



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

**Glacier National Park  
Montana  
Waterton-Glacier International Peace Park**

**FINDING OF NO SIGNIFICANT IMPACT  
Comprehensive Telecommunications Plan  
December 2021**

**Recommended:**

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Pete Webster, Deputy Superintendent  
Glacier National Park  
National Park Service

Date

**Approved:**

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Michael T. Reynolds, Regional Director  
Interior Regions 6, 7, & 8  
National Park Service

Date

## INTRODUCTION

In compliance with the National Environmental Policy Act (NEPA), the National Park Service (NPS) prepared an Environmental Assessment (EA) to examine alternative actions and environmental impacts associated with the proposed Comprehensive Telecommunications Plan for Glacier National Park. The plan is needed to improve the overall reliability and effectiveness of NPS telecommunications systems that support park operations, and to establish a strategy for enabling cellular and/or Internet connectivity for public and NPS use in developed areas where most needed.

The statements and conclusions reached in this finding of no significant impact (FONSI) are based on documentation and analysis provided in the EA and associated decision file. Relevant sections of the EA are summarized and incorporated by reference below. This NEPA process began under the 1978 Council on Environmental Quality (CEQ) NEPA Regulations; the EA and FONSI have therefore been prepared in accordance with the 1978 Regulations. The EA is available at <https://parkplanning.nps.gov/GNPtelecommunicationsplan>.

The public was provided two opportunities to comment on the plan. The NPS accepted public comments during scoping from 24 February to 9 March 2020. The EA for the plan was released to the public for review on 10 June 2021 and was open for comment until 11 July 2021. A summary of public comments received and responses from the NPS are provided in Appendix C of this document.

## SELECTED ACTION AND RATIONALE FOR DECISION

Based on the analysis presented in the EA, the NPS has selected *Alternative A*, the proposed action and NPS preferred alternative (pages 5-29 of the EA). The selected action is divided into two sections. Section I includes actions with a well-developed scope and design; Section II includes less developed, or programmatic, actions. Programmatic actions are broadly analyzed in the EA and will undergo additional project-level review, analysis, and compliance once the scope and design are further developed. All actions are listed below in Table 1 and described in detail in Sections I (Actions No. 1-11) and II (Programmatic Actions No. 1-8) of the plan/EA.

### **Improve NPS Telecommunications Systems**

Under the selected action, the NPS will correct deficiencies in NPS radio, phone, and computer/Internet/data-based telecommunication systems needed to operate and maintain essential park services and operations. The selected action will allow a flexible response to changing communication needs and technological advances, including the ability to employ new or developing technologies. Improvements to NPS telecommunication systems will involve replacing three equipment poles with 40-foot towers; extending the height of one 40-foot tower to 80 feet; installing equipment such as antennas and microwave dishes; phone system upgrades; installing a radio repeater at the Loop on the Going-to-the-Sun Road (a National Historic Landmark); upgrading a temporary radio repeater shelter in recommended wilderness until it can be moved outside the park; and installing temporary scene-of-action repeaters and possibly one to four additional permanent repeaters in recommended wilderness.

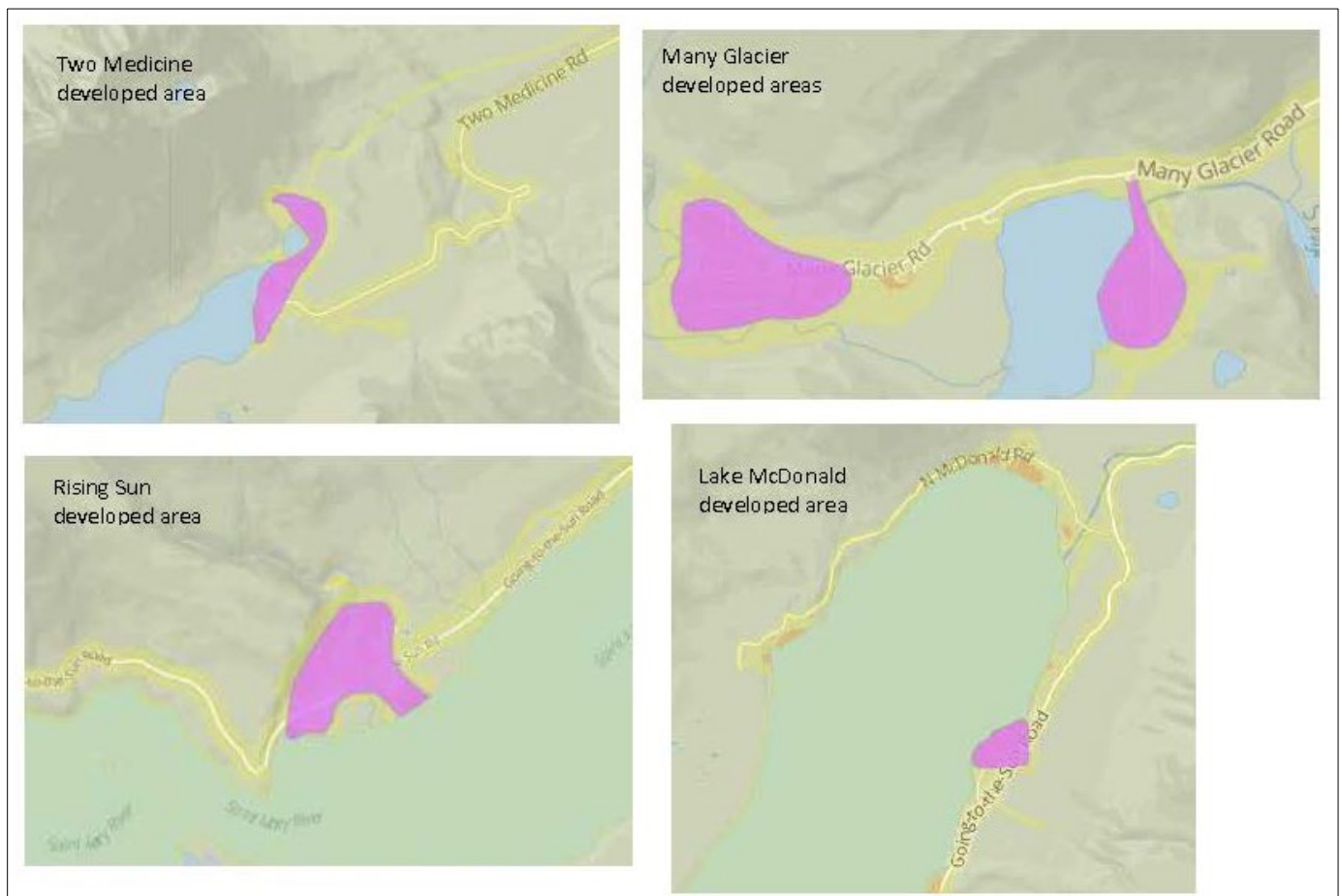
### **Establish a Strategy for Cellular and Internet Connectivity**

Additionally, the selected action identifies four developed areas (the Many Glacier, Rising Sun, Two Medicine, and Lake McDonald Lodge developed areas) where installation of commercial infrastructure for cellular and/or Internet connectivity for public and NPS use is appropriate and could be authorized. (Figure 1). The selected action establishes conditions and parameters on the amount, type, size, and placement of commercial infrastructure, extent of coverage areas, and other factors. Commercial telecommunications infrastructure will only be permitted in the four developed areas shown in Figure 1 and will not be permitted in the park's Backcountry Zone (as defined in the park's 1999 General Management Plan) or recommended wilderness. Coverage will also not be provided along park roads outside the identified coverage areas. Some signal spillover may occur in portions of recommended wilderness, the Backcountry Zone, and on roadways that are immediately adjacent to approved coverage

areas, but providers will be required to minimize spillover outside approved areas as much as technologically feasible (see Conditions and Parameters for Commercially Provided Cellular and Internet Service, Table 2 below).

Technologies that require the least visible, smallest scale infrastructure feasible with minimal impacts to park resources will be given foremost consideration, such as micro cell sites or wireless access points (or WAPs). Large-scale, highly visible commercial towers (e.g. taller than 80 feet) will not be permitted in Glacier National Park.

Establishing conditions and parameters for cellular and/or Internet connectivity will provide a consistent approach to the review and consideration of requests from commercial telecommunication providers to locate infrastructure and offer connectivity in the park. The selected action will ensure consistent measures to minimize impacts to park resources over the long term.



**Figure 1:** Approximate allowable coverage areas for the Two Medicine, Many Glacier, Rising Sun, and Lake McDonald Lodge developed areas. Purple polygons = approximate identified coverage areas; yellow highlight = Visitor Service Zone as defined by Glacier's 1999 GMP.

Coverage areas illustrated in Figure 1 are within the park's Visitor Service Zone as defined by Glacier's 1999 General Management Plan (GMP) and are roughly delineated according to development footprints (as defined in park GIS files). Opportunities to retain disconnected space within each of the coverage areas will be considered during site-specific, project-level review. As a result, instead of blanket coverage throughout each developed footprint, connectivity within the coverage areas may be more point specific (e.g. focused at certain buildings, parking areas, and/or high-use areas within the development footprint). The precise coverage delineations within the four developed areas cannot be determined at this time due to a number of variables, including what technologies will be used, specific locations for equipment and

infrastructure, and additional resource protection measures that may be identified during site-specific review.

All applications for ROW permits in the park, including those for wireless telecommunications uses, will be processed in accordance with 36 CFR 14, all applicable policies including, but not limited to NPS Management Policies (2006), Director’s Order 53, and the NPS right-of-way permitting guidance document, Reference Manual 53B.

**Table 1:** Summary of actions that will be implemented under the selected action. Each action is described in detail on pages 5-29 of the plan/EA.

<b>Actions with a Developed Scope and Design – Section I</b>	
1	<p>Improve NPS data/ Internet access, phone systems, and alarm management at Many Glacier; enable backup radio communications via Radio over Internet Protocol (RoIP).</p> <ul style="list-style-type: none"> <li>• Entails replacing an existing equipment pole with a 40-foot tower at the Many Glacier Ranger Station and mounting one microwave dish; replacing an existing equipment pole with a 40-foot tower at the Many Glacier Entrance Station, mounting two microwave dishes, and thinning adjacent trees; mounting two microwave dishes at the existing communications shelter at the Many Glacier water tanks site and digging trench in previously disturbed ground.</li> </ul>
2	<p>Connect the Two Medicine Entrance Station to the Local Area Network (LAN) by means of an NPS microwave data link.</p> <ul style="list-style-type: none"> <li>• Entails removing a tree and mounting one microwave dish on the existing equipment pole at the Two Medicine Entrance Station, and mounting one microwave dish on the existing Two Medicine communications tower.</li> </ul>
3	<p>Replace the existing job-box for the temporary NPS radio repeater on Looking Glass Hill (in recommended wilderness) with a manufactured equipment shelter with 20-foot mast and three solar panels.</p> <ul style="list-style-type: none"> <li>• Entails helicopter flights to deliver equipment.</li> <li>• Note: Recent developments indicate that the repeater may be relocated outside the park without first requiring replacement of the job-box at the current site.</li> </ul>
4	<p>Enable NPS backup radio communications via RoIP at the St. Mary Ranger Station.</p> <ul style="list-style-type: none"> <li>• Entails installing land mobile radio (LMR) antennas on the existing NPS telecommunications tower.</li> </ul>
5	<p>If necessary, install an NPS radio repeater on Elk Mountain (in recommended wilderness) to improve NPS radio coverage on the south side of the park.</p> <ul style="list-style-type: none"> <li>• Entails installing an equipment shelter with 20-foot mast and solar panels, and helicopter flights to deliver equipment.</li> </ul>
6	<p>Move an LE repeater to the existing NPS telecommunications site on Apgar Mountain to improve coverage.</p> <ul style="list-style-type: none"> <li>• Entails installing land mobile radio (LMR) antennas on the existing NPS telecommunications tower.</li> </ul>
7	<p>Replace the Polebridge Ranger Station phone system with a Voice over Internet Protocol (VoIP) system.</p> <ul style="list-style-type: none"> <li>• Entails digging trench for cable in previously disturbed ground.</li> <li>• Note: Since preparation of the EA for the plan, the phone system has been upgraded without the need for digging trenches, and, therefore, with no impacts to park resources. Compliance with the National Environmental Policy Act (NEPA) was covered with Categorical Exclusion 3.2 E. Documentation under Section 106 of the National Historic Preservation Act (NHPA) was not required as the Polebridge Ranger Station structure is not historic. This action is being retained, however, in the event that future system upgrades require trenches.</li> </ul>
8	<p>Increase the height of the NPS tower at the Chief Mountain Port of Entry (POE) from 40 to 80 feet to increase NPS signal propagation; install an additional repeater.</p> <ul style="list-style-type: none"> <li>• Entails extending the existing tower or replacing both the tower and foundation, and thinning trees.</li> </ul>
9	<p>Replace the existing equipment pole at the Goat Haunt Ranger Station with a 40-foot tower and install an NPS repeater to improve NPS radio coverage and enable secure radio communications for NPS law enforcement.</p> <ul style="list-style-type: none"> <li>• Entails installing a new foundation and digging a trench in previously disturbed ground.</li> </ul>
10	<p>Provide NPS Internet/data and NPS phone access at the Logan Pass Visitor Center for NPS operations by means of a DOI satellite Internet system.</p> <ul style="list-style-type: none"> <li>• Entails installing a 6 to 7-foot tall pipe, mounting a satellite dish on the pipe, and digging an approximately 50-foot trench in previously disturbed ground (if possible).</li> </ul>
11	<p>Install a Local Area Network (LAN) at the Walton Ranger Station to improve Internet and phone service for NPS operations.</p> <ul style="list-style-type: none"> <li>• Entails digging a trench for cable in previously disturbed ground.</li> </ul>

<b>Programmatic Actions – Section II</b>	
1	Install additional microwave data links to improve NPS data/Internet, phone access, and radio and alarm management at East Glacier and Two Medicine. <ul style="list-style-type: none"> <li>Installing microwave data links would entail mounting one dish on the existing tower at the East Glacier Ranger Station and digging a trench from the ranger station to the barn (previously disturbed ground); mounting an additional microwave dish on the existing Two Medicine communications tower; and installing three microwave dishes at a third, undetermined site from which the signals could be propagated to a federal Internet circuit.</li> </ul>
2	Relocate the NPS repeater and related equipment on Looking Glass Hill to a preliminarily identified site outside the park in order to remove infrastructure from recommended wilderness while maintaining NPS telecommunications in the area.
3	Install an NPS radio repeater at the Loop on the Going-to-the-Sun Road to improve park radio coverage. <ul style="list-style-type: none"> <li>Entails constructing a small enclosure attached to the back of the comfort station to house the repeater and installing a 30-foot mast and solar panels on the comfort station roof.</li> </ul>
4	Install backup power at the existing NPS telecommunications site on Apgar Mountain. <ul style="list-style-type: none"> <li>May entail installing solar panels, digging a trench for cable (likely in undisturbed ground), and helicopter flights to deliver equipment.</li> </ul>
5	As opportunity presents, upgrade or install advanced technology or additional equipment at existing NPS telecommunication sites or other NPS administrative sites to improve communications for NPS operations; remove unnecessary infrastructure; install fiber optic cable where appropriate to replace above-ground infrastructure.
6	Install temporary scene-of-action (SOA) repeaters as needed to support NPS radio communications for short-term situations. <ul style="list-style-type: none"> <li>Generally entails placing a repeater on the ground in portable cases, packs, or similar container with an expandable mast, foldable solar panels or mounted solar panel assembly.</li> </ul>
7	If necessary, install up to 3 additional permanent NPS radio repeaters to support or improve NPS radio communications. <ul style="list-style-type: none"> <li>Likely entails installing an equipment shelter with a 20-foot mast and solar panels.</li> </ul>
8	Identify four developed areas (the Many Glacier, Rising Sun, Two Medicine, and Lake McDonald Lodge developed areas) where installation of commercial telecommunications infrastructure and cellular and Internet coverage for public and NPS use will be appropriate and could be authorized, and establish conditions and parameters for commercial telecommunications infrastructure and connectivity.

