permanent outdoor lighting would be installed.

Construction is anticipated to occur during fall and the following spring. The project is estimated to take approximately 8 weeks in total to complete. The construction schedule would depend on weather conditions; night work would accelerate the construction schedule and is

likely, but would only occur in the fall. The expansion of the Apgar Transit Center parking lot would cost approximately \$500,000.00 and would be funded by the Federal Lands Highway Program.

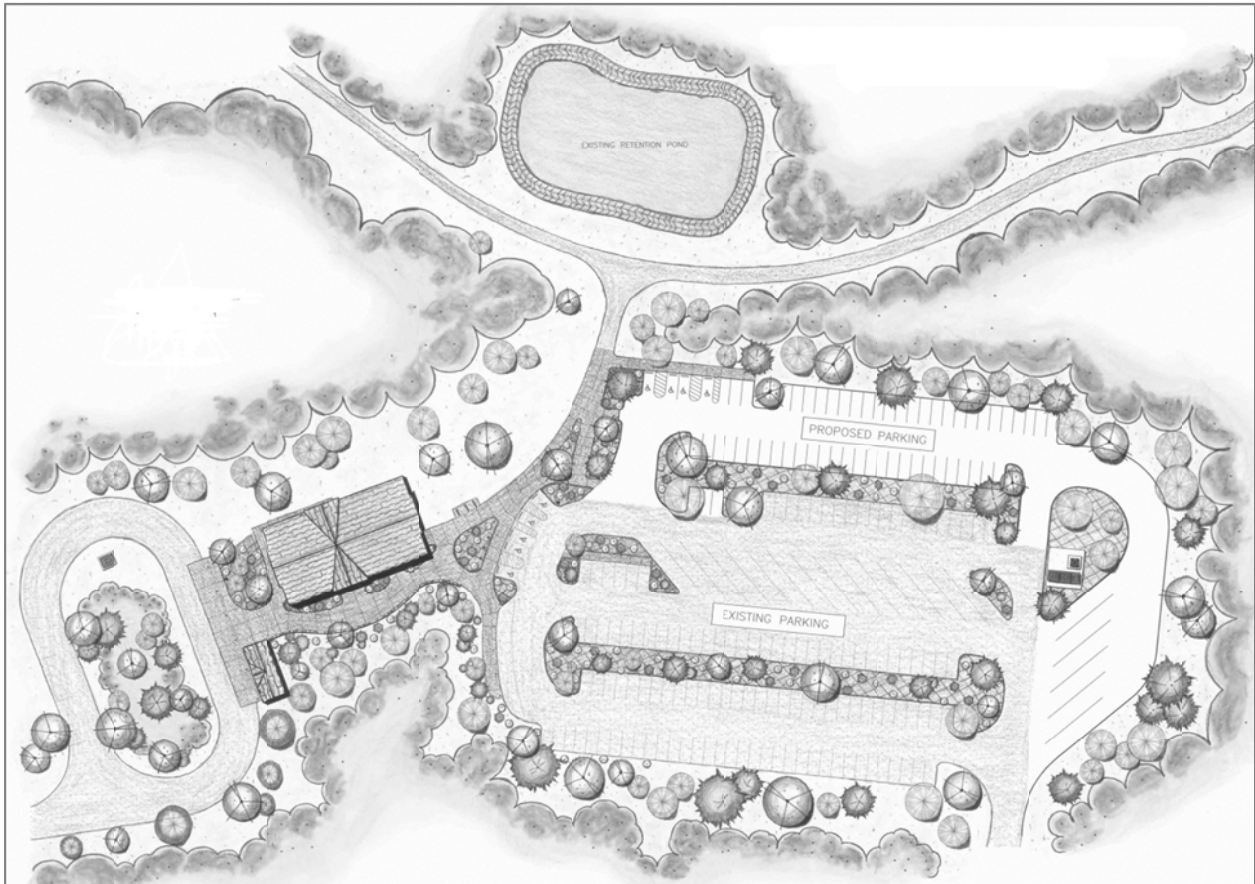


Figure 1: Conceptual illustration of the proposed parking lot expansion at the Apgar Transit Center.

Mitigation Measures

The following mitigation measures would minimize the degree and/or severity of adverse effects and would be implemented during the project:

Wildlife

- Work crews would be trained on appropriate behavior in the presence of wildlife and on proper storage of food, garbage, and other attractants.

Vegetation and Plant Species of Concern

- Glacier National Park's Best Management Practices would be implemented to minimize the extent of impacts.
 - Disturbance to vegetation would be avoided as much as possible and contained to as small a footprint as possible while meeting project objectives.
- Any specimens of the state listed sensitive velvetleaf huckleberry (*Vaccinium myrtilloides*) shrub within the area to be disturbed would be removed and transplanted in a suitable location adjacent to the site.
- Non-native invasive plant infestations near the parking area would continue to be treated on a yearly basis.

Soils

- Glacier National Park's Best Management Practices would be implemented to minimize the extent of impacts.
 - Disturbance to soils would be avoided as much as possible and contained to as small a footprint as possible while meeting project objectives.
- Existing topsoil resources would be evaluated for non-native invasive plant infestations. Heavily infested topsoil would be removed. Non-infested topsoil would be salvaged, stored according to Glacier National Park soil conservation guidelines, and replaced once construction is complete.
- Erosion control measures that provide for soil stability and prevent movement of soils during rain events would be implemented.
- Any ground surface temporarily disturbed during construction would be aerated and replanted with native vegetation to reduce compaction and prevent erosion.
- Following construction, all conserved top soil would be used to restore the area.

Cultural Resources

- Although no archeological resources have been identified in the project area, all new ground disturbance would be monitored by an archeologist.

Alternatives Considered but Eliminated from Detailed Study

Two alternative designs for the parking lot expansion and an element of the action alternative have been dismissed and are addressed below.

Expand the southern perimeter of the parking lot, toward the T-intersection. This was considered but dismissed because it would have crowded the intersection and removed too much vegetation between the existing parking lot and the entry route, conflicting with the original objective of providing a vegetative buffer and filtered views of the transit building along the entry route.

Design the northern expansion for one-way traffic. This was considered but dismissed because it would have complicated circulation to have both one-way and two-way traffic in a

single parking lot and because it would have resulted in fewer parking spaces.

Construct a small addition to the transit center building. A small addition to the north side of the transit center building that would have expanded the size of the lobby and provided additional space for visitor center resources was initially considered, however it was determined that there is not enough information at this time to adequately analyze it in this EA. This action has therefore been dismissed. An addition could be constructed in the future, depending on visitor center needs and available funding.

Alternatives, Suggestions, and Concerns from Public Scoping

Fourteen comment letters were received during scoping. Two letters opposed the proposal to expand the parking lot and seven were supportive. The scoping brochure also presented possible new parking lots in Apgar Village as called for in the *Commercial Services Plan/Final EIS and Record of Decision* (CSP) (NPS 2004b), and discussed the *General Management Plan's* (GMP) decision to move the visitor center function to the Apgar Transit Center site. Several comments were received about these actions. Suggestions and concerns from public scoping, including comments received during a public open house, are addressed below.

Parking in Apgar Village. Comments both supported and opposed a future parking plan for Apgar Village as described in the scoping brochure. Concerns focused primarily on traffic and pedestrian circulation, visual and environmental impacts, and impacts on cultural resources and Apgar's village character. Some commenters believed that a parking plan for Apgar Village would require an EA. At this time, the park believes that the environmental analysis in the CSP/EIS adequately analyzes the area of effect for the proposed parking changes and additional NEPA is not required. If new information becomes available or new concerns or impacts are identified, the park will reexamine the need for an EA. The NPS will continue to seek and seriously consider public comment on the final design and locations of new parking lots. After visitor center operations are moved to the transit center, the need for additional parking in Apgar Village will be reexamined. The public will be given the opportunity to review any changes or new designs.

Relocation of visitor center operations. Comments on the planned relocation of visitor center operations also reflected both support and opposition; concerns centered on visitor convenience and the visitor center's community oriented contribution to Apgar Village. As previously stated in this document, this decision had been made and was evaluated in the GMP. No new information or concerns were raised during scoping that indicated the need for additional analysis.

Comment: *Consider moving the backcountry permit office to the old interpretive center.*

Response: The GMP decision reflects this consolidation. However, at this time the building is too small to accommodate this use. This will be addressed in the future.

Comment: *Consider a larger visitor center that would make items from the archives available for the public to view.* **Response:** The intent for the West Side Discovery Center as described in the GMP was for a new facility that would accommodate visitor services, education, and interpretation, including exhibition of museum objects from the archives. The park still intends to provide such a facility. At this time, funding is not available and design has not begun. The planned relocation of visitor center operations to the transit center combined with the action proposed in this EA are a preliminary step toward implementing the GMP decision for a visitor center and museum at the transit center site.

Comment: *The transit center function was only approved for operation during the period of road*

rehabilitation, originally intended to extend for about 4-7 years. The ATC facility could then be used as the new visitor center. This would mitigate the need for an expanded facility, as the ATC building is much larger than the existing visitor center. **Response:** Implementation of a transit system was one of the decisions in the 1999 GMP and Final EIS and Record of Decision. The Going-to-the-Sun Road rehabilitation project provided funding to implement this decision during road work. After road rehabilitation is completed, another funding source will be required to continue operation of the transit system and transit center. However, no additional authorities are required to continue operation and or use infrastructure that has been built.

Comment: *I have never seen the parking lot full during the short summer season, and there would be more than adequate parking in the existing lot.* **Response:** The justification for expanding the parking lot is addressed under *Purpose and Need* and in the impacts analysis for *Visitor Use and Experience*.

Comment: *There will never be enough parking to accommodate everyone who visits the park; why try to accommodate something that a few more parking spaces will clearly not achieve?* **Response:** The *Purpose and Need* and the impacts analysis for *Visitor Use and Experience* address the justification for the proposed project.

Comment: *The EA needs to address carrying capacity of the natural environment, potential impacts on the rare huckleberry plant, wildlife, including bald eagles, migrating and wintering common loons and other waterfowl, nesting, migratory and wintering habitat for birds in the area, and climate change.* **Response:** The carrying capacity for the park has not yet been determined. However, the intent of this proposal is not to increase visitation but to accommodate the shift of visitor center services to the Apgar Transit Center. Impacts to the velvetleaf huckleberry are discussed in this EA in the *Affected Environment/Environmental Consequences* section, under *Vegetation and Plant Species of Concern*. Impacts to wildlife are addressed under *Affected Environment and Environmental Consequences, Wildlife*. Impacts to wildlife species of concern, including bald eagles, and the climate are addressed under *Impact Topics Dismissed from Further Analysis*.

Comment: *Among the Issues to Consider in the scoping brochure, why were impacts to wildlife not included?* **Response:** This was an oversight. Impacts to wildlife are addressed in this EA under *Affected Environment and Environmental Consequences, Wildlife*; impacts to threatened and endangered species and species of concern are addressed under *Impact Topics Dismissed from Further Analysis*.

Comment: *Consider a visitor center on the west side along the lines of the one at St. Mary, with space for special exhibits and a small theatre.* **Response:** The park has already decided to provide such a visitor center, as reflected in the 1999 GMP Final EIS and Record of Decision.

Comment: *Consider including motion detector lights/night sky friendly lights on all the buildings at the transit center; the lights currently interfere with night sky viewing. Preserving darkness in the park should be considered whenever there are new projects.* **Response:** The existing lights at the transit center meet Leadership for Energy and Environmental Design (LEED) standards for night sky preservation. However these lights will be re-evaluated to ensure they are night sky friendly. Due to concerns about impacts of outdoor lighting on the night sky, the current proposal does not include the addition of outside lighting to the exterior of the building or the parking lot.

Comment: *I thought the transit center funding couldn't be used for a visitor center. What has changed?* **Response:** Funding received for completion of the transit center was used for

completion of a transit center. However, it does not restrict future expansion or adaptation of transit center space provided a different source of funding is used. Other funding will be used for this purpose and the transit operation will continue to operate as intended.

Comment: *The design of the new parking expansion at the transit center should accommodate park snow plowing operations.* **Response:** This is addressed in the description of the preferred alternative.

Comment: *Is there enough room at the west end of the transit center parking lot for further expansion?* **Response:** FHWA design engineers and NPS Landscape Architects concluded that there was not adequate space at the west end of the parking lot to meet the targeted number of additional parking spaces.

Comment: *Consider bussing or shuttling people from the transit center to Apgar Village; a golf cart could be used to shuttle people.* **Response:** This was offered the first year of operation of the transit system, however ridership was very low and limited funding resulted in a decision to remove this part of the transit service. However, it will be reconsidered.

Comment: *Fifteen RV spaces at the transit center do not seem like enough.* **Response:** The design includes approximately six new spaces for RV's and oversized vehicles, which would be in addition to the fifteen oversized vehicle spaces already available. The number of additional over-sized vehicle spaces reflects a reasonable footprint and circulation pattern.

Comment: *Consider the edge effect that would be created by the new parking development; the project could impact wildlife in the area.* **Response:** The impacts to vegetation, soils, and wildlife are discussed in the *Affected Environment and Environmental Consequences* section of this document, and impacts to threatened and endangered species and species of concern are described under *Impact Topics Dismissed from Further Analysis*.

Comment: *The proposal will result in a lot more foot traffic on the path to Apgar Village, and pedestrian and bicycle traffic on the trail is already congested. Will there be any accommodation for this increase?* **Response:** This will be monitored by area rangers and the situation will be addressed if necessary.

Comment: *A black bear family was regularly observed near the transit center during the summer of 2011, and the proposed plan would result in the loss of bear habitat. Consider constructing a wildlife crossing, possibly an underpass, in the area.* **Response:** The anticipated impacts to wildlife are discussed under *Affected Environment and Environmental Consequences, Wildlife*. A wildlife crossing will be considered during the design development process for the portion of the GTSR between the T-intersection and Avalanche Campground, known as Phase 10. Wildlife crossings are being considered in the design development for each section of the GTSR rehabilitation.

Comment: *Consider the emissions that will result from additional traffic, and the impact on air quality. The evening campfires at Apgar can produce a lot of smoke.* **Response:** Impacts to air quality are discussed under *Impact Topics Dismissed from Further Analysis*.

Alternative Summaries

Table 1 summarizes the major components of Alternatives A and B and compares the ability of these alternatives to meet the project objectives (as identified in the *Purpose and Need*). As shown, Alternative B, the preferred alternative, achieves all of the project objectives while Alternative A, the no action alternative, only partially achieves one project objective.

Table 1: Summary of alternatives and how each alternative meets the project objectives.

Alternative Elements	Alternative A – No Action	Alternative B - Preferred
Expanded parking lot and additional parking spaces	The parking lot would not be expanded and no additional parking spaces would be added.	The existing parking lot would be expanded approximately 90 feet to the north and 90 feet to the east; approximately 60 parking spaces for passenger cars and 6 spaces for RV's and oversized vehicles would be added. This would provide a total of approximately 190-195 spaces for passenger vehicles, including 9 accessible spaces, and 21 RV or oversized vehicle spaces.
Pedestrian and bicycle traffic, and Architectural Barriers Act (ABA) requirements	There would be no change to existing paths, and no new paths would be constructed.	Areas where paths intersect with the expansion would be reconfigured as necessary to accommodate bicycles and meet requirements of the ABA.
Ground disturbance and hazard trees	The parking lot would not be expanded and there would be no additional ground disturbance. Hazard trees would continue to be evaluated in accordance with the <i>Hazard Tree Management Plan/EA</i> and FONSI.	Approximately 1.2 additional acres of ground would be disturbed; hazard trees outside of the expansion's perimeter may be selectively removed in accordance with the park's <i>Hazard Tree Management Plan</i> ; native vegetation would be retained within the island between the north expansion and the existing parking lot; the island would be vegetated with supplemental plantings.
Stormwater detention	No additional runoff would enter the stormwater detention area.	The existing stormwater detention area would accommodate additional runoff and no upgrades would be required.
Project Objectives	Meets Project Objectives?	Meets Project Objectives?
Accommodate increased visitor use of the Apgar Transit Center following the relocation of visitor center operations.	No. Following the relocation of visitor center operations to the transit center, the expected increase in visitor use would not be accommodated.	Yes. Increased visitor use and associated parking needs resulting from the transfer of visitor center operations to the transit center would be accommodated.
Provide for a quality visitor experience at the Apgar Transit Center.	No. Visitors would have increased difficulty locating a parking space at the transit center during July and August once visitor center operations are relocated. This would degrade the quality of the visitor experience.	Yes. An increase in available parking during July and August would minimize the frustration of not being able to find a parking space, thereby maintaining or improving the quality of the visitor experience.
Minimize impacts to park resources while providing for visitor use and enjoyment.	Yes and no. There would be no impacts to park resources, but visitor use and enjoyment would be degraded by limited parking availability.	Yes. The parking lot expansion would occur where there are no historic buildings, structures, archeological, or ethnographic resources, and impacts to natural resources would be minimized due to the largely developed nature of the site. Improved parking availability would provide a necessary element for visitor use and enjoyment.

Table 2 summarizes the anticipated environmental impacts for Alternatives A and B. Only those impact topics that have been carried forward for further analysis are included. The Affected Environment/Environmental Consequences section provides a more detailed explanation.

Table 2: Environmental Impact Summary by Alternative.

Impact Topic	Alternative A – No Action	Alternative B – Preferred
Vegetation and Plant Species of Concern	None.	Minor, adverse, site-specific, and short and long-term from the permanent loss of vegetation on approximately 0.9 acres, the establishment of non-native invasive plants, changes in the shade regime, future hazard tree removal, and the temporary disturbance of approximately 0.3 acres. There would be minor to moderate, adverse, site-specific impacts to velvetleaf huckleberry from the disturbance of less than 1% of the known population; impacts would be short or long-term depending on transplanting success.
Soils	None.	Minor, adverse, site-specific, and short and long-term from the permanent compaction and loss of soil productivity on 0.9 acre, and the temporary disturbance of soils and establishment of weed species on approximately 0.3 acre.
Wildlife	None.	Negligible to minor, adverse, short-and long-term, and site-specific from disturbance, displacement, and habitat loss.
Natural Soundscapes	None.	Moderate, adverse, site-specific, and short-term from noise during the construction period.
Visitor Use and Experience	Moderate, adverse, site-specific and local, and long-term from an insufficient amount of parking that would not meet current and future visitor needs at the Apgar Transit Center.	Minor to moderate, beneficial, long-term, site-specific and local due to improved parking availability, an enhanced ability to stop in one location for interpretation and information, tour buses, and transit services. Minor to moderate site-specific, short-term adverse impacts would occur during the construction period.
Visual Resources	None.	Minor, beneficial, site-specific, and long-term from an expanded view of nearby mountain ridges. Negligible to minor adverse, site-specific and long-term from changes to the immediate forested viewshed and because recreational vehicles parked in the eastern expansion would be visible from the entrance road. There would be negligible to minor, short-term, and site-specific adverse impacts during the construction period.

Environmentally Preferable Alternative

According to the CEQ regulations implementing NEPA (43 CFR 46.30), the environmentally preferable alternative is the alternative “that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources. The environmentally preferable alternative is identified upon consideration and weighing by the Responsible Official of long-term environmental impacts against short-term impacts in evaluating what is the best protection of these resources. In some situations, such as when different alternatives impact different resources to different degrees, there may be more than one environmentally preferable alternative.”

Alternative A (No action) is the environmentally preferable alternative because there would be no activities that would disturb elements of the biological and physical environment.

Alternative B (expand the Apgar Transit Center parking lot) is not the environmentally preferable alternative because it would cause the permanent removal of native vegetation and permanent soil compaction and loss of soil productivity on 0.9 acre; temporarily disturb vegetation and soils on 0.3 acre; increase the potential for non-native invasive plants to become established in the project vicinity; temporarily disturb and displace wildlife, including the threatened grizzly bear, during the construction period; cause the loss of 1.2 acres of lodgepole pine forest habitat; and temporarily affect the natural soundscape during the construction period.

Preferred Alternative

No new information came forward from public scoping or consultation with other agencies to necessitate the development of any new alternatives, other than those described and evaluated in this document. While Alternative B is not the environmentally preferable alternative, it would best accomplish the purpose and need of the proposal and would not significantly impact affected natural resources. Alternative B would provide for visitor use and enjoyment, which, in addition to resource conservation, is in accordance with the 1916 Organic Act for the National Park Service. Through mitigation measures and project design, Alternative B would achieve a balance between visitor use and enjoyment and conservation of park resources. Department of the Interior (DOI) regulations do not require that the environmentally preferable alternative be selected as the NPS preferred alternative (DOI 43 CFR Part 46, Implementation of the National Environmental Policy Act of 1969, § 46.420). Therefore, Alternative B is the NPS preferred alternative.

Affected Environment and Environmental Consequences

This chapter describes the affected environment (existing setting or baseline conditions) and analyzes the potential environmental consequences (impacts or effects) that would occur as a result of implementing the proposed project. Direct, indirect, and cumulative effects are analyzed for each resource topic carried forward. Potential impacts are described in terms of type, context, duration, and intensity. General definitions are defined as follows, while more specific impact thresholds are given for each resource in Table 3 and at the beginning of each resource section.

- **Type** describes the classification of the impact as either beneficial or adverse, direct or indirect:
 - *Beneficial*: A positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition.
 - *Adverse*: A change that moves the resource away from a desired condition or detracts from its appearance or condition.
 - *Direct*: An effect that is caused by an action and occurs in the same time and place.
 - *Indirect*: An effect that is caused by an action but is later in time or farther removed in distance, but is still reasonably foreseeable.
- **Spatial Context** describes the area or location in which the impact would occur. Effects may be 1) *site-specific* – at the location of the action, 2) *local* – on a drainage or district-wide level, 3) *widespread* – throughout the park, or 4) *regional* – outside of the park.
- **Duration** describes the length of time an effect would occur, either short-term or long-term. The definitions for these periods depend upon the impact topic and are described in Table 3.
- **Intensity** describes the degree, level, or strength of an impact. For this analysis, intensity has been categorized into negligible, minor, moderate, and major. Because definitions of intensity vary by resource topic, intensity definitions are provided separately for each impact topic analyzed in this EA and are also provided in Table 3.