Table 2 lists conditions and parameters for commercially provided cellular and Internet service that will be in effect when considering whether to approve, deny, or renew telecommunications right-of-way (ROW) permits. These conditions and parameters will apply to any ROW permit for commercially provided cellular and Internet service, including service for the public, park partners, and concessioners, and any service used in support of NPS operations. The conditions and parameters include requirements from Director’s Order No. 53 Special Park Uses, Reference Manual 53B (Right-of-Way), and Section 6.4.8 Rights-of-Way in wilderness and 8.6.4.3 Telecommunication Sites of the 2006 NPS Management Policies, which provides direction for management decisions regarding non-NPS telecommunications sites and will be in effect regardless of whether the park implements a telecommunications plan. Conditions and parameters also include those that will be established under this plan in addition to NPS Management Policies. Additional conditions will be established on a site-specific basis. All applicable laws, regulations, policies, and orders pertaining to NPS ROW permits including, but not limited to, 54 U.S.C, 100902, 36 CFR 14, Director’s Order 53, Reference Manual 53B (RM 53B), and Management Policies 2006 must be considered when evaluating any applications for new ROWs or renewals and amendments of existing ROW permits. Mitigation measures will also be in effect as applicable.

**Table 2:** Conditions and Parameters that will be in effect when considering applications for telecommunications ROW permits for commercial providers or National Telecommunications and Information Administration (NTIA) authorized non-commercial users. Conditions and parameters include those that are established under this plan as well as requirements from the 2006 NPS Management Policies and other applicable NPS policies that will be in effect regardless of whether the park implements a telecommunications plan.

<p><b>Conditions and parameters required in accordance with the 2006 NPS Management Policies, Section 8.6.4.3 Telecommunications Sites, including policy amendments approved November 20, 2020</b></p>	<p><b>Additional conditions and parameters under Glacier National Park’s proposed Comprehensive Telecommunications Plan</b></p>
<p>Requests to site non-NPS telecommunication antennas and related facilities on NPS lands will be considered in accordance with the Telecommunications Act of 1996 (47 USC 332 note), which authorizes but does not mandate a presumption that such requests be granted absent unavoidable conflict with the agency mission, or the current or planned use of the property or access to that property.</p>	<p>1. Applications must include a detailed analysis of potential alternative service locations outside the park to confirm that, in order to provide service, telecommunications infrastructure and equipment are necessary inside the park boundary.</p> <p>The requirement outlined in Management Policies, Section 8.6.4.1 and Director’s Order 53, Section 10.2 Rights-of-Way that a right-of-way “may be issued only pursuant to specific statutory authority, and generally only if there is no practicable alternative to use of NPS lands” will also apply. The guidance for conditions when a special use permit will not be issued which is found in Director’s Order 53, section 4. Policy Guidance, shall also apply.</p>
<p>Superintendents will accept an application for a telecommunications site only when the application includes or is accompanied by an application for receiving or transmitting equipment from a properly licensed provider. Some telecommunications services do not require any license to operate, such as Wi-Fi. However, other telecommunications services, such as cellular antennas, require a license from the Federal Communications Commission to operate. If the telecommunications service requires a license to operate, then that license must be provided with the application.</p>	<p>2. Commercial telecommunications infrastructure, equipment, and coverage will only be approved in the developed areas identified in this Comprehensive Telecommunications Plan/EA. Those areas are the Two Medicine, Many Glacier, Rising Sun, and Lake McDonald Lodge developed areas as shown in Figure 8.</p>
<p>The manner in which the park will manage the technology and related facilities should be addressed in an appropriate planning document.</p>	<p>3. Alternative technologies with minimal impacts to park resources (low visibility, for example) will be given foremost consideration, such as microcell sites or similar technology.</p>
<p>As with other special park uses, telecommunication proposals must not include uses that would cause unacceptable impacts.</p>	<p>4. The park will determine backhaul methods (the method used to move a signal between the infrastructure site and the provider’s main system). Fiber optic cable will be the preferred backhaul method. Microwave (wireless point-to-point) or other technologies (e.g. satellite) may be permissible until fiber is available. Commercial providers initially approved to use microwave or other technologies for backhaul will be required to transition to fiber optic cable once it becomes available. The exception to this could be if another backhaul method is identified that will have less environmental impact than fiber.</p>
<p>When considering whether to approve, deny, or renew permits, superintendents will:</p> <ul style="list-style-type: none"> <li>• hold preliminary meetings with facility applicants to discuss pending applications and policy and procedural issues and other NPS concerns;</li> <li>• conduct NEPA and NHPA analysis expeditiously and consistent with all applicable statutes and Director’s Order No. 12, and within timetables established pursuant to Director’s Order No. 53;</li> <li>• consider the potential benefit of having telephone access to emergency law enforcement and public safety services; and</li> <li>• consider whether the proposal would cause unavoidable conflict with the park’s mission, in which case the permit will be denied.</li> </ul>	<p>5. Technologies that do not require additional vertical infrastructure (i.e. towers, poles, or masts) will be given foremost consideration, or existing and appropriate NPS vertical infrastructure (such as light poles) will be used whenever possible. (For example, microcell site technology requiring no new towers, poles, or masts will be used for the distribution of a cellular or data signal.)</p> <p>The height and overall visible footprint of any new commercial telecommunications infrastructure, including any vertical infrastructure (for microwave backhaul, for example), will be of the smallest size and scale necessary (i.e. the least visible) and/or will be proportional to or less than that of existing infrastructure and development. Given the scale of existing infrastructure in the areas where connectivity will be considered, new infrastructure taller than 80 feet will not be permitted; 80-foot tall infrastructure will only be approved if 80 feet is proportional to the height of existing infrastructure at the site in question.</p>

<p><b>Conditions and parameters required in accordance with the 2006 NPS Management Policies, Section 8.6.4.3 Telecommunications Sites, including policy amendments approved November 20, 2020</b></p>	<p><b>Additional conditions and parameters under Glacier National Park’s proposed Comprehensive Telecommunications Plan</b></p>
<p>Superintendents will evaluate the entire footprint of new facilities when evaluating requests (including new electrical lines, communications lines, and vehicle access).</p>	<p>6. Equipment poles, masts, or other vertical infrastructure will be sited at or near existing communication sites whenever feasible (e.g. provided doing so will not interfere with communications capabilities supported by existing telecommunications infrastructure or, if near non-coverage areas, does not result in excessive signal spillover).</p>
<p>Superintendents will avoid or minimize potential impacts of current and future telecommunications facilities by ensuring that the facilities and their supporting infrastructure:</p> <ul style="list-style-type: none"> <li>• are located where they would have the least impact on park resources and values;</li> <li>• are not located in scenic, historic, and/or sensitive areas integral to the park’s mission;</li> <li>• include the maximum potential for future co-location.</li> </ul>	<p>7. Providers will be required to provide a visual analysis that evaluates impacts to viewsheds (i.e. identifies areas from which the infrastructure will be visible) before the approval of any vertical infrastructure (e.g. equipment poles, masts, or towers).</p>
<p>Superintendents will require the best technology available. For example, consideration should be given first to co-locating new facilities, constructing towers that are camouflaged to blend in with their surroundings, and installing micro-sites. New traditional towers (i.e. monopole or lattice) should be approved only after all other options have been explored and should not be visible from any significant public vantage point.</p>	<p>8. Lights will not be permitted on any communications infrastructure.</p>
<p>As appropriate, superintendents should consider making use of available interpretive media to caution park users of the limited (or nonexistent) cellular service and their personal responsibility to plan accordingly.</p>	<p>9. Prior to installation, the permittee will provide documentation that demonstrates that the placement of equipment, the azimuths of antennas, and the technology used will minimize signal spillover into the park’s recommended wilderness and Backcountry Zone (as identified in Glacier’s 1999 General Management Plan) and along park roadways to the extent technologically feasible while providing coverage within approved areas. If microcell sites are permitted, antennas will be directional and will be oriented to direct coverage only to approved coverage areas. If monitoring determines that spillover is occurring beyond what is approved in the right-of-way permit, providers will be required to reduce signal strength.</p>
	<p>10. The amount of commercial telecommunications infrastructure and equipment (e.g. the number of microcell sites or other technologies) will be the minimum necessary to service approved coverage areas.</p>
	<p>11. Commercial telecommunications infrastructure and equipment will be:</p> <ul style="list-style-type: none"> <li>• designed to blend with surroundings (painted, for example) to minimize visual effects to National Register listed or eligible properties and other resources;</li> <li>• mounted to existing infrastructure whenever doing so is feasible and least intrusive;</li> <li>• sited indoors whenever feasible (such as WAPs, for example); and</li> <li>• the smallest size available and technologically feasible. Microwave or satellite dishes will not exceed 36 inches in diameter. WAP devices will not exceed 12-inches in diameter or height.</li> </ul>
	<p>12. Buried pipe or cabling will be installed in existing road or utility corridors or other previously disturbed ground.</p>

<p><b>Conditions and parameters required in accordance with the 2006 NPS Management Policies, Section 8.6.4.3 Telecommunications Sites, including policy amendments approved November 20, 2020</b></p>	<p><b>Additional conditions and parameters under Glacier National Park’s proposed Comprehensive Telecommunications Plan</b></p>
	<p>13. Multiple microcell sites, WAP sites, or other technologies may be established within a single approved coverage area. If multiple sites are approved, they will be interconnected by fiber or copper cabling, which will follow existing road or utility corridors whenever possible.</p>
	<p>14. More than one commercial provider could provide telecommunication services, but multiple providers will be required to co-locate on shared infrastructure to minimize the amount of telecommunications infrastructure in the park. If more than two commercial providers request permits for cellular technology, the park may require utilization of individual microcell sites using a distributed antenna system (DAS), meaning the providers will share a single antenna array (i.e. a single wrap of multiple antennas). This will only be feasible if the providers use a common frequency range. If multiple cellular providers are permitted at a given location, they will be required to share the backhaul method; if backhaul is fiber, multiple count fiber will be used so each provider has their own strand of fiber.</p>
	<p>15. Commercial telecommunications equipment will not be co-located on NPS telecommunications infrastructure.</p>
	<p>16. Interference and intermodulation studies in accordance with Director’s Order No. 15 will be required to ensure all new sites and equipment installations within the park do not negatively impact existing NPS telecommunications equipment.</p>
	<p>17. If and when the park approves and issues ROW permits, except as provided in 36 CFR 14.26(c)(1), the commercial telecommunications company or other telecommunications use permittee will be responsible for building and maintaining the related infrastructure according to the terms and conditions of the permit and will pay a fair market value for the use of federal land and the NPS costs for monitoring the permitted activity.</p>
	<p>18. The park’s Road Opening and Closing Directive 7.3, including seasonal road closures, will remain in effect. Roads closed during winter will not be plowed for vehicle access for maintenance or repair of commercial telecommunications sites. Commercial telecommunications providers will access closed roads in the same manner that park staff access the same areas; i.e. if NPS administrative access is limited to non-motorized access (hiking/skiing/snowshoeing, for example), then commercial providers will also use non-motorized access.</p>
	<p>19. Installation of commercial telecommunications infrastructure and equipment will require site-specific review in compliance with NEPA, the National Historic Preservation Act (NHPA), and other applicable laws.</p>
	<p>20. Applicants for right-of-way permits for commercial telecommunications equipment will be required to provide an electromagnetic radiation emissions study (as authorized by Director’s Order 15) to ensure the equipment will not exceed limits deemed safe for human exposure.</p>



## **Rationale**

The NPS has selected Alternative A because it best meets the project purpose to:

- Correct deficiencies in NPS telecommunications systems that support park operations.
- Allow a flexible response to changing communication needs and technological advances.
- Establish conditions and parameters for cellular and/or Internet connectivity in appropriate developed areas for both public and NPS use while minimizing the visibility of infrastructure, signal spillover outside identified coverage areas (including within recommended wilderness), and other impacts to park resources.

## **Changes to the Selected Action**

The following adjustments have been made to the text of Alternative A (the selected action) since the plan/EA was released for public review.

- Reasons for replacing the job-box on Looking Glass Hill with an equipment shelter are further explained. Due to recent developments, moving the repeater outside the park may be possible before replacing the shelter.
- Considerations necessary to avoid installation of an NPS radio repeater on Elk Mountain are further explained, as well as factors that could lead to additional permanent repeaters in recommended wilderness.
- Text has been added to clarify that, depending on site specific review, commercially provided cellular and/or Internet coverage within the developed areas at Many Glacier, Rising Sun, Two Medicine, and Lake McDonald Lodge could be point specific.
- The feasibility of certain mitigation measures has been clarified.
- Additional mitigation measures have been added.

Except for the inclusion of additional mitigation measures, none of the changes alter how the selected action will be implemented. Minor points of clarification have been made to the impacts analysis, including a brief discussion of impacts to the audible landscapes of historic districts and a comparison between the number of radio repeaters that may be installed in recommended wilderness under the plan and the number of existing installations. None of the changes have affected the overall conclusions of the analysis of impacts to park resources. Text changes to the plan/EA are presented in Appendix C of this document.

## **MITIGATION MEASURES**

The selected action incorporates the mitigation measures listed on pages 30-33 of the plan/EA and in Appendix A of this document.

## **FINDING OF NO SIGNIFICANT IMPACT**

As noted in the introduction, the NPS prepared the Comprehensive Telecommunications Plan EA and FONSI under the 1978 CEQ regulations. As a result, the NPS applied the ten criteria from those regulations (formerly 40 CFR Section 1508.27) for determining whether the selected action will have a significant effect on the human environment. Of those ten criteria, the following were weighed most heavily in consideration and deemed relevant to this plan:

- 1508.27(b)(1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the federal agency believes that on balance the effect will be beneficial.
- 1508.27(b)(2) The degree to which the proposed action affects public health or safety.
- 1508.27(b)(3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetland, wild and scenic rivers or ecologically critical areas.

- 1508.27(b)(7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.
- 1508.27(b)(8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.
- 1508.27(b)(9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

Given the environmental impacts described in the EA, the NPS has determined there will be no significant direct, indirect, or cumulative impacts under any of the above criteria. As described in the EA, the selected action has the potential for adverse impacts on visual resources, historic districts, recommended wilderness, natural soundscapes, grizzly bears, Canada lynx, wolverine, and visitor use and experience. However, as demonstrated below, significant adverse impacts will not occur, and impacts that do occur will be minimized through the mitigation measures described in the EA and Appendix A.

No effects were identified relevant to the remaining factors for significance, so they are not considered in this FONSI.

**Impacts include:**

Visual resources at historic properties include rustic architecture and design elements that represent Glacier's history of tourism and development. At project sites in recommended wilderness, the visual landscape is undeveloped, naturally picturesque, and representative of the park's outstanding geologic and ecological resources. The selected action will result in some adverse impacts to visual resources due to visibility of telecommunications equipment and infrastructure. The majority of impacts will not appreciably change existing visual conditions because they will occur at sites where NPS telecommunications equipment is already present or will not be out of context with existing development. GIS-based viewshed modeling shows little increase in the visibility of four new NPS towers. Replacing three 30 to 40-foot equipment poles with 40-foot lattice frame towers at the Many Glacier and Goat Haunt Ranger Stations and Many Glacier Entrance Station will result in a 1.0 percent increase in visibility at the Many Glacier Ranger Station and no change in visibility at the Goat Haunt Ranger Station and Many Glacier Entrance Station. Replacing the existing 40-foot tower with an 80-foot lattice frame tower at the Chief Mountain POE will result in a 9.5 percent increase in visibility of the tower. Modeling indicates that the addition of a 30-foot mast for a radio repeater at the Loop on the Going-to-the-Sun Road will result in a 3.9 percent increase in visibility compared with the existing comfort station. New and/or additional telecommunications equipment at other sites will not meaningfully change visual resources because existing buildings will detract from any change in visibility and/or telecommunications infrastructure and equipment is already present. Thinning trees at the Many Glacier Entrance Station and the Chief Mountain POE will reduce visual screening but will not alter the overall visual character of either site since the surrounding areas are well-forested.

Visual impacts will be of greater intensity at Looking Glass Hill, Elk Mountain, and other undeveloped sites since any radio repeater infrastructure will be out of context with the existing undeveloped visual character. Impacts from the upgrade to the repeater shelter at Looking Glass Hill will be temporary until the repeater can be moved outside the park; recent developments indicate this may occur without the need to first upgrade the shelter at the current site. GIS-based viewshed modeling indicates that repeater infrastructure at Elk Mountain (which may not be installed) will be visible over an area of approximately 20.0 square kilometers; of this, about 2.6 square kilometers will be outside the park boundary, leaving the mast visible from about 17.4 square kilometers inside the boundary. The repeater may not be discernable at times due to the visual dominance of the surrounding landscape and will be less apparent from lower elevations due to screening from forested areas. The area of impact will be negligible when compared

with undiminished surrounding viewsheds and the amount of undeveloped land in the park (over 3,753 square kilometers of the park is recommended wilderness, essentially without visible signs of modern human occupation), and most of the park's undeveloped visual landscape will remain unaffected. Impacts from SOA repeaters will be temporary and of low intensity because the equipment is small in scale and will be installed on a temporary basis. Impacts from three additional permanent repeaters in undeveloped areas, if installed, will be similar to those described for Elk Mountain, with higher visibility in less heavily forested areas but little change to the overall visual character of the park's undeveloped scenic landscape given the amount of undeveloped terrain in the park.

For commercially provided connectivity in four developed areas (Many Glacier, Rising Sun, Two Medicine, and Lake McDonald Lodge), conditions and parameters (such as restrictions on tower height and the size of satellite dishes, designing infrastructure and equipment to blend with surroundings, and using the smallest size technologies available, among others) will minimize the visibility of commercial equipment and infrastructure such that existing visual resources and values will continue to define the visual character of these areas. When the impacts of the selected action are combined with those of past, present, and reasonably foreseeable actions (such as existing telecommunications infrastructure and other visible administrative installations), the cumulative impacts to visual resources will continue to be adverse, with other actions contributing the majority of the impacts. Therefore, the incremental impacts of the selected action will contribute slightly to but will not substantially change visual resource impacts that are already occurring.

Project sites are associated with four of the park's six National Historic Landmarks (NHLs), ten historic districts listed on the National Register of Historic Places (NRHP), five properties recommended for listing as historic districts, and two properties that have not been evaluated but are treated as eligible for listing until they can be evaluated (in accordance with Section 110 of the NHPA (B) and 63 FR 20496, The Secretary of the Interior's Standards and Guidelines for Federal Agency Historic Preservation Programs Pursuant to the NHPA, Standard 6, Guideline (d)). The addition of telecommunications infrastructure and equipment to historic districts will add non-historic elements to historic settings. The scale and intensity of the impact will be small, however, because there will be no removal or alteration of historic or contributing structures, elements, or features; mitigation measures and conditions and parameters will be in place to minimize the visibility of infrastructure and equipment; and, except for the Sherburne Ranger Station Historic District and Glacier Route 3, where removing 15-20 trees will reduce vegetation and slightly increase visibility, existing vegetation will continue to provide visual screening. Intermittent noise from visitors using connected devices will have low audibility compared with that of vehicle traffic and other noises typical of developed areas and will not differ appreciably from existing conditions. Historic districts will retain their overall rustic character and appearance, and there will be no degradation of the architectural and historical features that contribute to the historic districts' significance, no alteration of elements that make the properties eligible (or potentially eligible) for listing on the NRHP, and no changes that will undermine NHL designations. Cumulatively, past, present, and reasonably foreseeable actions (such as existing telecommunications infrastructure and other visible administrative installations, and rehabilitation of park roads and other infrastructure), will continue to impact historic districts from the alteration or removal of features or elements of historic settings or environments. When the impacts of the selected action are combined with those of past, present, and reasonably foreseeable actions, the incremental impacts of the selected action will contribute slightly to but will not substantially change impacts to historic districts/properties that are already occurring.

In general, project sites in recommended wilderness are undeveloped except for historic structures and administrative and recreational facilities (e.g. a lookout on Mt. Brown, backcountry campgrounds, etc.). If implemented, the shelter upgrade at Looking Glass Hill and installation of radio repeaters at Elk Mountain and possibly three other sites (possibly the Belly River, Nyack, or Two Medicine areas, or on Mt. Brown), as well as any installation of SOA repeaters, will adversely impact the undeveloped quality of recommended wilderness and opportunities for solitude because the infrastructure will be visible signs

of improvement and human habituation. Visibility of the infrastructure will also impact scenic features of value if the sites are later identified as such. At Looking Glass Hill, impacts will not represent a substantial change from existing conditions and will be temporary until the repeater can be moved to a location outside the park; recent developments indicate this may be possible without the need to first replace the shelter at the current site. At Elk Mountain (where a repeater will only be installed if other actions do not improve radio communications along the park's southern border), impacts will be long-term since the infrastructure could be onsite indefinitely. Visibility of the mast at Elk Mountain will affect less than 0.5 percent of the more than 3,753.6 square kilometers of recommended wilderness in the park; therefore, impacts will not meaningfully affect wilderness character in the park as a whole. Impacts at Elk Mountain will also not be irretrievable since the infrastructure will not require a foundation and, therefore, could be removed without lasting evidence. Up to three additional permanent repeaters may or may not be installed in recommended wilderness, depending on other improvements to radio communications, changes in NPS operations in areas with limited radio coverage, available technology, and consideration of options outside of recommended wilderness. If installed, impacts from up to three additional permanent repeaters will be similar to those from the repeater at Elk Mountain in that they will likely only be apparent from a small percentage of recommended wilderness and will not be irretrievable. SOA repeaters will be removed when no longer needed and will not be easily seen from a distance due to their small size.

The possible addition of up to four permanent repeaters and three SOA repeaters will only slightly increase the number of similar installations in the park's recommended wilderness. Currently, there are an estimated 356 installations in Glacier's recommended wilderness that are similar in type, scale, and level of impact to a radio repeater (e.g. seasonal use cabins, lookouts, barns, fire caches, boat houses, outhouses and low-rider toilets, woodsheds, hitchrails, food-hanging poles, bridges, hiker shelters, weather stations, and two existing radio repeaters). Given the number of existing installations, the addition of up to four permanent repeaters and three SOA repeaters will not notably change the overall degree of impact to wilderness character from installations. SOA repeater installations will be temporary, and the plan includes a mitigation measure whereby, if additional permanent repeaters are installed, the park will attempt to avoid a net gain of installations in recommended wilderness by considering whether another installation can be removed elsewhere if possible (e.g. if technically feasible and doing so will not interfere with operations).

Helicopter flights to transport repeater equipment that cannot be packed in on foot or with livestock will adversely impact the undeveloped quality, opportunities for solitude, and the natural condition. Impacts from helicopters will occur intermittently over an estimated one-day period for each site, ending once sling load operations are complete except for infrequent adverse impacts from any subsequent flights to replace equipment (possibly requiring a single flight every four or five years, estimated). The park will make every effort to keep helicopter flights for this plan within the park's 50-flight limit and combine flights with other administrative flights.

The chance of signal spillover into recommended wilderness from commercial telecommunications infrastructure in four developed areas (the Many Glacier, Rising Sun, Two Medicine, and Lake McDonald Lodge developed areas) will be low since conditions and parameters will require commercial providers to minimize spillover (Table 2, condition no. 9), and due to the distance between the identified coverage zones and the 1974 recommended wilderness boundary (nearest points between coverage zones and the recommended wilderness boundary are 30 meters at the west edge of the Many Glacier/Swiftcurrent developed area, 90 meters at the north edge of the Rising Sun developed area, 85 meters at the northwest end of the Two Medicine developed area, and 500 meters at the east edge of the Lake McDonald Lodge developed area). When the impacts of the selected action are combined with those of past, present, and reasonably foreseeable actions (such as existing NPS radio repeaters at three sites in recommended wilderness and other administrative installations, including weather stations and fish passage barriers, for example), impacts to recommended wilderness will continue to be adverse, with other actions contributing the majority of the impacts. Therefore, incremental impacts under the selected

action will contribute to but not meaningfully change impacts to wilderness character that are already occurring.

Because the selected action will affect wilderness character and includes uses prohibited under Section 4(c) of the Wilderness Act (installations and helicopter landings) within recommended wilderness, a minimum requirements analysis (MRA) is required by NPS policy (NPS Management Policies, 6.3.5). An MRA and Minimum Requirements Decision Guide (MRDG) has been prepared and approved. Due to the programmatic nature of actions that may occur in recommended wilderness, the MRA/MRDG is programmatic. The MRA/MRDG determined that taking action to improve the park's radio system is necessary to preserve the natural condition of wilderness character and other features with historical, geological, ecological, scientific, and educational value, and that an alternative that includes the option to install radio repeaters best meets the need for action (see MRA/MRDG posted to the NPS Planning, Environment, and Public Comment (PEPC) website with this FONSI). If review prior to project implementation identifies impacts that exceed those identified in the programmatic MRA/MRDG, another MRA/MRDG will be prepared.

Natural soundscapes at project sites in or near developed areas may include people talking and noise from vehicles, traffic, and maintenance activities. Depending on the location, other sources of noise may include motorboats or railroad traffic. Natural sounds dominate at Looking Glass Hill and Elk Mountain, but both of these sites are near the park boundary where the natural soundscape is likely interrupted by noise from adjacent highways and, at Elk Mountain, the Burlington Northern Railroad. Project noise in developed areas will be audible but will not dramatically change existing conditions due to vehicle traffic and other prevalent noise. At Looking Glass Hill, Elk Mountain, Apgar Mountain, and other undeveloped sites, noise from helicopter long-line sling load operations will interfere with the quiet, stillness and natural background sounds that characterize undeveloped areas. Highest intensity impacts from helicopters will be temporary, ceasing once sling load operations are over (likely within a single day at each site) except for infrequent noise from any subsequent flights to replace equipment (possibly a single flight every four or five years). Since helicopter noise will be of short duration, it will not cause lasting effects or meaningfully change the overall character of natural soundscapes at undeveloped sites, and soundscapes in the vast majority of the park will remain unaffected. In the four developed areas where commercially provided cellular or Internet connectivity will be permitted, ringtones, conversations on speaker, or audio from music or videos may slightly alter natural soundscapes. But impacts will be negligible because this type of noise will have low audibility, will be sporadic if not infrequent, and will not appreciably differ from the sound of people in conversation or using devices with previously downloaded content. When the impacts of the selected action are combined with those of past, present, and reasonably foreseeable actions (such as administrative and guided motorboat use, Burlington Northern Santa Fe Railway avalanche mitigation, trail and backcountry campground maintenance), the cumulative impacts to natural soundscapes will continue to be adverse, with other actions contributing the majority of the impacts. Therefore, the selected action will incrementally increase but will not notably change the number and degree of adverse impacts to natural soundscapes already occurring.

Looking Glass Hill, Elk Mountain, Apgar Mountain, and the Two Medicine communications tower are within areas established as grizzly bear Management Situation 1 as directed by the USFWS 1993 Grizzly Bear Recovery Plan, where management decisions favor the needs of the grizzly bear (NPS 2010, NPS 2010a). The remaining project sites are within areas established as Management Situation 3, where grizzly bear habitat maintenance and improvement are not the highest management considerations and grizzly bear presence is actively discouraged (NPS 2010, NPS 2010a). These sites are, however, surrounded by Management Situation 1 areas. With the exception of the Polebridge Ranger Station and Lake McDonald Lodge, project sites are within critical habitat for Canada lynx. Wolverine habitat exists at remote project sites; wolverines may also use habitat in the vicinity of developed project sites. Actions in developed areas will not be expected to impact grizzly bears, Canada lynx, or wolverine beyond existing levels of human influence due to high levels of human activity, mitigation measures at Many

Glacier and Goat Haunt, and because project activities will be intermittent and too short in duration to have lasting effects on how the species use the areas. Helicopter long-line sling load operations in undeveloped areas will have comparatively more potential for impacts, but the highest intensity effects will end once operations are over (likely within a single day) except for infrequent subsequent flights as needed (possibly one flight every four to five years, estimated). Impacts will occur at the individual level, with no population effects and no effects to overall species distribution. Commercially provided cellular or Internet connectivity in identified developed areas is not expected to impact grizzly bears, Canada lynx, or wolverines beyond existing levels of human influence due to the relatively high levels of ongoing visitor activity in these areas, including vehicle traffic. When the impacts of the selected action are combined with those of past, present, and reasonably foreseeable actions (such as NPS administrative flights, administrative and guided motorboat use, Burlington Northern Santa Fe Railway avalanche mitigation, trail and backcountry campground maintenance, facility upgrades and repairs), the cumulative impacts to grizzly bears, Canada lynx, and wolverine will continue to be adverse, with other actions contributing the majority of the impacts. Therefore, the selected action will contribute to but not appreciably change the level of adverse impacts already occurring to these species.