Cumulative Impact Scenario

The CEQ regulations which implement NEPA require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts are considered for both the no-action and preferred alternatives.

Cumulative impacts were determined by combining the impacts of the preferred alternative with other past, present, and reasonably foreseeable future actions. Therefore, it was necessary to identify other ongoing or reasonably foreseeable future projects at Glacier National Park and, if applicable, the surrounding region. Because the scope of this project is relatively small, the

geographic and temporal scope of the cumulative analysis is similarly small. The geographic scope for this analysis includes actions within the Apgar developed area and along the GTSR road corridor between West Glacier and Lake McDonald Lodge; the temporal scope includes projects within a range of approximately 20 years. Given this, the following projects were identified for the purpose of conducting the cumulative effects analysis, listed from past to future:

Cumulative Impact Scenario

Past Actions

- *Going-to-the-Sun Road Rehabilitation.* Rehabilitation of the GTSR under the current program has been underway since 2005. Smaller project work has occurred along various segments since the early 1990's. From 1991 to 1992, some repairs were made to the section between West Glacier and Avalanche Creek, and included sub-base drainage improvements, culvert installation, ditch construction, the removal of several turnouts along Lake McDonald, and a redesign of the intersection with Apgar Loop Road. In 2010, the section received a pavement overlay. Additional drainage work and improvements to the intersection are planned for the near future as part of the GTSR rehabilitation project.
- *The Apgar Transit Center.* The Apgar Transit Center was constructed north of the GTSR and Camas Road T-intersection in 2007 as a staging area for the GTSR transit system and to provide information and orientation for visitors. The permanent, hard-surfaced footprint for the facility covers an area of approximately five acres and includes the transit center structure and associated approach roadways and parking areas, sidewalks, paths, utility corridors, and a stormwater detention area. Over five acres outside the hard-surfaced areas were restored with native vegetation.
- *West Entrance Station improvements.* In 2007 and 2008, the park made several modifications to the West Entrance Station to improve traffic flow, visitor experience, and the working environment for park employees. Accessibility and security were improved, a storage area and a break room were provided for entrance station staff, and an additional approach lane and entrance lane as well as an employee parking area were constructed.
- *Information pullout east of the West Entrance Station.* Constructed in 2002 a quarter-mile east of the West Entrance Station, the pullout provides orientation to the park and updated information on road construction.
- *New Apgar wastewater treatment facility.* In 2004, the park constructed a new wastewater treatment plant north of the Quarter Circle Bridge. The existing treatment system was not meeting discharge regulations from the Montana Department of Environmental Quality.
- *Apgar to Headquarters waterline replacement.* In 2003-2004, the park replaced the waterlines between Apgar and Park Headquarters. The existing system was obsolete and did not meet Montana Department of Environmental Quality regulations.
- *Lake McDonald Lodge developed area improvements.* As called for in the CSP, the dorms adjacent to Snyder Creek were moved to another location within the developed area and two new dorms have been constructed near Jammer Joe's. In the fall of 2011, the park began construction of additional parking for visitors, concession employees, and Red

Buses within the Lake McDonald Lodge developed area, as called for in the CSP. Additional parking has been concentrated in areas that have been previously disturbed or formerly occupied by dormitory buildings. The project will be completed by the spring of 2012.

Ongoing Actions

- *Going-to-the-Sun Road Rehabilitation.* During 2012, rehabilitation of the GTSR will be ongoing between Avalanche Creek and the Logan Creek area and between Big Bend and Haystack Creek. This work will be consistent with other recent GTSR construction efforts identified in the 2003 *GTSR Rehabilitation Plan/EIS*, including drainage, bridge and culvert repairs, pavement reconstruction, parking improvements, and masonry rehabilitation. Repair of the Upper McDonald Creek Bridge (also known as the Kelly Camp Bridge) has also been contracted, with repair of the wood girders, decking and abutment scheduled to begin in spring.
- *Lower McDonald Creek Bridge repair.* The north slope beneath the Lower McDonald Creek Bridge is eroding, fill at the abutments is washing out, and the piles are failing. The park plans to repair the abutments and construct new piles. The project is anticipated for the fall of 2012 or 2013, and would be funded by the Federal Lands Highway Program.
- *Roadside mowing.* Vegetation along the GTSR and at the transit center parking lot is periodically mowed.

Future Actions

- *Apgar Village parking improvements.* The park's CSP (2004) called for several actions to address inadequate parking, congested streets, and crowding between pedestrians and traffic in Apgar Village. Some improvements have been made, but parking issues at Apgar remain largely unresolved. The park is therefore developing a parking plan for Apgar, and is considering several locations for additional passenger and oversized vehicle parking along the Apgar Loop Road. Vehicle congestion and parking issues will likely be minimized once visitor center operations are relocated to the Apgar Transit Center, and this will help determine more precisely the final number, size, and locations of new parking areas in Apgar Village. Additional parking in Apgar Village will therefore be reevaluated after the visitor center operations are moved to the transit center.
- *Relocation of visitor center operations from Apgar Village to the Apgar Transit Center.* Visitor center operations will be relocated from Apgar Village to the transit center as a first step toward implementing the 1999 GMP/FEIS decision to construct a visitor center and museum north of the GTSR and Camas Road T-intersection.
- *Going-to-the-Sun Road Rehabilitation.* Rehabilitation of the GTSR between West Glacier and Avalanche Creek is anticipated for 2015, depending on funding. The work will include turnout repair, some drainage improvements, asphalt milling and removal along the mainline, improvements to the base and subgrade where necessary, curve widening where needed, and re-paving.
- *An addition to the transit center building.* A small addition to the transit center building may be constructed in the near future. The addition would provide more space for visitor center resources to better meet the intent of the GMP, which called for a west side discovery center and museum.

Table 3: Definitions for intensity levels and duration.

Impact Topic	Negligible	Minor	Moderate	Major	Duration
Vegetation and Plant Species of Concern	Vegetation would not be affected or the changes would be so slight that they would not be of any measurable or perceptible consequence to the species' population.	Some individual native plants would be affected over a relatively small area, but the effects would be localized, and would be of little consequence to the species' population.	Some individual native plants would be affected over a relatively wide area or multiple sites and would be readily noticeable. A sizeable segment of a species' population could be affected.	Considerable long-term negative effects on native plant populations over a relatively large area of the park would occur. Extensive mitigation measures to offset the adverse effects would be required, and success of the mitigation measures would not be guaranteed.	Short-term: After implementation, would recover in less than 3 years. Long-term: After implementation, would take more than 3 years to recover or effects would be permanent.
Soils	Soil productivity or soil fertility would not be affected or the effect would be below or at the lower end of detection. Any effects to soil productivity or soil fertility would be slight and not measurable.	The effects to soil productivity or soil fertility would be detectable, but small. The area affected would be local.	The effect to soil productivity or soil fertility would be readily apparent. Effects would result in a change in soils over a relatively wide area or multiple locations.	The effect on soil productivity or soil fertility would be readily apparent and would substantially change the character of soils over a large area.	Short-term: After implementation, would recover in less than 3 years. Long-term: After implementation, would take more than 3 years to recover or effects would be permanent.
Wildlife	Effects would be at or below the level of detection and the changes would be so slight that they would not be of any measurable or perceptible consequence to wildlife species' populations.	Effects on wildlife species would be detectable, although the effects would be localized and would be small and of little consequence to the species' population.	Effects on wildlife species would be readily detectable and widespread, with consequences at the population level.	Effects on wildlife would be obvious and would have substantial consequences to species' populations in the region.	Short-term: After implementation, would recover in less than 1 year. Long-term: After implementation, would take more than 1 year to recover or effects would be permanent.

Impact Topic	Negligible	Minor	Moderate	Major	Duration
Natural Soundscapes	Noise from the action would very rarely be audible or would be below the level of detection and would not result in any perceptible consequences.	The action would be less than 1 month or noise from the action would rarely be audible or would attenuate (reduce in acoustic energy or amplitude) to 30 dBA within a short distance (<200 meters) from the source.	The action would be 1 to 3 months or noise from the action would occasionally be audible or would attenuate to 30 dBA within an intermediate distance (200 meters to 600 meters).	The action would be more than 3 months and noise from the action would be regularly audible and would attenuate to 30 dBA within a large distance (>600 meters) from the source.	Short-term: Would be temporary during implementation. Long-term: Would be permanent or continual.
Visitor Use and Experience	Visitors would not be affected or changes in visitor use and/or experience would be below or at the level of detection. The visitor would not likely be aware of the effects associated with the alternative.	Changes in visitor use and/or experience would be detectable, although the changes would be slight. The visitor would be aware of the effects associated with the alternative, but the effects would be slight.	Changes in visitor use and/or experience would be readily apparent. The visitor would be aware of the effects associated with the alternative.	Changes in visitor use and/or experience would be readily apparent and have important consequences. The visitor would be aware of the effects associated with the alternative.	Short-term: Occurs only during project implementation. Long-term: Occurs after project implementation or is permanent.
Visual Resources	Effects would not result in any perceptible changes to existing viewsheds.	Effects would result in slightly detectable changes to a viewshed or in a small area or would introduce a compatible human-made feature to an existing developed area.	Effects would be readily apparent and would change the character of visual resources in an area.	Effects would be highly noticeable or would change the character of visual resources by adding human-made features into a mostly undeveloped area or by removing most human-made features from a developed area.	Short-term: Would be temporary and removable. Long-term: Would be continual or permanent.

Vegetation and Plant Species of Concern

Affected Environment

The NPS strives to maintain all components and processes of naturally evolving park unit ecosystems, including the natural abundance, diversity, and ecological integrity of plants (NPS 2006). Vegetation in the vicinity of the Apgar Transit Center is dominated by second growth lodgepole pine, western larch, Douglas fir, Engelmann spruce, and subalpine fir forest. Western white pine, western hemlock, western red cedar, and black cottonwood also occur in small amounts. Prior to a wildfire in 1929, this site supported a western red cedar/western hemlock forest. The climax habitat type for the area is western hemlock /queencup beadlily, and the present vegetation community is lodgepole pine/queencup beadlily-beargrass.

Currently, the site supports a diversity of native and exotic plant species. Common understory shrubs include snowberry, kinnikinnik, Oregon grape, dwarf and globe huckleberry, buffaloberry, shiny-leaf spiraea, and twinflower. Listed as sensitive with the state of Montana, the velvetleaf huckleberry (*Vaccinium myrtilloides*) occurs in the project area and is addressed below in Plant Species of Concern. Understory herbaceous native vegetation includes queen's cup bead-lily, beargrass, blue-leaf strawberry, prince's pine, bunchberry, field pussytoes, heartleaf arnica, round-leaved violet, white-flowered hawkweed, starry solomon's plume, northern bedstraw, spreading dogbane, sidebells wintergreen, mountain sweet-cicely, cow-wheat, fireweed, bracken fern, pearly everlasting, harebell, western fescue, northwest sedge, Ross' sedge, blue wildrye, and pinegrass. Exotic grasses and forbs are common along road, trail, and parking lot shoulders and include notable species such as Kentucky bluegrass, smooth brome, timothy, redtop, quackgrass, orchard grass, Paul's betony, alsike clover, white clover, yellow clover, red clover, sweet clover, black medic, common plantain, prickly lettuce, mullein, dandelion, and self-heal, as well as noxious weeds oxeye daisy, St. Johnswort, spotted knapweed, orange hawkweed, field bindweed, sulphur cinquefoil, and Canada thistle. Appendix A contains a list of plant species commonly found in the vicinity of the Apgar Transit Center.