The project area for the plan includes some of the most popular visitor use areas in the park, including the Many Glacier, Two Medicine, Rising Sun, and Lake McDonald Lodge developed areas. Undeveloped sites, including Looking Glass Hill and Elk Mountain, are associated with several popular hiking trails. Effects to visitor use and experience will primarily be beneficial as improvements to NPS telecommunications support park staff in service of visitor needs. At project sites in developed areas, noise from heavy machinery and/or chainsaws may disturb visitors at or near project sites, but noise will not occur for more than one to two days at most sites and will end once a given project is complete. Except for temporary closures of construction areas (possibly one to three days at most sites, not expected to exceed a week to ten days), project activities will not alter visitors' ability to use project sites. Impacts from changes in the visibility of NPS telecommunications equipment will be slight in developed areas because the additional equipment will not appreciably change existing conditions or be out of context with existing development. At undeveloped areas (Looking Glass Hill, Elk Mountain, and other undeveloped areas where SOA repeaters or additional permanent repeaters may be installed), infrastructure and noise from helicopter flights may disrupt visitors' experience. But since impacts from helicopter noise, SOA repeaters, and infrastructure at Looking Glass Hill will be temporary, and because the vast majority of undeveloped areas in the park will remain unaffected, the visitor experience will not be meaningfully affected. If approved in the Many Glacier, Two Medicine, Rising Sun, and Lake McDonald Lodge developed areas, commercially provided connectivity may adversely impact visitors seeking disconnected spaces. But most of the park will remain without coverage, since the park is over one million acres in size and, if blanket coverage is provided throughout the entire developed footprint of each of the four developed areas, coverage will only be expected to be available over an area of approximately 150-160 acres. Coverage areas could be smaller if coverage is point-specific instead of throughout each developed footprint (precise coverage delineations within each of the four developed areas cannot be determined until project-level review). In areas where coverage is available, intermittent noise from the use of devices will not differ appreciably from the sound of offline conversations or people using devices with previously downloaded content. When the impacts of the selected action are combined with those of past, present, and reasonably foreseeable actions (such as existing telecommunications and administrative infrastructure, trail and campground maintenance, facility upgrades/repairs, and area closures), cumulative impacts to visitor use and experience will continue to be adverse, with other actions contributing the majority of the impacts. Therefore, the selected action will contribute to but will not meaningfully increase cumulative impacts to visitor use and experience.

The selected action will improve NPS telecommunications systems that support park operations, thus enhancing the park's ability to disseminate information about traffic, road conditions, closures, wildfires and other potential hazards with greater reliability. Improvements, including backup radio capabilities, will enhance visitor and personnel safety, support emergency response capabilities, and reduce the

occurrence of systemwide network failures. Improved utility monitoring and alarm reporting will reduce the risk of utility system failures and outages, including for water, sewer, and power. Enabling remote access to digital video recording systems will enhance personnel safety. Allowing commercial coverage in four developed areas will enable visitors, concessioners, contractors, and others to communicate during an emergency, and will enhance emergency response capabilities for the NPS, search and rescue entities, and emergency medical services personnel.

The NPS coordinated with the USFWS Montana Ecological Services Office to ensure compliance with section 7 of the Endangered Species Act. On February 24, 2020, Glacier National Park notified the USFWS of public scoping for the plan/EA. On May 26, 2021, the park submitted a biological assessment to the USFWS and requested concurrence with determinations of “may affect, not likely to adversely affect” the grizzly bear and Canada lynx, and “no effect” to Canada lynx critical habitat, bull trout or bull trout critical habitat, meltwater lednian stonefly, western glacier stonefly, Spalding’s campion, or the proposed whitebark pine. On June 16, 2021, the USFWS concurred with the park’s determinations.

As defined in 36 CFR 800.2(d), the NPS used NEPA public involvement requirements to fulfill National Historic Preservation Act (NHPA) Section 106 requirements for public involvement. In February of 2020, the park sent hard copies of the scoping document for the plan/EA to the Tribal Historic Preservation Officers (THPOs) for the Blackfoot Nation and the Confederated Salish and Kootenai Tribes (CSKT). Neither the Blackfoot Nation or the CSKT raised concerns about the proposed actions during initial consultation meetings in 2020. On June 10, 2021, the park sent the plan/EA to both THPOs for review and comment concurrent with public review. Ongoing consultation will continue with the Blackfoot Nation and CSKT as site-specific treatments are identified. This was confirmed during a phone call on August 9, 2021 between park cultural resources staff and the Blackfoot Nation THPO. The park will notify the Blackfoot Nation THPO of site-specific actions as they are developed and describe how treatments will be mitigated, and the THPO will review and provide concurrence or non-concurrence and/or suggestions. The CSKT THPO did not comment on the plan/EA during the comment period but will be notified of site-specific actions in a similar manner.

In February of 2020, the park sent the scoping document for the plan/EA to the Montana State Historic Preservation Office (SHPO). On June 10, 2021, the park sent the plan/EA to the SHPO for review and comment concurrent with public review. Additional consultation with the Montana SHPO will be initiated for each action under the plan upon further design, as details necessary for Section 106 of the NHPA are available; the SHPO confirmed and agreed to this approach in correspondence with park cultural resources staff on June 23, 2021. For each action, the park anticipates a determination of “historic properties affected, no adverse effect” under Section 106 of the NHPA. Any adverse impacts will be mitigated in consultation with the SHPO.

### ***References***

National Park Service (NPS), US Dept. of the Interior. 2010. Glacier National Park bear management plan. Division of Science and Resources Management, Glacier National Park, West Glacier, MT. 6 pp.

\_\_\_\_\_. 2010a. Glacier National Park bear management guidelines. Division of Science and Resources Management, Glacier National Park, West Glacier, MT. 23 pp.

## **CONCLUSION**

As described above, the selected action does not constitute an action meeting the criteria that normally requires preparation of an environmental impact statement (EIS). The selected action will not have a significant effect on the human environment in accordance with Section 102(2)(c) of NEPA.

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

## APPENDIX A: MITIGATION MEASURES

The following impact mitigation measures will be part of the implementation of the plan and will be applied as relevant for both NPS and commercial telecommunications infrastructure and equipment (in addition to the conditions and parameters listed in Table 2 for commercial telecommunications infrastructure).

### **Wildlife, including federally listed threatened species and state listed species of concern**

- Project personnel will be trained on appropriate behavior in the presence of bears and other wildlife. Park regulations concerning proper storage of food, garbage, and other attractants will be strictly enforced.
- Project sites will be surveyed for bats and migratory birds in consultation with the park's wildlife staff. If migratory or nesting birds are present, thinning trees, brushing, or the removal of other vegetation and the use of heavy equipment will not occur until late summer or early fall, after the critical bird breeding and nesting period (between April 15 and August 15, possibly later in the summer depending on survey results). If bats are present, thinning trees will not occur until late summer or early fall when maternity roosts are no longer active. The park's wildlife staff will be consulted regarding timing for vegetation removal, tree thinning, and the use of heavy equipment.
- When thinning trees, trees that provide essential habitat (e.g. cavity nests or roost sites) for wildlife will be avoided (i.e. left standing). The park's wildlife staff will be consulted ahead of time to identify habitat trees.
- Project activities in the Many Glacier area will occur before the Many Glacier Road closes to public vehicle access (third week of November) to protect wildlife security in the road corridor.
- Project activities at the Goat Haunt Ranger Station project site will occur during the visitor use period to protect wildlife security when the area is closed for the season and human activity is low. Within this timeframe, work will not occur until late summer/early fall, after the critical bird breeding and nesting period, to avoid impacts to nesting bald eagles, waterbirds, and other migratory birds from noise during excavation with heavy machinery. The park's wildlife staff will be consulted regarding the appropriate timeframe for project activities.
- Project activities will occur during the daytime only; no night work will occur.
- During excavation, if trenches are to be left open overnight, trenches could be fenced and/or escape ramps will be constructed to avoid trapping reptiles, amphibians, and other wildlife.
- Any observation of grizzly bears or Canada lynx at project sites will be reported to the park's wildlife staff; appropriate action will be taken as necessary to reduce potential effects (hazing bears from developed project sites, for example).
- To protect birds from exposure to radiofrequency electromagnetic fields (RF-EMF), antennas will be mounted such that they are not immediately adjacent to structural features that may encourage birds to nest (e.g. platforms) and measures will be taken to discourage nesting (such as affixing netting or metal sheeting, for example) beneath eaves where antennas may be placed and some bird species may attempt to nest. These measures will be subject to technological feasibility and review under Section 106 of the NHPA.
- The following conservation measures as agreed to with the US Fish and Wildlife Service (USFWS) in the park's programmatic biological assessment for administrative flights (NPS 2018) are required for all park administrative flights and will be followed for any flights associated with this plan:



- Flights will follow suggested flight paths away from sensitive areas. Where possible, flight paths will follow road corridors and occur over developed areas.
- Flights will occur between one hour after sunrise and one hour before sunset from 1 May to 1 October to minimize impacts to grizzly bears. Grizzly bear denning activity peaks during den emergence from 15 March to 15 May and during den construction from 15 October to 15 November. No flights will occur over known dens or potential den habitat during den emergence and den construction. In order to conserve prey species, flights will avoid ungulate winter range from 15 January to 1 May when wintering ungulates are most vulnerable.
- Flights will be restricted to the 1 May to 1 October period, or minimized outside that period, to eliminate or minimize impacts to sensitive wildlife.
- The helicopter will fly at a minimum of 2000 feet above ground level (AGL) over the park whenever possible, depending on mountainous topography, weather, and except when it is landing or taking off or delivering supplies via long line.
- To minimize impacts on denning Canada lynx, no flights will be permitted over known den sites from 1 May to 1 September.
- Flight paths will be designated so as to avoid open alpine meadows, talus slopes, or other areas where grizzly bears congregate but do not have access to cover. If a low-level flight or landing is needed in an alpine area and a bear is seen, the flight will be postponed. If the flight cannot be postponed, the flight will keep a maximum distance from the bear(s).
- The flight manager will be responsible for coordinating with the park biologist to identify sensitive sites prior to the flight.

### **Vegetation and Soils**

- When thinning trees, sensitive tree species (e.g. whitebark pine, limber pine) will be avoided (i.e. left standing). The park's Vegetation Management Specialist will be consulted prior to thinning to identify sensitive species.
- In consultation with the park's Vegetation Management Specialist, enough large diameter trees (7 inches or more in diameter) will be left standing to maintain a representative age class.
- All trenching and other ground disturbing activities will occur in previously disturbed areas, such as roads and utility corridors, whenever possible (e.g. wherever previously disturbed ground is present and within feasible proximity to infrastructure that must be connected).
- Trench paths will be selected in consultation with the park's Science and Resources Management staff, including the Vegetation Management Specialist, in order to identify paths that will have the least impact on vegetation and soils.
- Project sites will be surveyed for rare plants before work begins; locations of rare plants will be marked and avoided.
- Foundations will be poured on-site whenever feasible (e.g. if equipment and materials can be transported to a given site) to minimize the size of the hole that must be dug for the foundation (rather than bringing pre-cast footers to the site, for example, which require a hole large enough for placement with machinery).
- When selecting equipment for excavating foundations and trenches, equipment that causes the least ground disturbance will be used (e.g. tracked machinery, which causes less disturbance than wheeled vehicles).

- Vertical infrastructure will be self-supporting (i.e. no guy wires) whenever feasible to minimize ground disturbance (e.g. if the size of the foundation and the height of the tower can be such that the additional stabilization provided with guy wires is not necessary).
- Areas of disturbance will be rehabilitated and restored (e.g. re-seeded with hand tools) through consultation with the park's Vegetation Management Specialist. Site-specific restoration needs will be developed as needed for each site where ground disturbance will occur. Only seeds and plants originating from the park or from approved sources will be used in restoration activities.
- When trenching, empty conduit will be laid whenever feasible (e.g. provided doing so will not interfere with existing utility lines, or the ability to access the lines for repair, for example) for the possible installation of fiber optic cable in the future; this will reduce the need to re-open trenches if installing fiber.

### **Natural Soundscapes**

- Machinery that produces the least audible noise possible will be used (during excavation and tower placement, for example).

### **Visual Resources**

- All new towers will be painted or otherwise disguised to blend with surroundings and minimize reflectivity from sunlight. If paint is used, paint that is approved for galvanized towers must be used so that it does not peel, slough, or slip off, and to ensure a non-slip climbing surface for technicians.
- All other telecommunications infrastructure and equipment (such as equipment shelters, antennas, masts, poles, and the like) will also be painted or otherwise disguised to blend with surroundings and minimize reflectivity whenever doing so will not interfere with the functionality of the equipment and is in accordance with manufacturer's specifications. (Sanding or bead-blasting, for example, could minimize reflectivity.)
  - Existing telecommunications infrastructure and equipment will likewise be painted or disguised during maintenance or other site visits.
  - Every effort will be made to obtain microwave dishes that are non-white in color (e.g. green or tan or otherwise colored to blend with surroundings). If non-white microwave dishes cannot be obtained from the manufacturer, dishes will be painted or otherwise disguised if in accordance with manufacturer's specifications.
- The park's Interdisciplinary Team (ID Team) will be consulted regarding materials and colors used to disguise towers and equipment.
- NPS telecommunications equipment will be located on existing NPS infrastructure whenever technologically feasible.

### **Recommended Wilderness**

- Before installing additional infrastructure or equipment in recommended wilderness, options outside of recommended wilderness will be thoroughly considered and implemented if feasible (e.g. if radio signals can be sufficiently propagated to necessary coverage areas from sites outside recommended wilderness or outside the park and, if outside the park, any necessary approvals from outside jurisdictions can be secured).
- If additional permanent repeaters are installed within recommended wilderness, the park will attempt to avoid a net gain of installations in recommended wilderness by considering whether another installation can be removed elsewhere if possible (e.g. if technically feasible and doing so will not interfere with other operations).