Plant Species of Concern. According to the Montana Natural Heritage Program, there are 74 state sensitive vascular plant species and 26 non-vascular plant species known to be present in the park (MNHP 2011b). Many of these species are found in wetland or alpine habitat not present in the project area. According to the park's rare plant database and rare plant surveys conducted by park staff, only one state sensitive species, the velvetleaf huckleberry (*Vaccinium myrtilloides*), has been located near the vicinity of the Apgar Transit Center.

Velvetleaf huckleberry is generally found in forested areas between park headquarters and Apgar. Primarily a Canadian species, the plant is globally common and secure but is critically imperiled in Montana (MNHP 2011b). There are only three recorded populations in the state, all within Flathead County (MNHP 2011b). Two of these documented populations are within Glacier National Park, although one has not been observed since 1936. A population on private land near Lake Five was last observed in 1994. The population located between Glacier National Park Headquarters and the south border of Lake McDonald, including the Apgar Transit Center area, is the only population in the state known to be currently extant and secure. The Apgar population is extensive and has not been entirely mapped. It is scattered over an area of about 700 acres, and surveys and mapping have shown its presence on a total of about 200 acres. Surveys conducted by the park in October 2005 show that velvetleaf huckleberry plants were abundant throughout the entire 30 acres surrounding the transit center project area. While *Vaccinium* species (huckleberry, blueberry, and cranberry), including velvetleaf huckleberry, are

difficult to propagate or transplant, the park's native plant nursery has some limited experience growing and transplanting these species.

Intensity Level Definitions

- Negligible:* Vegetation would not be affected or the changes would be so slight that they would not be of any measurable or perceptible consequence to the species' population.
- Minor:* Some individual native plants would be affected over a relatively small area, but the effects would be localized, and would be of little consequence to the species' population.
- Moderate:* Some individual native plants would be affected over a relatively wide area or multiple sites and would be readily noticeable. A sizeable segment of a species' population could be affected.
- Major:* Considerable long-term negative effects on native plant populations over a relatively large area of the park would occur. Extensive mitigation measures to offset the adverse effects would be required, and success of the mitigation measures would not be guaranteed.
- Short-term:* After implementation, would recover in less than 3 years.
- Long-term:* After implementation, would take more than 3 years to recover or effects would be permanent.

Impacts of Alternative A – No Action

No new construction or ground disturbance would occur under Alternative A, and there would be no new impacts to vegetation.

Cumulative Impacts of Alternative A

Because there would be no action, there would be no cumulative impacts from Alternative A combined with previous, ongoing, or reasonably foreseeable actions.

Conclusion

There would be no change to current conditions, and therefore no new impacts to vegetation under the no action alternative.

Impacts of Alternative B – Preferred

Under Alternative B, vegetation within the parking lot expansion would be permanently removed and adjacent vegetation would be temporarily impacted and require restoration. Also, additional acreage in the vicinity of the project area would likely be indirectly impacted by the establishment of non-native invasive plants, changes in the shade regime, and future hazard tree removal.

Vegetation would be permanently removed from approximately 0.9 acre north and east of the existing parking lot. Native second-growth forest would be cleared and would include mostly small diameter lodgepole pine trees, as well as subalpine fir, western hemlock, western red cedar, Engelmann spruce, and mid and understory Douglas fir seedlings and saplings. Native understory shrubs, forbs, and grasses would also be removed. A portion of an approximately 3 to 5-foot wide strip along the north edge of the existing parking lot that was successfully replanted with native plants and salvaged soils when the Apgar Transit Center was constructed in 2007-2008 would be temporarily disturbed but retained as a vegetated island along the south

edge of the expansion. Construction activity during implementation of the preferred alternative and fill associated with the curb would also temporarily impact vegetation within an estimated 5-foot wide perimeter (approximately 0.07 acre) outside the proposed paved and curbed area. Vegetation similar to the forest vegetation described above would likely be disturbed, if not removed. Areas disturbed by fill and construction activities would require restoration with native plants. Overall, Alternative B is expected to impact vegetation over a total area of approximately 1.2 acres. Approximately 0.9 acres of vegetation would be permanently removed and approximately 0.3 acres of vegetation would be temporarily impacted and restored with native species.

Due to the soil type and prevalence of available weed sources, the vicinity of the project area would be highly susceptible to invasion from non-native invasive plant species. These soils were disturbed with the construction of the Apgar Transit Center in 2007-2008, and weed species that germinated from the seed bank continue to dominate adjacent restoration areas, despite several years of intensive weed control. Weed species have not been eliminated from these original restoration sites. Non-native invasive plants may require treatment with herbicides, possibly limiting the native species able to survive along the parking lot shoulder. Additionally, a large-scale native plant experiment located just north of the existing parking lot would need to be permanently removed under Alternative B. Set up in 2008, this experiment is currently testing six different planting techniques with several species of native plants to assess their effectiveness and seed rates for several restoration projects in Glacier National Park. Due to the area's accessibility, secure location, and level of previous disturbance, the experiment is the only one of its kind currently established in the park.

Velvetleaf Huckleberry. The preferred alternative could adversely affect velvetleaf huckleberry in the project area. A few velvetleaf huckleberry shrubs are known to occur within the proposed parking expansion area, as they were transplanted during the construction of the Apgar Transit Center and existing parking lot. The park's revegetation crew has successfully transplanted velvetleaf huckleberry during single transplants, but many individual shrubs die when transplanted a second time, as evidenced by data from the West Entrance Station (NPS, Asebrook et al. 2011). Velvetleaf huckleberry is also known to occur within the forested area adjacent to the transit center. Additional disturbance to this forest could potentially disturb some velvetleaf huckleberry plants north and east of the existing parking lot. Impacts would be minor to moderate because, while only a few individual plants within a very small percentage (<1%) of the known, mapped velvetleaf huckleberry population would be disturbed, they belong to one of the last known populations in the state. If transplanting velvetleaf huckleberry plants following construction is not successful, adverse impacts to the species would be long-term. If velvetleaf huckleberry plants are successfully transplanted, adverse impacts would be short-term. Velvetleaf huckleberry appears to grow well along edges of forest openings and the majority of the population should continue to thrive in undisturbed parts of the project area.

Cumulative Impacts of Alternative B

The cumulative impacts analysis covers an area including and between park headquarters, Apgar Village, Apgar campground, and the south shore of Lake McDonald. Most of the impacts to vegetation in this area are due to projects other than the proposed action, which would disturb a comparatively small area. A large number of trees were removed during construction of the Apgar Transit Center and existing parking lot. Most of these were small diameter lodgepole, but also included a mix of young spruce, fir, hemlock, and cedar trees. Future actions such as parking improvements in Apgar Village and upcoming GTSR rehabilitation work would result in some additional impact to vegetation in the area. An addition to the Apgar Transit Center may

further impact vegetation in the area depending on the size and location. Roadside vegetation mowing and trimming in the area would continue. Cumulative impacts to vegetation from past, ongoing, and reasonably foreseeable actions combined with impacts to vegetation from the preferred alternative would be minor to moderate, adverse, short and long-term, and site-specific.

Velvetleaf Huckleberry. Several previous actions have resulted in the removal of a number of individual velvetleaf huckleberry shrubs, including the construction of the Apgar Transit Center and existing parking lot, the construction of a new wastewater treatment facility and an expanded holding pond, the replacement of waterlines between park headquarters and Apgar, and improvements to the West Entrance Station in 2007-2008. Anticipated future actions that may further impact the velvetleaf huckleberry population include parking improvements in Apgar Village.

Prior to construction of the Apgar Transit Center, a few scattered velvetleaf huckleberry plants within the project area were salvaged and transplanted in a suitable location nearby. Most of these shrubs have survived the initial transplanting, but are now within the expanded parking area and some would need to be removed and transplanted again. Data from the West Entrance Station improvement project indicate that the species does not tolerate transplanting a second time, and many plants at the West Entrance Station have not survived initial transplantings. Less than half of the shrubs transplanted near the West Entrance Station survived after being transplanted the first time, and mortality was even higher among shrubs that were transplanted twice. Furthermore, all velvetleaf huckleberry shrubs transplanted for the West Entrance Station project appear frail three years later and have decreased in size each year. Therefore, some mortality would be expected among velvetleaf huckleberry shrubs that are transplanted following the parking lot expansion, especially for shrubs that are transplanted more than once. Expanding the parking lot at the transit center combined with past, ongoing, and foreseeable actions would increase impacts to the local population of velvetleaf huckleberry, and cumulative impacts would be minor to moderate, adverse, site specific, and short and long-term.

Conclusion

The expansion of the transit center parking lot would result in the permanent loss of 0.9 acres of vegetation, and would temporarily impact approximately 0.3 acres of vegetation that would be restored. Vegetation would also likely be adversely affected by the establishment of non-native invasive plants, changes in the shade regime, and future hazard tree removal. Effects would be localized and would not affect native plant species at the population level, however, and impacts to vegetation would be minor, adverse, site-specific, and short and long-term. Additionally, a large-scale native plant experiment underway north of the project area since 2008 would be permanently removed. Cumulatively, the loss and disturbance of vegetation over a comparatively small area under Alternative B combined with previous, ongoing, and reasonably foreseeable actions would have impacts to vegetation that are minor to moderate, adverse, short and long-term, and site-specific.

Velvetleaf Huckleberry. The expansion of the transit center parking lot would have minor to moderate adverse, site-specific impacts to velvetleaf huckleberry from the disturbance of less than 1% of the known, mapped velvetleaf huckleberry population. These impacts would be short-term if removed velvetleaf huckleberry plants are successfully transplanted, but they would be long term if transplanting is unsuccessful. Cumulatively, the preferred alternative combined with past, ongoing, and foreseeable actions would increase disturbances to the local population of velvetleaf huckleberry, and cumulative impacts would be minor to moderate, adverse, site specific, and short and long-term.

Soils

Affected Environment

The NPS preserves the soil resources of parks and protects those resources by preventing unnatural erosion, physical removal, or contamination (NPS 2006). Soils in the project area are classified as sandy over cobbly alluvial forest soils. The parent material is gravelly, sandy, and loamy alluvium. They include glacial outwash terraces and more recent alluvial fans and terraces with deep sandy and gravelly alluvial soils. The high terraces were deposited by glacial outwash streams at the end of the last ice age or by current streams since de-glaciation ended. These deep, well-drained forest alluvial soils are dominated by sandy loam textures in the surface and sandy loam to sand in the subsoil. The surface layer has few or no rock fragments to a depth of 10-30 inches. Rock fragments are abundant below and consist of well-rounded gravels and cobbles. Rock types are predominantly quartzite and argillite with some limestone and occasional fragments of granitic rock. Rocks are well-rounded gravels and cobbles. Some of the fine soil material was deposited by wind and includes volcanic ash (Dutton et al. 2001).