- For remote sites without road access, equipment that is small and lightweight enough for packing on foot or livestock will be selected whenever possible (e.g. when available and/or provided it meets technological objectives) to avoid helicopter flights or reduce the number of flights.
- Scene of Action (SOA) repeaters and additional permanent repeaters will be sited outside of recommended wilderness whenever possible (e.g. if radio signals can be sufficiently propagated to necessary coverage areas from sites outside recommended wilderness or outside the park and, if outside the park, any necessary approvals from outside jurisdictions can be secured).
- Communications equipment sited inside recommended wilderness will be painted or otherwise disguised to blend with surroundings as much as possible (see Visual Resources mitigation measures).
- To minimize administrative helicopter use in recommended wilderness, the park will make every effort to include helicopter flights for this plan within the 50-flight limit on administrative flights. Flights will be considered with other proposed administrative flights, coordinated with other projects, and combined with other hauling needs whenever possible.
  - Only flights needed for the initial installation of infrastructure could exceed the park's 50-flight limit; any later flights needed for maintenance or repairs (including equipment replacements) will be kept within the park's 50-flight limit.
- A heavy lift helicopter will be used whenever available to carry as much heavy material as possible and reduce the number of flights. More efficient, lower noise models will be preferred.
- All motorized use and new installations in recommended wilderness will be documented as part of the park's Wilderness Character Monitoring Plan, which tracks use in the park's recommended wilderness; documentation will be provided to the park's Wilderness Coordinator before the end of the calendar year.
- The park will monitor signal spillover into recommended wilderness from commercial coverage provided under this plan. Monitoring will likely occur at least once per year. If signal spillover is occurring beyond what is agreed to and approved, and/or is not consistent with the conditions and parameters established in this plan, the provider will be required to reduce signal strength.

**Cultural Resources (Archeological Resources, Historic Districts, Historic Structures)**

- Archeological surveys and, if necessary (e.g. if cultural materials are found), inventories, must be conducted in consultation with the park's Cultural Resources Specialist prior to:
  - any ground disturbance (such as digging trenches and foundations),
  - removal of trees, and
  - placement, installation, or construction of structures, including those placed on top of the ground (such as equipment shelters at Looking Glass Hill, Elk Mountain, or other undeveloped sites).
- Telecommunications infrastructure will be designed to avoid known archeological resources.
- Trench paths will be identified in consultation with the park's Science and Resources Management Staff, including the Cultural Resources Management Specialist, in order to avoid disturbance to archeological resources.
- Where necessary as determined from survey results, archeological monitoring will be required during ground disturbing activities in consultation with the park's Cultural Resources Management Specialist.
- If cultural resources are discovered during ground disturbing activities, ground disturbance will immediately cease, and the park's Cultural Resources Specialist will be notified. Discovered resources will be evaluated for their potential eligibility for listing in the National Register of

Historic Places (NRHP). Procedures will follow those outlined in 36 CFR 800, Protection of Historic Properties.

- A determination of eligibility (DOE) for listing in the National Register of Historic Places (NRHP) must be completed before an equipment shelter could be placed on Elk Mountain (due to the foundation remnant from an earlier lookout).
- Telecommunications equipment and infrastructure installed in historic districts will be located where it is least visible and will be designed to blend with surroundings (see Visual Resources mitigation measures).
- Telecommunications equipment and infrastructure will be of the smallest size available and technologically feasible.

#### **Night Skies**

- Lights will not be permitted on any towers or communications infrastructure.

#### **Visitor Use and Experience**

- If public connectivity is approved (only in one or more of the developed areas identified in this plan), the park will develop visitor messaging on how to minimize disturbance to others from cell phone use. Messaging may include suggestions to silence ringers, observe quiet times, and avoid streaming music and movies in public, for example, and reminders of the personal wellness benefits of enjoying the park while limiting personal use of cell phones and other devices.
- The park will monitor signal spillover from commercial coverage provided under this plan into areas identified as disconnected space and onto roadways. Monitoring will likely occur at least once per year. If signal spillover is occurring beyond what is agreed to and approved, and/or is not consistent with the conditions and parameters established in this plan, the provider will be required to reduce signal strength.

#### **Health and Human Safety**

- Electromagnetic frequency transmitting equipment will be placed far enough out of reach (e.g. atop masts, poles, or towers) and far enough away from human-use areas to avoid unsafe exposure.

## APPENDIX B: NON-IMPAIRMENT DETERMINATION

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

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

An action constitutes impairment when its impacts "harm the integrity of park resources or values, including the opportunities that otherwise will be present for the enjoyment of those resources or values" (NPS 2006, Section 1.4.5). To determine impairment, the NPS must evaluate the "particular resources and values that will be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts. An impact on any park resource or value may constitute impairment, but an impact would be more likely to constitute an impairment to the extent that it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- identified in the park's general management plan or other relevant NPS planning documents as being of significance (NPS 2006, Section 1.4.5).

Resources that were carried forward for detailed analysis in the EA, and for which a non-impairment determination has been made, include visual resources, historic districts, natural soundscapes, and grizzly bears, Canada lynx, and wolverine. Based on Glacier National Park's 1999 General Management Plan and 2016 Foundation Plan, which discuss fundamental resources and values for Glacier National Park, all of these resources are considered necessary to fulfill specific purposes identified in the establishing legislation; are key to the natural or cultural integrity of the park; and/or identified as a goal in relevant NPS planning documents. A non-impairment determination is not necessary for recommended wilderness and visitor use and experience because these impact topics are not generally considered park resources or values subject to the non-impairment standard (see NPS 2006, Section 1.4.6).

### Visual Resources

Telecommunications equipment and infrastructure will be visible but will not appreciably change existing visual conditions because effects will occur at sites where NPS telecommunications equipment is already present or will not be out of context with existing development. GIS-based viewshed modeling shows little increase in the visibility of new NPS towers (1.0 and 9.5 percent increase at the Many Glacier Ranger Station and Chief Mountain POE, respectively; no change at the Many Glacier Entrance Station or Goat Haunt Ranger Station). Radio repeater infrastructure at sites in recommended wilderness will be out of context with the undeveloped visual character. Impacts from the shelter upgrade at Looking Glass Hill will be temporary until the radio repeater can be moved outside the park; recent developments indicate that this may be possible without the need to first replace the shelter at the current site. GIS-based viewshed modeling indicates that repeater infrastructure at Elk Mountain (which may not be installed)

will be visible over an area of approximately 20.0 square kilometers; of this, about 2.6 square kilometers will be outside the park boundary. The repeater may not be discernable at times due to the visual dominance of the surrounding landscape and will be less apparent from lower elevations due to screening from forested areas. The amount of area impacted is negligible compared with undiminished surrounding viewsheds and the amount of undeveloped land in the park (over 3,753 square kilometers of the park is recommended wilderness, essentially without visible signs of modern human occupation), leaving most of the park's undeveloped visual landscape unaffected. Impacts from SOA repeaters will be temporary and of low intensity because the equipment is small in scale and will be installed on a temporary basis. Impacts from three additional permanent repeaters in undeveloped areas, if installed, will be similar to those for the repeater at Elk Mountain and will not substantially change the overall visual character of Glacier's undeveloped scenic landscape. For commercially provided connectivity in four developed areas (Many Glacier, Rising Sun, Two Medicine, and Lake McDonald Lodge), conditions and parameters (such as restrictions on tower height and the size of satellite dishes, designing infrastructure and equipment to blend with surroundings, and using the smallest size technologies available, among others; see Plan/EA Table 2 page 27) will minimize the visibility of commercial equipment and infrastructure such that existing visual resources and values will continue to define the visual character of these areas. Conditions and parameters will apply to any right-of-way permit for commercially provided cellular and Internet service. Cumulatively, the incremental impacts of the selected action will contribute slightly to but not substantially change visual resource impacts already occurring from past, present, and reasonably foreseeable actions. For these reasons, the NPS has determined that visual resources will remain present for the enjoyment of current and future generations, and the selected action will not result in impairment of visual resources.

### **Historic Districts**

The addition of telecommunications infrastructure and equipment to historic districts will add non-historic elements to historic settings. The scale and intensity of the impact will be small, however, because there will be no removal or alteration of historic or contributing structures, elements, or features; mitigation measures and conditions and parameters will be in place to minimize the visibility of infrastructure and equipment; and, except for the Sherburne Ranger Station Historic District and Glacier Route 3 where removing 15-20 trees will reduce vegetation and slightly increase visibility, existing vegetation will continue to provide visual screening. Historic districts will retain their overall rustic character and appearance, and there will be no degradation of the architectural and historical features that contribute to the historic districts' significance, no alteration of elements that make the properties eligible (or potentially eligible) for listing with the National Register of Historic Places (NRHP), and no changes that will undermine National Historic Landmark (NHL) designations. Cumulatively, the incremental impacts of the selected action will contribute slightly to but not substantially change impacts to historic districts already occurring from past, present, and reasonably foreseeable actions. Therefore, historic districts will be present for the enjoyment of current and future generations and the NPS has determined that the selected action will not cause impairment of historic districts.

### **Natural Soundscapes**

Project noise in developed areas will be audible but will not dramatically change existing conditions due to vehicle traffic and other prevalent noise. At undeveloped sites, noise from helicopter operations will interfere with the quiet, stillness and natural background sounds that characterize undeveloped areas. Noise impacts from helicopters will be temporary, ceasing once sling load operations are over (likely within a single day at each site) except for infrequent noise from any subsequent flights to replace equipment (possibly one flight every four to five years, estimated). Therefore, helicopter noise will not cause lasting effects or meaningfully change the overall character of natural soundscapes at undeveloped areas, and natural soundscapes in the vast majority of the park will remain unaffected. In the four developed areas where commercially provided cellular or Internet connectivity will be permitted, ringtones, conversations on speaker, or audio from music or videos may slightly alter natural soundscapes. But this type of noise will have low audibility, will be sporadic if not infrequent, and will

not appreciably differ from the sound of people in conversation or using devices with previously downloaded content. Cumulatively, the incremental impacts of the selected action will contribute slightly to but not substantially change impacts to natural soundscapes already occurring from past, present, and reasonably foreseeable actions. For these reasons, natural soundscapes will continue to be present for the enjoyment of current and future generations and the NPS has determined that the selected action will not result in impairment of natural soundscapes.

#### **Grizzly Bears, Canada lynx, and Wolverine**

Actions in developed areas will not be expected to impact grizzly bears, Canada lynx, or wolverine beyond current levels from human activity due to high existing levels of human activity, mitigation measures at Many Glacier and Goat Haunt, and because project activities will be intermittent and too short in duration to have lasting effects on how the species use the areas. Helicopter operations in undeveloped areas will have more potential for impacts to individuals in the immediate area, but the highest intensity effects will end once operations are over (likely within a single day at each site) except for infrequent subsequent flights as needed (possibly one flight every four to five years, estimated). Impacts will occur at the individual level, with no population effects and no effects to overall species distribution. Cumulatively, the incremental impacts of the selected action will contribute slightly to but not substantially change impacts already occurring to these species from past, present, and reasonably foreseeable actions. Therefore, these species will continue to be present for the enjoyment of current and future generations, and the NPS has determined that impacts from the selected action will not result in impairment of grizzly bears, Canada lynx, or wolverine.

#### **Conclusion**

In conclusion, based on the preceding analysis and in consideration of the park's purpose and significance, it is the Superintendent's professional judgment that these resources will continue to be present for enjoyment by current and future generations. Therefore, implementation of the selected action will not constitute an impairment of the resources or values of Glacier National Park.

## APPENDIX C – ERRATA SHEETS

### TEXT CHANGES AND RESPONSES TO PUBLIC COMMENT

The Comprehensive Telecommunications Plan/EA was released on the NPS PEPC webpage for a 30-day public review period from 10 June 2021 to 11 July 2021. The park sent notification letters to numerous public officials, regulatory agencies, and interested parties on the project mailing list, and distributed a press release to several media outlets. The park received 82 comment letters. The NPS reviewed and considered comments and suggestions, and incorporated several minor clarifications and modifications into the plan/EA, as described in this Errata. None of the commentors provided additional, new, or substantive information that changed the determination of effects in the EA.

### SUBSTANTIVE COMMENTS AND NPS RESPONSES

The NPS must consider all comments that are timely received, and the standard NPS practice is to respond to substantive comments submitted during the public review period of the EA. Substantive comments raise, debate, or question a point of fact or analysis. Comments that merely support or oppose a proposal or that merely agree or disagree with NPS policy are not considered substantive and do not require a formal response. This section summarizes comments received during public review of the EA that are substantive or otherwise warranted a response. Comments are condensed into the following concern statements, and a response to each statement is provided below.

#### NPS Radio Repeaters in Recommended Wilderness

- 1) **Concern Statement:** *The plan/EA proposes the installation of NPS radio repeaters in recommended wilderness and using helicopter support. This would violate NPS Management Policies Section 6.3.1, which require managing areas for the preservation of physical wilderness resources and wilderness character.*

**NPS Response:** NPS Management Policies (2006) does not prevent the NPS from considering and taking actions that impact wilderness character. As noted in section 6.3.10.1, administrative facilities may be allowed in wilderness if they are determined to be the minimum requirement necessary to carry out wilderness management objectives and are addressed in an appropriate planning document. A programmatic minimum requirements analysis and minimum requirements decision guide (MRA/MRDG) demonstrating the need for installations and the use of helicopters has been prepared and approved in accordance with NPS guidance and is posted to the NPS Planning, Environment, and Public Comment (PEPC) website with this FONSI. The NPS notes on page 53 of the plan/EA that it will continue to look for ways to complete projects under the plan without helicopter landings or in such a way that minimizes adverse impacts to wilderness resources. A mitigation measure has been added to page 32 specifying that, before installing additional infrastructure or equipment in recommended wilderness, options outside of recommended wilderness will be thoroughly considered and implemented if feasible (e.g. if radio signals can be sufficiently propagated to necessary coverage areas from sites outside recommended wilderness or outside the park and, if outside the park, any necessary approvals from outside jurisdictions can be secured); see Text Changes, below.

- 2) **Concern Statement:** *The repeater site on Looking Glass Hill should not be upgraded with a new shelter; the NPS should proceed instead with relocating the repeater to a site outside the park (Programmatic Action No. 2, Section II of the plan/EA).*

**NPS Response:** Recent developments and ongoing discussion with the Blackfeet Tribal Business Council indicate that the park may be able to relocate the Looking Glass Hill repeater outside the park (and, thus, outside recommended wilderness) without the need to first replace the shelter at the current site. Text changes have been made to pages 13 and 20 of the EA and page C-2 of Appendix C



(Consultation) to reflect this; see Text Changes, below. However, this Telecommunications Plan will retain the option to replace the shelter at the current site in case plans to move the repeater do not come to fruition and/or are delayed. The suggestion to forego upgrading the Looking Glass Hill repeater site until the repeater can be moved outside the park has therefore been dismissed, as explained in a text addition to Appendix B (see Text Changes, below).