Productivity and revegetation potentials are high in the surface soil, and this soil is well suited to road construction due to a high subsoil rock content and good drainage. Available water holding capacity is low. This soil is highly susceptible to weed infestation when disturbed. Despite years of intensive weed control, weeds continue to dominate disturbed soils from the construction of the Apgar Transit Center in 2007-2008. Weed infestation is most common with: disturbed soil (especially rocky and sandy textures), open canopy conditions, a weed seed source, south aspects, and lower elevations. This soil has a moderate erosion potential. Erosion would occur whenever the surface vegetation and plant litter is removed (Dutton et al. 2001).

Intensity Level Definitions

- Negligible:* Soil productivity or soil fertility would not be affected or the effect would be below or at the lower end of detection. Any effects to soil productivity or soil fertility would be slight and not measurable.
- Minor:* The effects to soil productivity or soil fertility would be detectable, but small. The area affected would be local.
- Moderate:* The effect to soil productivity or soil fertility would be readily apparent. Effects would result in a change in soils over a relatively wide area or multiple locations.
- Major:* The effect on soil productivity or soil fertility would be readily apparent and would substantially change the character of soils over a large area.
- Short-term:* After implementation, would recover in less than 3 years.
- Long-term:* After implementation, would take more than 3 years to recover or effects would be permanent.

Impacts of Alternative A – No Action

No new construction or ground disturbance would occur under Alternative A, and there would be no new impacts to soils within the project area.

Cumulative Impacts of Alternative A

Because there would be no action, there would be no cumulative impacts to soils from Alternative A combined with previous, ongoing, or reasonably foreseeable actions.

Conclusion

There would be no change to current conditions, and therefore no new impacts to soils under the no action alternative.

Impacts of Alternative B – Preferred

Under the preferred alternative, soils would be permanently affected on approximately 0.9 acre north and east of the existing parking lot, as pavement overlays would cause permanent compaction and loss of soil productivity. Construction activities and fill associated with the curb would temporarily impact soils within an estimated 5-foot wide perimeter (approximately 0.07 acre) outside the proposed paved and curbed area. Soils would also be temporarily disturbed within an approximately 3 to 5-foot wide strip along the north edge of the existing parking lot that was previously restored with native plants and salvaged soils when the Apgar Transit Center was constructed in 2007-2008. A portion of this area would be retained as a vegetated island along the south edge of the expansion, and would require renewed soil salvage and restoration. Overall, Alternative B would impact soils on approximately 1.2 acres, including approximately 0.9 acres of permanently compacted soil and approximately 0.3 acres of temporarily disturbed areas.

Cumulative Impacts of Alternative B

Soils in the vicinity of the transit center and between park headquarters, Apgar Village, Apgar Campground, and the south shore of Lake McDonald have been impacted by road and building construction and a number of facility improvement projects, including GTSR rehabilitation, construction of the Apgar Transit Center, and improvements to the West Entrance Station. These actions have caused soil compaction, eliminated or reduced soil fertility, and increased the potential for soil erosion. Future actions, including parking improvements in Apgar Village and GTSR rehabilitation, would likely further impact soils. An addition to the Apgar Transit Center may result in new impacts depending on the size and location of the addition. The preferred alternative combined with these actions would incrementally increase adverse impacts to soils due to the permanent loss of an additional 0.9 acre of functional soil.

Conclusion

The parking lot expansion would have minor, adverse, site-specific, and short and long-term impacts to soils from the permanent compaction and loss of soil productivity on 0.9 acre and from the temporary disturbance of soils and establishment of weed species on approximately 0.3 acre. Cumulatively, impacts to soils from the preferred alternative combined with past, present and foreseeable actions are expected to be minor to moderate, adverse, site-specific, and short and long-term, largely due to other projects such as the GTSR rehabilitation, construction of the Apgar Transit Center, and improvements to the West Entrance Station.

Wildlife

Affected Environment

The NPS is charged with maintaining native wildlife as an integral component of natural ecosystems. Wildlife habitat in the vicinity of the Apgar developed area includes riparian, lakeshore, and forested habitat types. A wildlife travel corridor has been documented between Apgar and West Glacier, and the Apgar area may serve as part of a travel corridor around the foot of Lake McDonald and between adjacent drainages. Elk use spring range between West Glacier and Apgar as a calving area. Nearer the project area, the lodgepole pine forested flat between the Apgar Transit Center, Apgar Village, and the Apgar Campground provides limited nesting, roosting, and foraging habitat for wildlife. The forest may also buffer wildlife from

human caused disturbances in nearby developed areas and provide thermal cover for ungulates during winter. Animal species diversity is limited by the homogenous nature of the habitat, characterized by small diameter trees of uniform size and no shrub cover. Over the last ten years, wildlife species reported in the general vicinity of Apgar, the T-intersection, and the campground include large mammals such as elk, white tailed deer, mule deer, and moose; carnivore species including grizzly bears, black bears, mountain lions, coyotes, red foxes, and pine marten; a silver-haired bat, red-tailed chipmunk, and common small mammals such as red squirrels, Columbian ground squirrels, and voles; and a number of bird species including Cooper's hawks, sharp-shinned hawks, bald eagles, a great horned owl, a northern pygmy owl, three-toed woodpeckers, red-naped sapsuckers, pileated woodpeckers, ruffed grouse, the common raven, American crow, mourning dove, American robins, pine siskins, chestnut-backed chickadees, red-breasted nuthatches, and European starlings (GNP files).

Intensity Level Definitions

- Negligible:* Effects would be at or below the level of detection and the changes would be so slight that they would not be of any measurable or perceptible consequence to wildlife species' populations.
- Minor:* Effects on wildlife species would be detectable, although the effects would be localized and would be small and of little consequence to the species' population.
- Moderate:* Effects on wildlife species would be readily detectable and widespread, with consequences at the population level.
- Major:* Effects on wildlife would be obvious and would have substantial consequences to species' populations in the region.
- Short-term:* After implementation, would recover in less than 1 year.
- Long-term:* After implementation, would take more than 1 year to recover or effects would be permanent.

Impacts of Alternative A – No Action

No new construction or disturbance would occur under Alternative A, and there would be no new impacts to wildlife.

Cumulative Impacts of Alternative A

Because there would be no action, there would be no cumulative impacts to wildlife from Alternative A combined with previous, ongoing, or reasonably foreseeable actions.

Conclusion

There would be no change to current conditions, and therefore no new impacts to wildlife under the no action alternative.

Impacts of Alternative B – Preferred

An expansion of the Apgar Transit Center parking lot would result in the loss of approximately 1.2 acres of lodgepole pine forested habitat immediately adjacent to the existing parking lot, and an increased number of people parking at the transit center could expose wildlife to a slightly higher level of human caused disturbances for the long term. Short-term disturbances would occur during the construction period, estimated at approximately 8 weeks, total. Work in the fall and spring could displace animals that are accustomed to lower levels of human activity. But the timing of the project would also help minimize impacts to wildlife, since the higher intensity, more intrusive construction activity involving ground disturbance and tree removal, for

example, would occur in the fall, outside sensitive nesting and denning periods. Work in the spring (such as paving and curb construction, for example) would be of lower intensity and would not result in additional habitat loss. While individual animals would be adversely affected by the proposed project, impacts would be fairly well localized to a small area and there would be little to no effect at the population level.

Cumulative Impacts of Alternative B

Existing developments and previous construction activities in the Apgar area have caused the incremental loss of habitat and ongoing disturbances to wildlife over the long-term.

Approximately five acres of lodgepole pine forest habitat was lost during construction of the Apgar Transit Center. The proposed parking lot expansion combined with future projects in the Apgar area, including additional parking at Apgar Village and an addition to the transit center building, would increase the level of disturbance to wildlife and result in the loss of additional habitat. The amount of habitat that would be lost as a result of future projects remains to be determined and depends on final project designs.

Conclusion

A parking lot expansion at the Apgar Transit Center would disturb and displace individual animals and cause the loss of approximately 1.2 acres of lodgepole pine forest habitat, but these effects would have little to no impacts on wildlife species' populations. Impacts to wildlife would therefore be negligible to minor, adverse, short-and long-term, and site-specific. Cumulatively, the proposed action combined with past, ongoing, and future actions would incrementally increase adverse effects to wildlife from habitat loss, displacement, and disturbance; cumulative impacts to wildlife would be adverse, negligible to moderate, site-specific, and short and long-term.

Natural Soundscapes

Affected Environment

An important part of the NPS mission is to preserve the natural soundscapes of national parks. Natural soundscapes are the sounds of nature, a diminishing resource in an ever modernizing world. Natural sounds have intrinsic value as part of the unique environment of Glacier National Park, and they predominate throughout most of the park. Glacier's natural soundscape includes the pervading quiet and stillness, low decibel background sounds, birdsong and animal calls, the buzz of insects, and the sound of wind, rain, and water, among many others. Natural soundscapes vary across the park, depending on elevation, proximity to water, vegetative cover, topography, time of year, and other influences.

In general, soundscapes in the park are managed according to the management objectives for the park's four different management zones (backcountry, rustic, day use, and visitor service). Existing ambient sound levels differ within each of these zones, and therefore soundscape management objectives for each zone are also different. Soundscapes for the park's backcountry and rustic zones differ markedly from the soundscapes within visitor service zones. Day use zones often overlap between rustic or backcountry zones, and soundscapes in these areas may be characteristic of both the backcountry and more developed areas.

According to the park's *General Management Plan* (NPS 1999), management in backcountry areas (which includes recommended wilderness) is focused on protection and, when necessary, restoration of resources and natural processes. Backcountry zones, where natural sounds predominate, are therefore managed for natural quiet. The rustic zone is managed to provide a staging area for use of the adjacent backcountry zone; facilities and campgrounds are primitive,

and natural sounds also predominate. In contrast, visitor service and day use zones allow for heavier use and more congested conditions, and some level of human caused, artificial noise is expected. Soundscapes in day use zones are managed for a range of conditions that include some noise as well as natural quiet, depending on their location in the park, while visitor service zones are managed for higher levels of human caused noise.

Noise in Glacier National Park originating from human activities varies depending on location, time of day, and time of year. Sources of noise in the park include road traffic (including motorcycles); motorboats; aircraft; railroad traffic; human activity at visitor centers, campgrounds, picnic areas, and along trails; and park administrative activities that require power tools, heavy equipment, airplanes, helicopters, or emergency vehicles. Elevated noise levels are generally concentrated near roads and developed areas. Existing and future development outside the park, including logging and construction, may also contribute to noise levels within the park.

Noise intrusions can mask biologically important sounds, degrade habitat, and cause behavioral and physiological changes in wildlife, and can interfere with visitors' experience of quietude or other qualities of the natural soundscape. The effects of noise typically diminish as the distance from the source of the noise increases. However, depending on sound frequencies and environmental factors, noise intrusions can contribute to overall background noise over very large distances, even if they are not distinctly audible.

The Apgar Transit Center is located entirely within the visitor service zone, where artificial noise is expected. The natural ambient sound level for the Apgar area ranges from 25 to 30 dBA (U.S. DOT 2009). Noise in the area comes primarily from vehicle traffic in Apgar Village, Apgar Campground, the Apgar Transit Center, and along the Camas Road and the GTSR. In general, the typical noise level for light automobile traffic is 50 dBA (Washington State Department of Transportation 2011). Other sources of noise in the area include motorboat use on Lake McDonald, concessioner and private landowner maintenance activities, NPS administrative operations, and a moderate to high level of human activity in general throughout the entire vicinity. Natural sounds are also audible, and the area's natural soundscape is characterized by low-level sounds such as wind in the trees, birdsong, insects, waves along the lakeshore, weather events, and stillness. These sounds are most audible during the low visitor use period when human activity is at a minimum.

Intensity Level Definitions

Note: The intensity level definitions for impacts to natural soundscapes vary according to the location of a proposed project, as natural ambient sound levels vary throughout the park and because different areas are managed for different levels of noise. The definitions below therefore reflect natural ambient conditions in the Apgar area only, as well as management objectives for the park's visitor service zone.

- Negligible:** Noise from the action would very rarely be audible or would be below the level of detection and would not result in any perceptible consequences.
- Minor:** The action would be less than 1 month or noise from the action would rarely be audible or would attenuate (reduce in acoustic energy or amplitude) to 30 dBA within a short distance (<200 meters) from the source.
- Moderate:** The action would be 1 to 3 months or noise from the action would occasionally be audible or would attenuate to 30 dBA within an intermediate distance (200 meters to 600 meters).

Major: The action would be more than 3 months and noise from the action would be regularly audible and would attenuate to 30 dBA within a large distance (>600 meters) from the source.

Short-term: Would be temporary during implementation.

Long-term: Would be permanent or continual.

Impacts of Alternative A – No Action

There would be no action under this alternative, and therefore no new impacts to the natural soundscape.

Cumulative Impacts of Alternative A

Because no action would be taken, there would be no additional cumulative impacts to natural sounds under Alternative A.

Conclusion

No action would be taken under Alternative A, and there would be no impacts to natural soundscapes.

Impacts of Alternative B – Preferred

The preferred alternative would temporarily affect the natural soundscape due to the use of heavy equipment and gas-powered tools during the construction period. The level of noise would vary depending on the stage of the project and the equipment that is in use. Some equipment, including a chainsaw, concrete saw, and jackhammer, would only be used intermittently for short periods (approximately 2 hours a day) for the first two weeks; the remainder of the equipment would be used intermittently throughout the project.

Construction equipment would produce noise ranging from approximately 76 dBA to 90 dBA fifty feet from the source (Appendix B). Noise attenuation calculations indicate that most of the noise would be expected to attenuate to about 30 dBA, or the upper end of the natural ambient noise range for the area, within approximately 2250 to 6850 meters (approximately 1.5 to 4.0 miles), depending on the machine; noise from the jack hammer and hoe ram would be at the upper end this attenuation range, and noise from the compressor would be at the lower end. Noise from the grader is calculated to attenuate to natural ambient levels over the longest distance, at approximately 10,000 meters (approximately 6.0 miles) and noise from the generator is calculated to attenuate to natural ambient levels over the shortest distance, at approximately 750 meters (approximately 0.5 mile).

At first glance, these attenuation distances may appear extreme, largely because they are derived without factoring in influences from environmental conditions, vegetation, topography, and existing noise. In actuality, the audibility of project noise beyond the transit center would be dampened and minimized by the surrounding mature lodgepole pine forest and by traffic sounds and other noises. The attenuation distances therefore represent a worst case scenario, and do not reflect the anticipated or likely level of audibility. At 4.0 to 6.0 miles, the acoustic energy from the jack hammer, hoe ram, and grader could raise the level of background noise to some degree and thus have some effect on the overall soundscape, even if the source of the noise is so distant that it is no longer identifiable.

Because the duration of the project (and therefore associated noise as well as any increases in background noise) would be less than three months, and since equipment noise would be intermittent and not regularly audible, adverse impacts to natural soundscapes would not exceed a moderate level. Noise impacts would be further minimized if construction occurs over

a non-continuous time frame (i.e., begins in the fall, ceases for the winter, and resumes in the spring), which would result in even greater intermittency of potentially impactful noise. Once construction is complete, the proposed parking lot expansion would not increase artificial noise beyond existing levels, and there would be no further impacts to natural soundscapes from the project.

Construction of the parking lot expansion would occur during fall and spring, outside the high visitor use period. Fall and spring remain popular times for people to visit the park, however, including the Apgar area. Some visitors to the immediate area would therefore be adversely affected for the short term by noise from the project. Additionally, noise disturbances would affect wildlife, possibly causing some animals to temporarily avoid the project area. But wildlife would not be measurably affected since sensitive breeding, nesting, denning, and rearing periods would be over by the time the project begins, and because work during the spring is expected to be of relatively low intensity and audibility.

Cumulative Impacts of Alternative B

The cumulative effects of artificial noise on the natural soundscape are most relevant for actions that would be occurring at the same time as the proposed action. The preferred alternative would temporarily and incrementally contribute to artificial noise generated by ongoing construction projects in the Apgar vicinity, most notably the GTSR Rehabilitation Project. While the proposed action would also temporarily contribute to additive effects over time from past and future actions, the project area is within the visitor service zone, which is managed for higher levels of artificial noise.

Conclusion

The preferred alternative would have short-term, site-specific, moderate adverse impacts on the natural soundscape due to intermittently audible construction noise and likely increases in background noise during the construction period. The audibility of noise beyond the project area would be minimized by existing noise and the surrounding lodgepole pine forest. Cumulatively, Alternative B would temporarily increase the level of noise generated by the GTSR Rehabilitation Project; cumulative impacts would be minor to moderate, adverse, short-term, and site-specific and local.

Visitor Use and Experience

Affected Environment

Apgar is the traditional point of entry into Glacier National Park. Named for the Milo and Diane Apgar family, who were among the original homesteaders and entrepreneurs in the area before the park was established, Apgar was first settled in the early 1890's on the south shore of Lake McDonald. Historically, before roads were built, Apgar was the launching point for boat transportation up the lake and is historically significant as one of the earliest development sites in Glacier National Park. The Apgar area offers visitors opportunities to boat, fish, swim, hike, picnic, bike, snowshoe, cross country ski, view wildlife, and photograph scenery. Educational opportunities, overnight accommodations, camping, and dining are also available.

The Apgar Transit Center was constructed north of the GTSR and Camas Road T-intersection in 2007 to serve as a transit staging area and facilitate visitor access along the GTSR during road rehabilitation. Designed for energy efficiency and minimal resource impacts, the transit center received a gold award as a Leadership for Energy and Environmental Design (LEED) certified facility. As the park's only development with this distinction, the transit center showcases many of the park's sustainable landscape and design initiatives.

The transit center is now one of the first developments encountered by visitors entering the park via the West Entrance Station. The facility provides parking for transit users, oversized and recreational vehicles, and boat trailers. Red Bus tours meet at the transit center, Sun Tours provides pick-up service there, and the site is used to park commercial tour buses after passengers have been dropped off at Apgar. During the peak visitor season in the summer, the transit center provides orientation and park information to thousands of visitors. The transit center building features a central, open lobby space designed to provide a welcoming visitor experience. Visitors may obtain park maps and shuttle schedules to assist them in planning their trip to Glacier. Located along the path between Apgar Village and Apgar Campground, the facility provides parking for visitors who wish to park at the transit center and walk or bike to Apgar Village. Public restrooms are also available. The existing parking lot includes parking spaces for 127 passenger cars, 15 RV's or oversized vehicles, and 5 accessible spaces, and often accommodates overflow parking from Apgar Village.

Intensity Level Definitions

Negligible: Visitors would not be affected, or the changes in visitor use and/or experience would be below or at the level of detection. The visitor would not likely be aware of the effects associated with the alternative.

Minor: Changes in visitor use and/or experience would be detectable, although the changes would be slight. The visitor would be aware of the effects associated with the alternative, but the effects would be slight.

Moderate: Changes in visitor use and/or experience would be readily apparent. The visitor would be aware of the effects associated with the alternative.

Major: Changes in visitor use and/or experience would be readily apparent and have important consequences. The visitor would be aware of the effects associated with the alternative.

Short-term: Occurs only during project implementation.

Long-term: Occurs after project implementation or is permanent.

Impacts of Alternative A – No Action

This alternative would not meet the increased need for parking when visitor center operations are transferred to the transit center from Apgar Village. Parking at the transit center is already limited and at the height of the summer season in July and August, the parking lot is often full. If it is not expanded, visitors would continue to have difficulty finding a place to park; these difficulties would increase once visitor center operations are relocated. Currently, most visitors who go to the visitor center and Apgar-based NPS staff park in Apgar Village; many of these vehicles will likely be parked at the transit center once visitor center operations are moved. Shuttle ridership and day-long parking by tour group passengers combined with visitor center parking would all contribute to increased competition for parking spaces at the transit center. Limited parking can be a frustrating experience, and taking no action to improve parking availability would have adverse impacts on the overall quality of the visitor experience for the long term. Safety concerns would also increase as visitors park in undesignated areas, including road shoulders and other pedestrian use areas.

Cumulative Impacts of Alternative A

Under no action, the benefits to visitor use and experience from transferring visitor center operations to the transit center would be diminished by the adverse effects of insufficient

parking space. Additionally, parking demands would not be partially shifted away from Apgar Village. Apgar Village would therefore be the sole location for future parking improvements in Apgar, possibly resulting in greater impacts to the rustic village atmosphere.

Conclusion

Impacts to visitor use and experience would be adverse, moderate, long-term, and site-specific and local due to insufficient parking at the transit center once visitor center operations are relocated there. Cumulative impacts to visitor use and experience under no action would be adverse, moderate, long-term, and site-specific and local because there would not be enough space for visitor center parking.

Impacts of Alternative B – Preferred

Alternative B would support the upcoming transfer of visitor center operations to the Apgar Transit Center by providing additional space for increased parking needs. Visitor use and experience would benefit as a result. Expanding the parking lot would increase the availability of short and long-term parking, thus facilitating not only visitor center services, but also use of the transit system and commercial bus tours. This alternative would considerably improve the ability of visitors to stop in one location for information, tour buses, and transit services.

Some short-term, site-specific adverse impacts to visitor use and experience would occur due to temporary noise from heavy equipment during the construction period. The visitor experience at the campground could be slightly diminished for the long-term by the reduction of vegetative screening between the parking lot and the south end of the campground. This alternative would not include any additional lighting, so visitors' opportunities to view the night sky at this location would not be affected.

Cumulative Impacts of Alternative B

The preferred alternative would enhance the safety improvements and overall benefits to visitors that have resulted or are anticipated from a number of past, ongoing, and future actions. The parking lot expansion combined with improvements to the West Entrance Station and the information pullout to the west would help promote area-wide efforts to separate pedestrians and vehicles. This alternative would also likely alleviate some of the parking congestion in Apgar Village and help the park determine where parking improvements in Apgar are most needed. Combined with the transfer of visitor center operations to the Apgar Transit Center and a possible future addition to the transit center building, Alternative B would help meet increased visitor needs in this particular area.