- 3) **Concern Statement:** *The EA does not explain why the job-box at the temporary repeater site on Looking Glass Hill must be replaced with an equipment shelter. The NPS needs to explain why this upgrade is necessary for the administration of the area as recommended wilderness.*

**NPS Response:** Text changes have been made to page 13 of the plan/EA clarify and further explain why the temporary job-box needs to be replaced if the repeater remains onsite (see Text Changes, below). Radio communications in the Two Medicine area must be maintained for resource protection (including resources that contribute to wilderness character), administrative operations (such as trail and backcountry campground maintenance), and visitor and personnel safety. Replacing the job-box with an equipment shelter is also necessary to minimize the number of helicopter flights to the site to replace damaged equipment, should the repeater need to remain onsite (see also NPS response to Concern Statement No. 2).

The Programmatic Minimum Requirements Analysis and Minimum Requirements Decision Guide (MRA/MRDG) prepared for the Comprehensive Telecommunications Plan (and posted to PEPC with this FONSI) identifies the shelter upgrade as necessary to preserve the natural condition of wilderness character and several features of value (integral cultural features with historical value and iconic features and species). As explained in the MRA/MRDG, management decisions that affect and preserve these qualities of wilderness character depend on data and information gained from research and monitoring, which require sufficient and reliable radio communications for safety, logistics, and efficacy. Wilderness character monitoring as described in the park's Wilderness Character Monitoring Plan similarly rely on radio communications, as do park operations that support public use of the wilderness resource.

- 4) **Concern Statement:** *The Looking Glass Hill repeater should not be moved to Blackfeet Nation land without their approval.*

**NPS Response:** As explained in Appendix C of the EA, Consultation, pages C-1 and C-2, the NPS and Blackfeet Tribal Business Council have been engaged in informal discussions about the relocating the repeater. These discussions are continuing, progressing toward formalizing a mutual agreement.

- 5) **Concern Statement:** *The EA does not adequately explain why a repeater may need to be installed on Elk Mountain. The NPS must provide an explanation of what improvements to radio communications would enable the park to avoid installing the repeater, and why the repeater on Elk Mountain is necessary to preserve wilderness character in the area.*

**NPS Response:** A text change has been made to page 15 of the plan/EA to further explain the contingencies that would determine whether a repeater must be installed on Elk Mountain (see Text Changes, below). Also, preliminary radio signal propagation studies indicate that relocating the Looking Glass Hill repeater could remove the need for a repeater on Elk Mountain.

The Programmatic MRA/MRDG prepared for the plan found that radio communications are necessary to support research and monitoring of resources that are integral to the preservation of wilderness character, and that retaining the option to install a repeater on Elk Mountain provides

the necessary flexibility and is the minimum tool to ensure reliable radio communications during unforeseen circumstances.

- 6) **Concern Statement:** *The EA does not consider alternatives to installing a repeater on Elk Mountain, such as satellite communications and installing a repeater on US Forest Service land outside the park. The NPS must not install a repeater on Elk Mountain until it can demonstrate that all reasonable alternatives have been exhausted.*

**NPS Response:** As explained in Appendix B of the EA (pages B-1 and B-3), the NPS considered but dismissed two alternatives to a repeater on Elk Mountain, including using satellite communications systems instead and installing NPS telecommunications equipment and infrastructure in developed areas only with no new telecommunications equipment or infrastructure in recommended wilderness, including on Elk Mountain. Text has been added to Appendix B to explain why a repeater on US Forest Service land has been considered but dismissed.

The NPS is committed to considering all reasonable alternatives to installing a repeater on Elk Mountain. A mitigation measure has been added to the plan/EA, page 32 under Recommended Wilderness, to consider options outside of recommended wilderness before installing additional infrastructure or equipment in recommended wilderness. Text has been added to page 14 of the plan/EA to clarify that this also applies to the Elk Mountain site.

- 7) **Concern Statement:** *The plan/EA does not include the size of radio repeater installations.*

**NPS Response:** The plan/EA describes the approximate size of repeater installations, including shelter and solar panel dimensions and mast and antenna heights, on pages 13,15, and 20.

- 8) **Concern Statement:** *A permanent installation on Elk Mountain requires a comprehensive analysis of site-specific impacts and alternatives other than the no action alternative.*

**NPS Response:** Site-specific environmental impacts of a repeater on Elk Mountain are described in the EA on pp. 37, 39-40, 50-52, 58-60, 64-65, and 68. Effects to wilderness character are further discussed in the programmatic MRA/MRDG.

- 9) **Concern Statement:** *A permanent repeater on Elk Mountain should be dropped from the plan.*

**NPS Response:** On page B-3, Appendix B of the plan/EA, the NPS considered and dismissed a suggestion for no new telecommunications equipment or infrastructure in recommended wilderness, including on Elk Mountain.

- 10) **Concern Statement:** *The plan/EA should describe conditions that would lead to the installation of additional permanent repeaters in recommended wilderness (Programmatic Action No. 7, Section II), explain why additional permanent repeaters would not be expected at more than three sites, and include alternatives, including the use of satellite communications devices or temporary scene-of-action repeaters. The NPS must identify the minimum requirements for any future permanent repeaters.*

**NPS Response:** The NPS cannot know whether additional permanent repeaters will be necessary until the effectiveness of other improvements under this plan have been implemented and tested. Text has been added to page 23 of the plan/EA to further describe factors that could lead to the need for additional permanent repeaters, and alternative approaches, including scene-of-action (SOA) repeaters, that will be considered before installing additional permanent repeaters in recommended wilderness (see Text Changes, below).

In Appendix B of the EA (pages B-1, B-2, and B-3), the NPS considered but dismissed alternatives to additional permanent repeaters in recommended wilderness, including installing antennas on lookouts only instead of on mountains, installing telecommunications equipment and infrastructure in developed areas only with no new telecommunications equipment or infrastructure in recommended wilderness, and using satellite communication devices exclusively instead of radios to support NPS field communications in remote areas. Text has been added to page B-1 to clarify the dismissal of exclusive use of satellite devices (see Text Changes, below).

As for why repeaters would not be expected at more than three sites, preliminary identification of areas where additional permanent repeaters could be placed is based on current locations of radio repeaters and telecommunications sites in the park. Possible sites listed in the plan/EA for additional permanent repeaters (Belly River, Nyack, Two Medicine, or Mt. Brown) are potential weak points in the system (i.e. are in areas with limited radio coverage) or are areas from which radio signals could be propagated to better serve surrounding poor coverage areas. Whether additional repeaters will be necessary cannot be known, however, until other actions under the plan are taken to improve radio communications and the efficacy of the improved system can be determined.

The Programmatic MRA/MRDG prepared for the plan found that retaining the option to install additional permanent radio repeaters provides the necessary flexibility to ensure reliable radio communications during unforeseen circumstances, and that radio communications are necessary to support research and monitoring of resources that are integral to the preservation of wilderness character.

**11) Concern Statement:** *The NPS should draw the line and not install new structures in recommended wilderness since they result in helicopter flights and environmental degradation.*

**NPS Response:** The NPS agrees that the installation of new structures in recommended wilderness must be avoided if at all possible, and makes every effort to identify solutions that do not require structures within recommended wilderness. Structures are only approved when no solution outside recommended wilderness exists and, in accordance with NPS Policy, if they are determined to be the minimum requirement necessary to carry out wilderness management objectives and are specifically addressed in appropriate planning documents (NPS Management Policies, Section 6.3.10.1). The Programmatic MRA/MRDG prepared for the plan found that retaining the option to install radio repeaters and associated structures in recommended wilderness is the minimum tool necessary to preserve the natural condition of wilderness character and several features of value (integral cultural features with historical value and iconic features and species). As explained in the MRA/MRDG, management decisions that affect and preserve these qualities of wilderness character depend on data and information gained from research and monitoring, which require sufficient and reliable radio communications for safety, logistics, and efficacy.

As stated on page 9 of the plan/EA (Chapter 2, Alternatives) and page 32 (Mitigation Measures, Recommended Wilderness), the park would make every effort to keep helicopter flights for this plan within the park's 50-flight limit and combine flights with other administrative flights. Mitigation measures for vegetation and soils (page 31 of the plan/EA) includes the rehabilitation and restoration of disturbed areas.

Text has been added to Appendix B of the EA to explain why this suggestion has been considered but dismissed; see Text Changes to Appendix B, below.

**12) Concern Statement:** *Permanent infrastructure for NPS Improvements (e.g. radio repeaters) should only be installed in already developed areas.*

**NPS Response:** A suggestion to install NPS telecommunications infrastructure and equipment in developed areas only was dismissed in Appendix B of the plan EA, page B-3.

**13) Concern Statement:** *The plan needs to emphasize minimizing visual and noise impacts to recommended wilderness.*

**NPS Response:** Mitigation Measures in the plan/EA include several measures to minimize impacts to recommended wilderness; see especially measures listed under Natural Soundscapes, Visual Resources, and Recommended Wilderness on page 32.

### **Commercially Provided Cellular or Internet Service**

**14) Concern Statement:** *Commercial telecommunications coverage should be more limited than proposed in the plan. One or two areas should be left without cell service.*

*The park should promote a cell-free experience, emphasize that Glacier is different from other places, and be a place where visitors can disconnect and enjoy nature. Signs should be posted at entrances instructing visitors to turn off their cell phones.*

**NPS Response:** The NPS recognizes the value of disconnected space and, therefore, the plan limits connectivity to four additional developed areas where it is most needed (Many Glacier, Rising Sun, Two Medicine, and Lake McDonald Lodge), as explained on page 24 of the plan/EA. Cell coverage is currently only available at Apgar and St. Mary from sources outside the park, and from a few other places where weak and sporadic signals may be available from outside sources. As stated on pages 3, 6, and 25 of the plan/EA, commercial telecommunications infrastructure and coverage will not be authorized in the park's Backcountry Zone (as defined in the park's 1999 General Management Plan). As explained on page 69, multiple front country locations, including campgrounds, in addition to the Backcountry Zone will remain disconnected except for inadvertent signal spillover from sources outside the park.

During project-level review of specific coverage proposals, the park will consider opportunities to retain disconnected space within the four selected developed areas. As a result, instead of blanket coverage throughout the developed footprint of each area depicted in Figure 8 of the plan/EA, cellular and/or Internet coverage could be more point specific (e.g. focused at certain buildings, parking areas, and/or high-use areas within the development footprint). Text has been added to page 25 of the plan/EA to clarify this point; see Text Changes, below. The precise coverage delineations within the four developed areas cannot be determined at this time due to a number of variables, including what technologies would be used, specific locations for equipment and infrastructure, and additional resource protection measures that may be identified during site-specific review.

In the event that blanket coverage is provided throughout the entire developed footprint of each of the four developed areas, coverage would be expected to be available over an area of approximately 150-160 acres, not including Apgar or St. Mary or other areas where sporadic signals from outside the park can be picked up. This acreage comprises the developed footprints for the Many Glacier, Two Medicine, Rising Sun, and Lake McDonald Lodge developed areas depicted in Figure 8 of the plan/EA. As explained above, coverage areas could be smaller if coverage is point-specific instead of throughout each developed footprint. Therefore, given that the park is over one million acres in size, coverage under this plan will not be available in the vast majority of the park. (Text has been added to page 69 of the EA to include these acreages in the analysis of impacts to Visitor Use and Experience; see Text Changes below.) The park will require technological measures to focus cellular signal coverage within the four developed areas and minimize any spillover. Since most of the park will

remain without coverage, Glacier will still be different from places where cell phone coverage is prevalent, and opportunities for people to enjoy nature will remain essentially unchanged.

Mitigation measures in the plan/EA include the development of visitor messaging on how to minimize disturbance to others from cell phone use (page 33). The suggestion to include signage at entrance stations will be forwarded to park staff responsible for visitor messaging.

**15) Concern Statement:** *Commercial telecommunications infrastructure and coverage should not be allowed at the Two Medicine developed area; visitors to Two Medicine can easily drive to East Glacier for service. If coverage is allowed at Two Medicine, it should not be provided at the Two Medicine Campground or along the lakeshore.*

**NPS Response:** In Appendix B of the EA (page B-2), the NPS considered but dismissed a suggestion to not install commercial telecommunications infrastructure in the Two Medicine developed area.

As explained in the response to Concern Statement No. 14, commercial coverage at Two Medicine could be point-specific, retaining some disconnected space, possibly including the campground and/or lakeshore, depending on project-level review; see text change to page 25 of the plan/EA in Text Changes, below.

**16) Concern Statement:** *Commercial coverage should not be permitted in campgrounds.*

**NPS Response:** As stated on page 69 of the plan/EA, the developed areas where coverage will be considered under this plan include only three of the park's 13 front country campgrounds – Many Glacier, Two Medicine, and Rising Sun. The park's remaining front country campgrounds will not be provided with connectivity under this plan, except where signals can be picked up from out-of-park sources, such as at Fish Creek, St. Mary, Apgar Campgrounds. (A text change has been made to page 69 of the EA to clarify that, while coverage in additional campgrounds will not be provided under this plan, it could become available from outside sources; see Text Changes, below). During project level review of specific coverage proposals, opportunities to retain disconnected space within the four selected developed areas will be considered, including within associated campgrounds; see also NPS response to Concern Statement No. 15. However, because the campgrounds are areas where a potentially large number of visitors may benefit from coverage, a blanket decision to not allow coverage at any of the campgrounds would not be consistent with plan objectives to enable connectivity where most needed. Also, the technological feasibility of excluding all or part of the campgrounds from coverage cannot be determined until project level review of specific proposals, when it is known what technologies would be used. Text has been added to Appendix B explaining why this suggestion has been considered but dismissed.

**17) Concern Statement:** *Commercial installations and coverage should be limited to park entry points at St. Mary and Apgar or West Glacier where existing coverage is inconsistent and where visitor centers are present. Visitors should be directed to these areas for park updates. Leaving St. Mary, Apgar or West Glacier out of consideration for public connectivity suggests that the NPS has selected the Many Glacier, Two Medicine, Rising Sun, and Lake McDonald Lodge developed areas for consideration based on demands from one of the concessioners.*

**NPS Response:** Text has been added to Appendix B of the EA to explain why limiting commercial connectivity to St. Mary, Apgar, or West Glacier has been considered but dismissed; see Text Changes, below. The park's communications needs assessment identified the Many Glacier, Two Medicine, Rising Sun, and Lake McDonald Lodge developed areas as locations where connectivity is

most needed and appropriate based on high levels of visitor use, the availability of stopovers, and connectivity needs for on and off-duty NPS staff, as well as concessioner operations.