Conclusion

The preferred alternative would have beneficial, minor to moderate, long-term, site-specific and local impacts to visitor use and experience because it would accommodate relocated visitor center parking needs and facilitate consolidated visitor access to information, transit functions, and interpretive resources. Minor to moderate site-specific, short-term adverse impacts would occur during the construction period. Cumulatively, the parking lot expansion would have long-term, minor to moderate, beneficial, site-specific and local impacts to visitor use and experience when combined with past, ongoing, and reasonably foreseeable projects intended to improve pedestrian safety, traffic flow, and parking availability.

Visual Resources

Affected Environment

The Apgar Transit Center and all of its associated support features are located within a forested stand of predominately even-aged, mature lodgepole pine covering fairly flat terrain. For many visitors, it is the first main development encountered beyond the park boundary at West Glacier. The entrance road into the facility is due north of a prominent juncture between two primary park roads, the Camas Road and the Going-to-the-Sun Road (GTSR). Along the curvilinear, tree-lined entry drive to the transit facility, views include glimpses of the transit center through the forest. Upon entering the parking area, the space opens up fairly dramatically. Howe Ridge to the west and the Belton Hills to the east are visible beyond the forest canopy, above the vertical edge created by the lodgepole pine trees encircling the parking area. The transit center and its associated parking lot and support features are not visible from other primary visitor use areas, such as Apgar Village, Apgar Campground, and the GTSR, except for partial views of the building from the intersection of the Camas Road and the GTSR.

Intensity Level Definitions

Negligible: Effects would not result in any perceptible changes to existing view sheds.

Minor: Effects would result in slightly detectable changes to a view shed or in a small area or would introduce a compatible human-made feature to an existing developed area.

Moderate: Effects would be readily apparent and would change the character of visual resources in the area.

Major: Effects would be highly noticeable or would change the character of visual resources by adding human-made features into a mostly undeveloped area or by removing most human-made features from a developed area.

Short-term: Would be temporary and removable.

Long-term: Would be continual or permanent.

Impacts of Alternative A – No Action

The existing viewshed and visual resources associated with the no action alternative would not be changed. Therefore, there would be no additional impacts on visual resources.

Cumulative impacts of Alternative A

There would be no cumulative impacts under Alternative A as no new actions are proposed.

Conclusion

There would be no new impacts to visual resources under the no action alternative.

Impacts of Alternative B – Preferred

The proposed expansion of the north and east perimeter of the existing parking lot would result in no change to views from areas outside the transit facility, including Apgar Village, Apgar Campground, and the GTSR and Camas Road. The proposed action would bring only minor changes to views from the transit center, and could be regarded as beneficial because a more open forest canopy would improve views of nearby mountain ridges. The chosen location of the proposed expansion does not conflict with the original objective of providing filtered views of the transit building along the entry route to the facility. The removal of additional lodgepole pine forest would result in a larger, extended opening through the trees. From a visual perspective, however, the surrounding vertical edge of the forest would remain similar in

appearance. Vegetation along the existing north edge would be salvaged into the island separating the expansion and the existing parking lot. However, due to lodgepole pine's susceptibility to windfall following increased exposure, much if not all of the existing stand in the island would most likely be removed over time, diminishing the natural appearance of the site. This affect, however, would be short-term because a profusion of pine seedlings would emerge within a relatively short period, as has happened following the original construction of the facility. This emergence would, along with supplemented plantings, partially screen the northern parking expansion. In the long-term, the addition of plantings beyond the perimeter curb-line may help to visually soften and transition the immediate view into the pronounced vertical edge surrounding the parking area.

The addition of the oversized parking area to the east would similarly expand the footprint of the pavement as well as the striping of the parking lot. Unlike the north expansion, recreational vehicles parked in the eastern expansion would be visible from the entrance road. No lighting is proposed under this alternative and therefore, views of the night-sky would remain as they are currently. Visual resources within the immediate project area would be temporarily diminished during the construction period, but these effects would be slight since the work would be underway during the fall and possibly spring, when visitation levels are low.

Cumulative Impacts of Alternative B

Additional parking at the transit center would facilitate parking needs associated with the relocation of visitor center operations from Apgar Village to the transit center. This would influence and possibly reduce the scope of any future parking improvements in Apgar Village, thereby helping to preserve the village's existing visual character. A future addition to the transit center building would not alter the visual character of the area, since it would be designed to blend with existing architectural features. The preferred alternative would only incrementally and temporarily increase impacts to visual resources from previous, ongoing, and future actions involving construction.

Conclusion

There would be minor beneficial, site-specific, and long-term impacts to visual resources from an expanded view of nearby mountain ridges. Negligible to minor adverse, site-specific and long-term impacts would occur from changes to the immediate forested viewshed and because recreational vehicles parked in the eastern expansion would be visible from the entrance road. The project would have negligible to minor, short-term, and site-specific adverse effects on visual resources during the construction period. Cumulatively, Alternative B would incrementally and temporarily increase adverse impacts combined with past, ongoing, and future construction projects, but could benefit the visual character of Apgar Village by influencing and possibly reducing the scope of future parking improvements. Cumulative impacts would therefore be negligible to moderate, adverse and beneficial, site-specific, and short and long-term.

Compliance Requirements

National Environmental Policy Act (NEPA) and Regulations of the Council on Environmental Quality – The National Environmental Policy Act applies to major federal actions that may significantly affect the quality of the human environment. This generally includes major construction activities that involve the use of federal lands or facilities, federal funding, or federal authorizations. This EA meets the requirements of the NEPA and the Council on Environmental Quality in evaluating potential effects associated with activities on federal lands. If no significant effects are identified, a finding of no significant impacts (FONSI) would be prepared. If significant effects are identified, a notice of intent (NOI) would be filed for preparation of an environmental impact statement (EIS).

Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) – Section 7 of the Endangered Species Act is designed to ensure that any action authorized, funded, or carried out by a federal agency does not jeopardize the continued existence of any endangered or threatened plant or animal species. If a federal action may affect threatened or endangered species, then consultation with the U.S. Fish and Wildlife Service is required. The NPS has determined that the proposed action would have “no effect” to grizzly bears, Canada lynx, bull trout, water howellia, or Spalding’s catchfly.

National Historic Preservation Act of 1966, as amended (16 U.S.C. 470, et seq.)— Section 106 of the National Historic Preservation Act of 1966 (as amended) requires all federal agencies to consider effects from any federal action on cultural resources eligible for or listed in the National Register of Historic Places (NHRP) prior to initiating such actions. During scoping, Glacier National Park notified the Montana State Historic Preservation Office (SHPO), the Confederated Salish and Kootenai Tribes, and the Blackfeet Tribal Business Council of the project in keeping with 36 CFR800. There are no historic properties in the project area, the Area of Potential Effect has been surveyed for archeological resources and none were identified, and neither the Blackfeet Tribe nor the Confederated Salish and Kootenai Tribes raised concerns about the proposed action. For Section 106 purposes, the park will document a “no historic properties affected” finding in its annual report to the State Historic Preservation Office in accordance with the *Programmatic Agreement among the National Park Service (U.S. Department of the Interior), the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers for Compliance with Section 106 of the National Historic Preservation Act*.

Consultation and Coordination

Internal and External Scoping

Scoping is an early and open process to determine the breadth of environmental issues and alternatives to be addressed in an EA. Glacier National Park conducted both internal scoping with park staff and external scoping with the public and interested and affected groups and agencies. The scoping process helped identify potential issues, alternatives, the possible effects of cumulative actions, and what resources would be affected.

Public scoping began on August 11, 2011 and the comment period closed on September 15, 2011. A press release was distributed to several media outlets and a scoping brochure was mailed to individuals and organizations on the park's EA mailing list, including members of Congress and various federal, state, and local agencies. An email announcement was sent to a number of interested parties, with a link to the brochure on the NPS Planning, Environment, and Public Comment (PEPC) website. An open house for the public was held on September 7, 2011 at the Apgar Transit Center. At least seven people attended; a few others came but did not sign in, so the actual number of attendees is unknown.

Fourteen pieces of correspondence, including letters, emails, postings on the PEPC website, and one telephone comment were received during scoping. Twelve correspondences were from private individuals, one was from the owner of a private business outside the park, and one came from a private landowner in the Apgar area. Seven letters were supportive of the proposal to expand the Apgar Transit Center parking lot, two expressed opposition to the project, and five either did not state an opinion or only addressed parking improvements at Apgar Village or the relocation of visitor center operations, without discussing the parking lot at the transit center. Specific comments are described under Alternatives, Suggestions, and Concerns from Public Scoping. Forty three comments were recorded during the Open House. These are also described and addressed under Alternatives, Suggestions, and Concerns from Public Scoping.

Agency Consultation

In accordance with Section 7 of the Endangered Species Act (ESA), Glacier National Park initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) on August 11, 2011. On August 11, 2011, Glacier National Park also notified the Montana State Historic Preservation Office (SHPO) in keeping with 36 CFR800.

Native American Consultation

Glacier National Park also notified the Confederated Salish and Kootenai Tribes and the Blackfeet Tribal Business Council on August 11, 2011, in accordance with 36 CFR800. Neither the Blackfeet Tribe nor the Confederated Salish and Kootenai Tribes raised concerns about the proposed action during scoping for this project.

Environmental Assessment Review and List of Recipients

This EA is subject to a 30-day public comment period. The public was notified of the EA availability through news releases to a number of state and local media outlets and a letter and or document to various agencies, tribes, groups businesses and individuals who have asked to receive notification or are otherwise required to get notification. The document will be available for review on the park's planning website at <http://parkplanning.nps.gov/ApgarTransitParking>. Copies of the EA will be provided to other interested individuals upon request.

During the 30-day public review period, the public is encouraged to submit their written comments to the NPS, as described in the instructions at the beginning of this document. Following the close of the comment period, all public comments will be reviewed and analyzed prior to the release of a decision document. The NPS will issue responses to substantive comments received during the public comment period.

List of Preparers

Jen Asebrook, Biological Science Technician, Vegetation/Inventory and Monitoring – Vegetation and Soils sections

Jack Gordon, Landscape Architect – Co-Team Captain, project description and alternatives, Visual Resources sections

Lon Johnson, Cultural Resource Specialist – Cultural resources sections, SHPO consultation

Joyce Lapp, Restoration Biologist – Vegetation and Soils sections

Laura Law, Education Specialist – Visitor Use and Experience section

Deborah Mensch, Lead Interpretive Park Ranger – Visitor Use and Experience section

Gary Noland, Landscape Architect – rendered drawing of the proposed parking lot expansion

Mary Riddle, Environmental Protection Specialist – Co-Team Captain, supervision, quality review, and editing; project description and alternatives; coordinates internal and regional reviews and agency consultation

Amy Secrest, Compliance Biological Science Technician – Assisted with preparation of the entire EA, particularly the natural soundscape, wildlife, and T & E species sections; document compilation, technical writing, editing, and formatting

John Waller, Wildlife Biologist – Wildlife, Threatened and Endangered Species and Species of Concern sections

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As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

References

- Dutton, B. L., J. Hadlock, M. Arthur, D. Marrett, A. Goldin, and A. Zhu. 2001. Soils of Glacier National Park. Land and Water Consulting, Inc., Missoula, MT.
- Intergovernmental Panel on Climate Change (IPCC). 2007: Summary for policymakers. In: *Climate change 2007: The physical science basis*. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- Mace, R.D., J. S. Waller, T. L. Manley, K. Ake, W. T. Wittinger. 1999. Landscape evaluation of grizzly bear habitat in Western Montana. *Conservation Biology* 13(2): 367-377.
- Montana Natural Heritage Program (MNHP). 2011a. Montana Field Guide. Montana Natural Heritage Program and Montana Fish, Wildlife and Parks. Retrieved on July 20, 2011, from <http://FieldGuide.mt.gov>.
- Montana Natural Heritage Program, 2011b. Velvetleaf huckleberry — *Vaccinium myrtilloides*. Montana Field Guide. Retrieved on December 15, 2011 from http://fieldguide.mt.gov/detail_PDERI180M0.aspx.
- National Park service (NPS). 1999. Final general management plan and environmental impact statement for Glacier National Park. U.S. Department of the Interior, National Park Service, Glacier National Park, West Glacier, MT.
- _____. 2003. Going-to-the-Sun Road rehabilitation plan/final environmental impact statement, Glacier National Park. U.S. Department of the Interior, National Park Service, Glacier National Park, West Glacier, MT.
- _____. 2004a. Apgar Transit Center cultural resource survey: A project under the Going-to-the-Sun Road rehabilitation plan, Glacier National Park, West Glacier, Montana, by Leslie M. Riley, Archaeology Technician, September 2004.
- _____. 2004b. Final commercial services plan and final environmental impact statement, Glacier National Park. U.S. Department of the Interior, National Park Service, Glacier National Park, West Glacier, MT.
- _____. 2005 Apgar Transit Center cultural resource survey: An addendum to the project under the Going-to-the-Sun Road rehabilitation plan, Glacier National Park, West Glacier, Montana, by Leslie M. Riley, September 2005.
- _____. 2006. NPS management policies. U.S. Department of the Interior, National Park Service, Washington, D.C.
- _____. 2010. Bear management plan, Glacier National Park. U.S. Department of the Interior, National Park Service, Glacier National Park, West Glacier, MT.
- _____. 2011. 2011 revegetation monitoring report: Glacier National Park. Glacier National Park, West Glacier, Montana, by J.M. Asebrook, J. Hintz, and P. DelZotto. 102pp.

- U.S. Department of Transportation (USDOT). 2009. Baseline ambient sound levels in Glacier National Park. U.S. Department of Transportation, Research and Innovative Technology Administration, John A. Volpe National Transportation Systems Center, Environmental Measurement and Modeling Division, RTV-4F Acoustics Facility, Cambridge, MA. 213 pages.
- U.S. Fish and Wildlife Service (USFWS). 2011. Candidate species, Section 4 of the Endangered Species Act. http://www.fws.gov/endangered/esa-library/pdf/candidate_species.pdf. Accessed January 10, 2012.
- Washington State Department of Transportation, Environmental Services. 2011. Advanced training manual, biological assessment preparation for transportation projects. Washington State Department of Transportation, Environmental Services. Olympia, Washington.
- Wright, P.L. 1950. *Synaptomys borealis* from Glacier National Park, Montana. General notes in Journal of Mammalogy, 31(4):460. American Society of Mammalogists. <http://www.jstor.org/stable/1375116>. Accessed January 26, 2012.

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Appendix A

Plant species commonly found in the vicinity of the Apgar Transit Center.

Plants	
Native Forbs	
Beargrass	<i>Xerophyllum tenax</i>
Blue-leaf strawberry	<i>Fragaria virginiana</i>
Bracken fern	<i>Pteridium aquilinum</i>
Bunchberry	<i>Cornus canadensis</i>
Canada goldenrod	<i>Solidago canadensis</i>
Canada horseweed	<i>Conyza canadensis</i>
Cow-wheat	<i>Melampyrum linare</i>
Cream peavine	<i>Lathyrus ochroleucus</i>
Field pussytoes	<i>Antennaria howellii</i>
Fireweed	<i>Chamerion angustifolium</i>
Foamflower	<i>Tiarella trifoliata</i>
Harebell	<i>Campanula rotundifolia</i>
Heartleaf arnica	<i>Arnica cordifolia</i>
Large-leaf avens	<i>Geum macrophyllum</i>
Mountain sweet-cicely	<i>Osmorhiza berteroi</i>
Nodding onion	<i>Allium cernuum</i>
Northern bedstraw	<i>Galium boreale</i>
Pathfinder	<i>Adenocaulon bicolor</i>
Pearly everlasting	<i>Anaphalis margaritacea</i>
Pink wintergreen	<i>Pyrola asarifolia</i>
Prince's pine	<i>Chimaphilla umbellatum</i>
Queen's cup bead-lily	<i>Clintonia uniflora</i>
Rosy pussytoes	<i>Antennaria rosea</i>
Round-leaved violet	<i>Viola orbiculata</i>
Sidebells wintergreen	<i>Orthilia secunda</i>
Silky lupine	<i>Lupinus sericeus</i>
Smooth aster	<i>Symphyotrichum laeve</i>
Spreading dogbane	<i>Apocynum andromaesifolium</i>
Starry Solomon's plume	<i>Maianthemum stellatum</i>
Sweetscented bedstraw	<i>Galium triflorum</i>
Tall annual willowherb	<i>Epilobium brachycarpum</i>
Western rattlesnake-plantain	<i>Goodyera repens</i>
White-flowered hawkweed	<i>Hieracium albiflorum</i>
Wild strawberry	<i>Fragaria vesca</i>
Yarrow	<i>Achillea millefolium</i>
Yellow penstemon	<i>Penstemon confertus</i>

Non-Native Forbs	
Alsike clover	<i>Trifolium hybridum</i>
Black medic	<i>Medicago lupulina</i>
Bull thistle	<i>Cirsium vulgare</i>
Canada thistle *	<i>Cirsium arvense</i>
Common chickweed	<i>Cerastium fontanum</i>
Common plantain	<i>Plantago major</i>
Dandelion	<i>Taraxacum officinale</i>
Field bindweed	<i>Convolvulus arvensis</i>
Field sorrel	<i>Rumex acetosella</i>
Filago	<i>Filago arvensis</i>
Mountain tarweed	<i>Madia glomerata</i>
Mullein	<i>Verbascum thapsus</i>
Orange hawkweed *	<i>Hieracium aurantiacum</i>
Oxeye daisy *	<i>Chrysanthemum leucanthemum</i>
Paul's betony	<i>Veronica officinalis</i>
Prickly lettuce	<i>Lactuca serriola</i>
Prostrate vervain	<i>Verbena bracteata</i>
Red clover	<i>Trifolium pratense</i>
Self-heal	<i>Prunella vulgaris var. vulgaris</i>
Silver cinquefoil	<i>Potentilla argentea</i>
Spotted knapweed *	<i>Centaurea maculosa</i>
St. Johnswort *	<i>Hypericum perforatum</i>
stork's bill	<i>Erodium cicutarium</i>
Sulphur cinquefoil *	<i>Potentilla recta</i>
Thyme-leaved speedwell	<i>Veronica serpyllifolia</i>
White clover	<i>Trifolium repens</i>
White sweet-clover	<i>Melilotus alba</i>
Wormwood	<i>Artemisia abstinthium</i>
Yellow clover	<i>Trifolium agrarium</i>
Yellow salsify	<i>Tragopogon dubius</i>
Native Grass	
Blue wildrye	<i>Elymus glaucus</i>
Downy oatgrass	<i>Danthonia intermedia</i>
Fowl bluegrass	<i>Poa palustris</i>
Northwest sedge	<i>Carex concinnoides</i>
Pinegrass	<i>Calamagrostis rubescens</i>
Ross' sedge	<i>Carex rossii</i>
Roughleaf ricegrass	<i>Oryzopsis asperifolia</i>
Slender wheatgrass	<i>Elymus trachycaulus spp. trachycaulus</i>
Slender-beak sedge	<i>Carex athrostachya</i>
Tall trisetum	<i>Trisetum canescens</i>
Thickhead sedge	<i>Carex pachystachya</i>
Ticklegrass	<i>Agrostis scabra</i>
Western fescue	<i>Festuca occidentalis</i>

Non-native Grass	
Canada bluegrass	<i>Poa compressa</i>
Hairy brome	<i>Bromus commutatus</i>
Kentucky bluegrass	<i>Poa pratensis</i>
Orchard grass	<i>Dactylis glomerata</i>
Quackgrass	<i>Elymus repens</i>
Redtop	<i>Agrostis stolonifera</i>
Smooth brome	<i>Bromus inermis</i>
Sterile wheatgrass	<i>Triticum aestivum</i>
Timothy	<i>Phleum pratense</i>
Shrubs	
Buffaloberry	<i>Shepherdia canadensis</i>
Dwarf huckleberry	<i>Vaccinium caespitosum</i>
Globe huckleberry	<i>Vaccinium membranaceum</i>
Kinnikinnik	<i>Arcostaphylos uva-ursi</i>
Mountain lover	<i>Pachystima myrsinites</i>
Oregon grape	<i>Mahonia repens</i>
Prickly rose	<i>Rosa acicularis</i>
Rocky Mountain maple	<i>Acer glabrum</i>
Serviceberry	<i>Amelanchier alnifolia</i>
Shiny-leaf spirea	<i>Spiraea betulifolia</i>
Snowberry	<i>Symphoricarpos albus</i>
Thimbleberry	<i>Rubus parviflorus</i>
Twinflower	<i>Linnea borealis</i>
Velvetleaf huckleberry	<i>Vaccinium myrtilloides</i>
Wood's rose	<i>Rosa woodsii</i>
Trees	
Black cottonwood	<i>Populus balsamifera</i>
Douglas fir	<i>Pseudotsuga menziesii</i>
Engelmann spruce	<i>Picea engelmannii</i>
Lodgepole pine	<i>Pinus contorta</i>
Paper birch	<i>Betula papyrifera</i>
Subalpine fir	<i>Abies lasiocarpa</i>
Western hemlock	<i>Tsuga heterophylla</i>
Western larch	<i>Larix occidentalis</i>
Western red cedar	<i>Thuja plicata</i>
Western white pine	<i>Pinus monticola</i>

* Noxious weed species

Appendix B

Average maximum noise levels at 50 feet from construction equipment expected to be in use during the Apgar Transit Center parking lot expansion.

Average maximum noise levels at 50 feet from common construction equipment. (*Biological Assessment Preparation Advanced Training Manual Version 02-201, Table 7-4, WSDOT 2011*)

Equipment Description	Impact Device?	Actual Measured Average L_{maxb} at 50 feet
Backhoe	No	78
Chain Saw	No	84
Compactor (ground)	No	83
Compressor (air)	No	78
Concrete Mixer Truck	No	79
Concrete Saw	No	90
Dozer	No	82
Dump Truck	No	76
Excavator	No	81
Flat Bed Truck	No	74
Front End Loader	No	79
Generator	No	81
Grader ^a	No	89
Jackhammer	Yes	89
Paver	No	77
Roller	No	80

^a WSDOT measured data in FHWA's Roadway Construction Noise Mode Database (2005).

^b L_{max} is the maximum value of a noise level that occurs during a single event.