- 18) Concern Statement:** *The park's assertion that visitors need more connectivity is not backed up with data from polls, surveys, or other research. The park needs to provide scientific evidence to support the conclusion in the EA that commercial connectivity will benefit visitor use and experience.*

**NPS Response:** Establishing a strategy under the plan to enable public connectivity is based on employee feedback during a several months-long communications needs assessment, anecdotal evidence from visitors (e.g. comment letters), the park's use of the Internet to provide real-time updates and information to visitors, and what is generally known about changing times and the increasing reliance on technologies that require access to the Internet for communication and day-to-day activities such as online banking, paying bills, and remote healthcare services, etc. These reasons provide sufficient purpose and need for taking action.

- 19) Concern Statement:** *Improvements to NPS telecommunications should be the priority, with no cell phone service for the public.*

**NPS Response:** In Appendix B of the EA (page B-1), the NPS considered but dismissed a suggestion to implement improvements to NPS communications without allowing cellular or data connectivity for the public.

- 20) Concern Statement:** *Commercial coverage should be limited to meeting the needs of park staff and concessioner personnel, and/or concessioner administrative needs (with no coverage for the public), using services such as satellite wifi, where its use would not be seen or heard or disrupt visitors. Concessioners should be prohibited from offering connectivity to guests or in public spaces.*

**NPS Response:** In Appendix B of the EA (page B-3), the NPS considered but dismissed a suggestion to keep commercial telecommunications to the minimum requirements necessary to meet the needs of park staff and concessioner personnel only, without making it available to the public.

Satellite wifi may be a type of technology used to provide commercial connectivity under the plan, if proposed and approved and consistent with conditions and parameters established by the plan. However, this cannot be determined until specific proposals are available and can undergo project-level review.

Limiting coverage to concessioner administrative operations and prohibiting concessioners from offering connectivity to guests has been considered but dismissed, as explained in a text addition to Appendix B; see Text Changes, below.

- 21) Concern Statement:** *Within the four developed areas where coverage would be considered, establish limited hot spots where visitors could access park updates away from areas where other visitors are likely to seek disconnected space. Or establish staffed information kiosks that display park updates in real time to all visitors, including those without phone or other devices.*

**NPS Response:** See the text change to page 25 of the plan/EA clarifying that, pending project-level and site-specific review, coverage within the identified developed areas could be point-specific rather than throughout the entire developed footprint (Text Changes, below); see also NPS response to Concern Statement No. 14.

The suggestion for kiosks has been considered but dismissed, as explained in a text addition to Appendix B; see Text Changes, below.

**22) Concern Statement:** *Public connectivity should be focused around buildings such as hotels or visitor centers, with signals extending no more than 100 yards beyond.*

**NPS Response:** Depending on project-level review, coverage could be focused around buildings and/or parking lots, possibly with a buffer of 100 yards or some other distance; see NPS response to Concern Statement No. 14. Establishing specific coverage delineations within each of the four selected developed areas cannot be done at this time due to multiple factors, such as type of technology, extent of signals, and whether focusing coverage around buildings would provide sufficient coverage to activity areas where visitors and staff are likely to require access. These factors will not be known until specific proposals can be reviewed.

**23) Concern Statement:** *Commercial coverage should only be permitted in parking areas and staff housing.*

**NPS Response:** Infrastructure could be focused at staff housing areas if the signal can also be sufficiently transmitted to desired public use areas. However, coverage will not be limited to staff, as this would be inconsistent with the purpose and need of the plan to provide connectivity to the public; see also NPS response to Concern Statement No. 21. Specific coverage delineations within each of the four selected developed areas cannot be determined until specific proposals can be reviewed; see response to Concern Statement No. 15.

**24) Concern Statement:** *The NPS should provide guidelines for visitors on how to reduce the impacts of cell phone use on other visitors. The NPS should educate visitors about the health and wellness benefits of limiting cell phone use when in the park.*

**NPS Response:** Mitigation measures in the plan/EA include visitor messaging on how to minimize disturbance to others from cell phone use (page 33). As stated, messaging may include reminders of the personal wellness benefits of reduced cell phone use when in the park.

**25) Concern Statement:** *Within the commercial coverage areas, signs could be posted that direct visitors to areas for cell phone use where they will not disturb other visitors. Visitors should be informed upon entry that there is limited coverage in the park and they are responsible for their own safety.*

**NPS Response:** The park already informs visitors of limited cell phone coverage in the park. Mitigation measures in the plan/EA include visitor messaging on how to minimize disturbance to others from cell phone use (page 33). The suggestion to post signs will be passed on to appropriate park staff for consideration.

**26) Concern Statement:** *No new towers should be installed for public connectivity purposes; equipment should be mounted on existing infrastructure and buildings.*

**NPS Response:** The appropriateness and potential impacts of proposed towers will be evaluated during project-level review of commercial coverage proposals. As specified in the plan/EA for commercial towers, highly visible large-scale towers (e.g. taller than 80 feet) would not be appropriate in Glacier National Park and will not be permitted (see pages 3, 6, 24), and technologies that do not require additional vertical infrastructure (including towers) will be given foremost consideration, or existing and appropriate NPS vertical infrastructure will be used whenever possible (see Table 2 on page 27). The plan/EA also includes a requirement that the height of any vertical infrastructure be proportional to or less than that of existing infrastructure (Table 2, page 27). The suggestion to entirely prohibit towers for public connectivity has been dismissed (see text addition to Appendix B, Text Changes, below) because in some instances, towers may be the least impactful

means of ensuring adequate signal transmission. For example, if trees and other vegetation could interfere with signal transmission, a tower that meets the conditions and parameters of the plan/EA may result in less impact than removing trees and vegetation.

**27) Concern Statement:** *The plan should include cell coverage at all campgrounds, Logan Pass, the Loop, and similar sites.*

**NPS Response:** In Appendix B of the EA (page B-4), the NPS considered but dismissed a suggestion for cell coverage at Logan Pass and along the Going-to-the-Sun Road, which includes the Loop. The suggestion for coverage at all campgrounds has been considered but dismissed as explained in a text addition to Appendix B; see Text Changes, below.

**28) Concern Statement:** *The plan should be more specific about the precise area of coverage and how signal spillover will be prevented. Cell phone coverage was not planned for but is available at Fifty Mountain and Granite Park Chalet. The NPS needs to be clearer on what it intends for the visitor experience.*

*Coverage areas should be limited to the developed areas and not spill over into recommended wilderness, including on an altitudinal gradient.*

*Signals from commercial providers must not spillover onto roads, into campgrounds, picnic areas, or hotel lodging.*

**NPS Response:** On pages 6, 24, 25, 26, 27, and 69, the plan/EA states that coverage will be limited to the four identified developed areas. On pages 1, 6, 25, 28, 52, 54, and 69 and in Appendix B on page B-2, the plan/EA states that signal spillover onto roads and/or into recommended wilderness will be minimized; conditions and parameters specify this as a requirement to the extent technologically feasible (Table 2, page 28). Measures to minimize spillover (such as directional antennas, for example) will minimize spillover in both an outward and upward (or altitudinal) direction. Coverage may be available at campgrounds, picnic areas, and hotel lodging, depending on the site-specific extent of signal coverage determined during project-level review. The precise area of coverage within the four identified developed areas cannot be determined until specific proposals are available and the proposed technology is known, as the extent of coverage will depend in part on the type of technology. During project-level review of specific coverage proposals, the park will identify a more precise extent of coverage within each of the four developed areas (see response to Concern Statement No. 15 and text change to page 25 of the plan/EA).

Text has been added to page 25 to explain possible methods for minimizing spillover; see Text Changes, below. In Table 2 on page 28, the conditions and parameters require permittees to demonstrate how spillover will be minimized. Further, NPS Reference Manual 53B (RM 53B) requires applications for right-of-way permits for wireless telecommunications uses to include signal coverage maps for the specific equipment the applicant is proposing to install. If the permit is approved and the permittee subsequently requests approval to replace the antennas that were previously authorized, the permittee must submit an application to amend the permit, a detailed list of the specific equipment, updated signal coverage maps, and additional information so the NPS can make an informed decision regarding the proposed equipment.

Cell phone coverage on Fifty Mountain and at Granite Park Chalet is a result of signal spillover from sources outside the park, which may not be subject to requirements to minimize signal spillover; i.e. coverage under this plan is subject to controlling spillover, whereas spillover is not necessarily controlled for signals from outside the park.



The plan/EA describes the objectives and desired future conditions for public connectivity on page 1 in Chapter 1, Purpose and Need. Objectives for public connectivity are further described on pages 24-29 in Chapter 2, Alternatives, under Programmatic Action No. 8 in Section II.

- 29) Concern Statement:** *How will the NPS enforce the provision limiting signal spillover? The NPS must test for spillover annually or semi-annually, including measuring signal strength in recommended wilderness, and share the results with the public. If spillover is occurring, the NPS must require the service provider to reduce signal strength.*

**NPS Response:** The NPS will fact check signal propagation analyses provided by prospective providers. The park will monitor spillover into recommended wilderness and other undeveloped areas, areas identified as disconnected space, and onto roadways. Monitoring will likely occur at least once per year, if not more frequently. If spillover is occurring beyond what is agreed to and approved in the right-of way permit, and/or is inconsistent with the conditions and parameters established in the plan, the provider will be required to reduce signal strength. To reflect this, text has been added to Table 2, No. 9 (page 28) and Mitigation Measures, under Recommended Wilderness (page 32) and Visitor Use and Experience (page 33). See also the reference to requirements under RM 53B in the NPS response to concern statement No. 28. The NPS is not required to notify the public when fact-checking or monitoring signals; monitoring results will be available upon request provided doing so does not compromise sensitive or protected information.

- 30) Concern Statement:** *The NPS must consider the impacts of signal spillover into recommended wilderness.*

**NPS Response:** The EA describes the impacts of signal spillover into recommended wilderness on pages 52 and 54.

- 31) Concern Statement:** *The plan/EA references the 1974 wilderness recommendation when discussing impacts from signal spillover instead of the larger 1999 update. The map in the plan/EA appears to include both the 1974 and 1999 boundaries.*

**NPS Response:** The map of the project area on page 4 of the plan/EA includes the 1974 recommended wilderness boundary. The 1974 Wilderness Plan is the only plan that identifies recommended wilderness in the park. To adjust the boundary for recommended wilderness, the NPS would first undertake a Wilderness Study, which was not done in 1999, and would then need to follow the process steps outlined in Sections 6.2.2.1 to 6.2.3 of NPS Management Policies.

- 32) Concern Statement:** *Commercial telecommunications coverage and people using their devices to livestream Internet content, text, or talk on their cell phones etc. will degrade the historic quality of the four developed areas. Glacier decided not to allow televisions in historic lodges and should make the same decision for commercial telecommunications.*

**NPS Response:** Personal portable devices are already used in the four developed areas (and associated historic properties) where public coverage will be considered. Visitors already use devices to take photographs, record videos, and access previously downloaded content such as movies, music, podcasts, games, etc. Other modern advancements are also in use and evident at the properties, including computers, landline telephones, radios, utility upgrades, modern makes of vehicles, etc. Historic integrity is not dependent on the absence of modern technological advances. While the sound of people using devices connected to coverage could slightly alter the audible landscape of the historic districts, the effects will not differ appreciably from existing conditions. A text change describing impacts to the audible landscape of historic properties has been made to page

47 of the EA (see Text Changes, below). Additionally, the park will develop visitor messaging on how to minimize disturbance to others from cell phone use. Messaging may include suggestions to silence ringers, observe quiet times, and avoid streaming music and movies in public, for example, and reminders of the personal wellness benefits of enjoying the park while limiting personal use of cell phones and other devices (see Mitigation Measures on page 33 of the plan/EA).

NPS criteria for evaluating effects to historic properties focus on the visual sense of the overall environment and the relatedness of properties within districts (National Register Bulletin: How to Apply the National Register Criteria for Evaluation 1997). As explained on page 47 of the EA, conditions and parameters established under the plan will minimize the visibility of commercial infrastructure, ensuring that historic properties retain their rustic character and appearance. Commercial coverage and infrastructure will be subject to project-level and site-specific review, at which time additional measures will be identified to further minimize visual impacts. The historic quality of the properties will be preserved through the preservation of their rustic character and appearance and because there will be no effects to their architectural and historical significance.

The assertion that the park does not allow televisions in historic lodges in order to preserve historic integrity is incorrect. Televisions are allowed at the Cobb Guest House and in one of the lounges at the Many Glacier Hotel. The decision to not have televisions in rooms at lodges was not based on historic considerations but to minimize noise disturbance in adjacent rooms. The same cannot be applied to personal portable devices because 1) the NPS does not have the authority to prevent people from using their devices; 2) personal devices are already in use, and providing connectivity is not likely to appreciably change existing conditions; 3) television noise is often louder than noise from personal devices; and 4) televisions provide a limited function (namely entertainment) whereas connectivity for personal devices meets a broad communication need as described in the purpose and need for the plan, including for visitors that are not staying at historic lodges.

**33) Concern Statement:** *The EA needs to consider whether telecommunication installations will displace nesting birds or otherwise impact wildlife, including the effects of electromagnetic fields on birds, other wildlife, and plants.*

**NPS Response:** Appendix D of the EA, Impact Topics Dismissed from Detailed Analysis, addresses impacts to wildlife and migratory birds from the plan, including from possible displacement (pages D-2 to D-4). Text additions have been made to Appendix D, Wildlife and Migratory Birds, on pages D-2 and D-3, and Vegetation and Soils, page D-4, addressing the potential for impacts from electromagnetic fields, and a mitigation measure to protect birds from exposure has been added to page 30, Mitigation Measures, under Wildlife; see Text Changes, below.

**34) Concern Statement:** *Permitting commercial telecommunications development inside the park may not meet the intent of Congress and may not be in accordance with the NPS mission. The 1996 Telecommunications Act does not permit facilities that are in direct conflict with agency mission; NPS mission has precedence. The NPS must not allow commercial telecommunications infrastructure within the park if it would be in direct conflict with agency mission or impair or significantly impact resources.*

**NPS Response:** Based on the information in the EA, the NPS has determined that Glacier National Park's Comprehensive Telecommunications Plan will not have a significant impact on park resources. The plan is not in conflict with the NPS mission or NPS Management Policies because there will be no impairment of park resources (see Non-Impairment Determination for this FONSI) and commercial telecommunications are an allowable special park use. In accordance with Director's Order 53, section 4. Policy Guidance, the NPS will not issue special park use permits (including right-of-way permits) for activities that "create an unacceptable impact on park resources or values,"

or “are contrary to the purposes for which the park was established.” Conditions and parameters established by the plan for commercially provided cellular and Internet service will minimize or prevent potential impacts and protect park resources and values in accordance with NPS Policy.

- 35) Concern Statement:** *Commercial telecommunications infrastructure must not impair or detract from scenery and iconic views in the park, night skies, wildlife, the wilderness experience, historic structures, or other natural and cultural resources.*

*Towers should be designed to blend with the surrounding area.*

*Towers should be below the height of surrounding trees and located away from iconic views.*

**NPS Response:** The NPS has determined that the plan will not have a significant impact, and there will be no impairment of park resources; see response to Concern Statement No. 34 and Non-Impairment Determination for this FONSI. Conditions and parameters (Table 2, pages 27-29) and mitigation measures (pages 30-33) have been developed to protect park resources. Requirements for infrastructure to blend with surroundings are included on page 28 in Table 2 and page 32 under Mitigation Measures, Visual Resources, and will apply to any approved towers. Project-level review will identify any additional site-specific measures to avoid or reduce impacts, including locating towers and other infrastructure to be as minimally visible as possible. A visual analysis of impacts to viewsheds from any proposed vertical infrastructure, including towers, will be required (Table 2, page 28); analysis results will be reviewed for effects to iconic viewsheds and other visual resources before approving vertical infrastructure.

Text has been added to Appendix B explaining why a blanket requirement that towers be lower than the height of surrounding trees has been considered but dismissed.

- 36) Concern Statement:** *The plan/EA does not explain statements that programmatic actions will undergo additional review. By including commercially provided connectivity as a programmatic action, the NPS is prematurely sanctioning and advocating for this activity without analyzing impacts, and is making an improper pre-determination.*

**NPS Response:** In determining the scope of the EA, the NPS followed the December 18, 2014 Memorandum from the Council on Environmental Quality on the Effective Use of Programmatic NEPA Reviews. Specifically, this guidance directs agencies to consider programmatic NEPA reviews and assess environmental impacts of proposed projects for which subsequent actions will be implemented in subsequent NEPA reviews tiered to the programmatic review. CEQ notes that, “A well-crafted programmatic NEPA review provides the basis for decisions to approve such broad or high-level decisions such as identifying geographically bounded areas within which future proposed activities can be taken or identifying broad mitigation and conservation measures that can be applied to subsequent tiered reviews.” As described in the EA on pages 2-3, the NPS details the scope of the plan and articulates which actions are site-specific and which actions are programmatic. The NPS identifies geographic areas where commercial telecommunications infrastructure may be considered in the future, following site-specific NEPA analysis. Further, on pages 18-29, the NPS notes which actions are subject to programmatic review and identifies relevant conditions, parameters, and mitigation measures. Lastly, CEQ notes that agencies may prepare a single NEPA document to support both programmatic and project-specific proposals. Such an approach may be appropriate when an agency plans to make a broad program decision, as well as timely decisions to implement one or more specific projects under the program, which the NPS did for this plan.

As noted on page 24 of the EA, the NPS describes the relevant laws and policies pertaining to right-of-way (ROW) permit applications within the park. The EA goes on to note that any future ROW

permit applications would be subject to site-specific analysis before a decision is made to issue the permit. No decisions are made in this EA and NEPA process regarding ROW permit issuance.

The NPS directs the commenter to the impact analysis for commercial telecommunications infrastructure on pages 41, 47, 52, 60, 64-65, 66, 68-70, of the EA, which addresses the impacts of the programmatic plan elements. The commenter does not suggest additional literature or note how the impact analysis is deficient, therefore, the NPS did not incorporate any changes.

**37) Concern Statement:** *Before deciding where to permit commercial infrastructure and coverage, the NPS needs to have a public discussion about whether the public is in favor of commercial telecommunications in the first place.*

**NPS Response:** Public discussion of the plan has occurred through public scoping and public review of the plan/EA. Comments from scoping and public review have been considered and were instrumental in the planning process and the evaluation of impacts.

**38) Concern Statement:** *The plan does not provide for public notice or involvement with regard to future commercial telecommunications facilities. NPS Reference Manual 53B, which provides guidance on Rights-of-Way permitting, states that parks should consider whether notification or civic engagement with the public is appropriate, regardless of the level of public notification required by environmental compliance. The NPS should notify the public and provide the opportunity for public comment on any applications the park receives from cellular providers.*

*The comment asserts that the NPS failed to respond to a Freedom of Information Act (FOIA) request from September of 2020.*

**NPS Response:** Public scoping was conducted for the plan/EA in February of 2020. The plan/EA was available for public review in June of 2021. Comments from scoping and public review have been considered and were instrumental in the planning process and evaluation of impacts.

RM 53B does not require public review of ROW permit applications. If project-level review of specific coverage proposals determines that an EA or environmental impact statement (EIS) is necessary, public review would occur in accordance with what is appropriate and required for an EA or EIS process. If a specific proposal meets the criteria for a categorical exclusion, the park would consider public involvement in accordance with RM 53B; however, public involvement is not required for a categorical exclusion (NPS NEPA Handbook).

The FOIA request from September of 2020 is outside the scope of this NEPA document.

**39) Concern Statement:** *The NPS must share information stipulated in Table 2 of the plan/EA as required from commercial providers.*

**NPS Response:** NPS RM 53B does not require public review of ROW permit applications. See response to preceding concern statement, No. 42.

**40) Concern Statement:** *In accordance with RM 53B, the NPS also needs to explain and assure a process for the public to appeal each commercial telecommunication facility.*

**NPS Response:** The appeal process from RM 53B pertains to the permit applicant. RM 53B does not include a provision for the public to appeal a decision on an NPS ROW permit application.

**41) Concern Statement:** *The plan/EA does not discuss wifi or broadband even though commercial broadband service is being tested by one of the concessioners in Many Glacier. The NPS should*

*provide more information to the public about the test and the public needs to know the details of future plans for wifi and broadband service. The comment mentions a FOIA request submitted on the topic and asserts that the compliance for the trial service was inadequate and should have included public review.*

**NPS Response:** As stated on page 3, the plan does not include proposals for specific commercial telecommunications services or infrastructure. Therefore, the details of any future wifi and broadband service in the four developed areas where commercial connectivity will be considered is not known at this time and will not be known until specific proposals are received and can be evaluated during project-level review.

The plan/EA discloses the test broadband service at Many Glacier on pages 2 and 67. The test service is an action for which NEPA was already done and, therefore, is not subject to this NEPA review and is not included in the range of alternatives.

The FOIA request is outside the scope of this NEPA document.

**42) Concern Statement:** *The EA lacks a range of alternatives; one alternative, “no action,” is not a range of alternatives.*

*The EA does not consider providing cell service in only one area of the park on a trial basis to determine if the public is in favor of cell coverage in the park.*

**NPS Response:** The NPS presented a reasonable range of alternatives in Chapter 2, including the Proposed Action and the No Action alternatives. Included in the range of alternatives are those alternatives considered during the NEPA process but eliminated from detailed analysis (43 CFR § 46.420(c)). These alternatives considered but dismissed are discussed in Appendix B of the EA and include a rationale for dismissal. Additionally, since an alternative may be developed to address more than one significant issue, no specific number of alternatives is required or prescribed under NEPA (43 CFR § 46.415).

As stated on pages 2 and 67 of the plan/EA, the park has already tested commercial broadband service at one site, in the Many Glacier developed area, on a trial basis (this occurred as a separate project under separate environmental review and compliance). As discussed in Appendix B of the EA, the NPS considered and dismissed an alternative that would remove Two Medicine as a potential location for commercial telecommunications infrastructure. Additionally, text has been added to Appendix B dismissing a suggestion to limit commercial connectivity to St. Mary and Apgar or West Glacier, where cell service is already available, thereby removing any additional potential sites. Because providing broadband in one area on a trial basis has already been done and the alternatives considered but dismissed in Appendix B provide sufficient consideration of a wide spectrum of possibilities, the NPS did not re-examine providing cell service in one area as an alternative element in the EA. Public input was sought during scoping and public review of the plan/EA and has been instrumental in the planning process and evaluation of impacts.

**43) Concern Statement:** *By not updating the park’s 1999 General Management Plan, Glacier is failing to meet its statutory obligation to manage increasing visitation. Providing connectivity could increase visitor overuse of popular park features.*

**NPS Response:** Visitor use and increasing visitation are outside the scope of this EA. It is speculative to suggest that increased connectivity would increase visitation.

**44) Concern Statement:** *The plan/EA does not explain who will build or operate cellular systems. Will commercial companies be given permanent franchise rights?*

**NPS Response:** Commercial telecommunications providers will be responsible for installing and operating systems that provide cellular and/or Internet connectivity. Approved providers will be issued ROW permits in accordance with 36 CFR 14, Management Policies 2006, and the NPS's ROW permitting guidance document, RM 53B. If a ROW permit application is inconsistent with the conditions and parameters established in the plan and any applicable NPS policies, it will be denied unless modified to ensure consistency. A ROW permit constitutes only a revocable, non-exclusive license to use the defined area for the purposes described in the permit for the term of the permit; it does not grant an interest in the land and is not a permanent grant. The term of right-of-way permits may not exceed 10 years unless approved by the Director.

**45) Concern Statement:** *How many commercial providers does the NPS intend to accommodate with the plan? Will multiple carriers result in taller towers?*

**NPS Response:** As stated in the plan/EA, on Table 2 on page 29, more than one provider could provide service, but multiple providers will be required to co-locate on shared infrastructure and share backhaul methods. The NPS encourages co-location to minimize impacts to park resources, however, the requirements for tower height as specified in Table 2 on page 27 will not change with multiple providers.

**46) Concern Statement:** *Will cell towers include blinking red lights?*

**NPS Response:** No. As stated in Table 2 on page 28 of the plan/EA, lights will not be permitted on any communications infrastructure.

**47) Concern Statement:** *Is there a way that cell towers could be customized and hidden in the attics of the Lake McDonald Lodge, Many Glacier Hotel, and the Two Medicine Store?*

**NPS Response:** Cellular infrastructure may or may not be placed in building attics, including hotels; however, this cannot be considered until specific proposals are available and proposed technologies are known.

**48) Concern Statement:** *Will the Many Glacier horse concession bunkhouses and the Lake McDonald ticket booth be included in the coverage zones for public connectivity? Coverage is necessary for operational considerations as well as off-duty horse concession employees.*

**NPS Response:** Because the bunkhouses are within the developed footprints of the Many Glacier and Lake McDonald Lodge developed areas, they would be included in the allowable coverage areas.

**49) Concern Statement:** *Can public connectivity be limited to emergency use, such as 911 calls?*

**NPS Response:** In Appendix B of the E (page B-3), the NPS considered but dismissed a suggestion to provide cellular service for emergency use only.

**50) Concern Statements:**

*The plan should include better phone service at the chalets.*

*The NPS should charge a fee for a cell service connection.*

*The NPS should install pay phones at the edge of parking lots instead of allowing cell service.*

*Allow commercial infrastructure to be co-located on existing park telecommunications infrastructure whenever possible.*

*Recommend that the NPS use this as an opportunity to remove facilities.*

**NPS Response:** These suggestions have been considered but dismissed, as explained in text changes to Appendix B, Alternatives and Alternative Elements Considered but Dismissed from Detailed Analysis; see Text Changes, below.

### **Improvements to NPS Telecommunications**

**51) Concern Statement:** *The NPS should provide the public with photo simulations of the NPS improvements described in Section I of the plan/EA, on pages 8-18.*

**NPS Response:** Photo simulations of NPS improvements are not required, and are not necessary since the majority of impacts will not appreciably change existing visual conditions, as explained on page 42 of the EA. Impacts at Looking Glass Hill will be temporary (if they occur at all; see response to Concern Statement No. 2), and the area of impact at Elk Mountain will be negligible compared with surrounding viewsheds and the amount of undeveloped land in the park (if impacts occur at all, since this action may not be implemented; see response to Concern Statement No. 5).

**52) Concern Statement:** *Will installing an NPS radio repeater at the Loop on the Going-to-the-Sun Road improve radio coverage at Avalanche Lake?*

**NPS Response:** Yes. The signal propagation analysis revealed that a radio repeater at the Loop will improve NPS radio communications at Avalanche Lake.

**53) Concern Statement:** *Telecommunications equipment that is no longer needed should be removed.*

**NPS Response:** The park already removes telecommunications equipment that is no longer needed or in use. On page 21, the plan/EA includes the removal of existing equipment and infrastructure that becomes obsolete or is no longer needed after any upgrades that may occur in response to changing communications needs and technological advancements (Programmatic Action No. 5, Section II of the plan/EA).

**54) Concern Statement:** *Lookouts are historic structures in historic landscapes. Smaller and more efficient solar panels and antennas should be installed near/at lookouts, if they are installed at all.*

**NPS Response:** Mitigation measure in the plan/EA include using equipment and infrastructure that is of the smallest size available and technologically feasible (page 33, under Cultural Resources).

**55) Concern Statement:** *Towers should be painted or designed to be minimally visible. While the plan says infrastructure would be disguised, it is not clear how this would be accomplished. Infrastructure at other sites, such as Apgar Lookout and Porcupine Mountain, is visible due to sun glare.*

**NPS Response:** The plan/EA states that towers and other telecommunication equipment and infrastructure will be painted or disguised to minimize visibility; see pages 11, 16, 17, 28, 32, 38, 40, 47, and 48. Mitigation Measures for Visual Resources on page 32 of the EA explain some of the ways that equipment could be disguised (e.g. painting, sanding or bead-blasting, obtaining dishes that are non-white in color). The exact methods of disguising the equipment cannot be known until the equipment is obtained and park staff are able to determine the best methods based on the specifications, size, dimensions, color, material, etc.

Mitigation Measures for Visual Resources on page 32 include painting or disguising existing telecommunications infrastructure during maintenance and site visits. (The glare from the Apgar

telecommunications tower was due to the anti-climbing tower panels affixed to the tower; the panels were recently painted under separate environmental review and compliance to reduce sun glare.)

**56) Concern Statement:** *Improving park communications should not result in radio coverage of 100 percent of the park.*

**NPS Response:** The NPS agrees that 100 percent radio coverage is not appropriate or realistic; the plan is not intended to achieve 100 percent coverage for radio communications.

## **General**

**57) Concern Statement:** *Statements such as “if feasible,” “whenever possible,” and “thoroughly explored” need to be clarified. What determines when a given measure is or is not feasible? The commenter specifically cites statements in the EA on pages, 23, 28, and 31.*

**NPS Response:** To clarify these statements, text changes have been made on pages 23 and 28 (Table 2), and to the Mitigation Measures on pages 31, 32, and 33, under Vegetation and Soils, Recommended Wilderness, and Cultural Resources; see Text Changes, below.

**58) Concern Statement:** *Review and consultation under Section 106 as described in the plan/EA does not include the public.*

**NPS Response:** Consulting parties for this undertaking were consulted as defined in 36 CFR 800.2(c). In the case of public input, as defined by 36 CFR 800.2(d), the agency can use NEPA public involvement requirements to fulfill requirements for public consultation under Section 106. Regarding site-specific designs and determinations of effect, information may be provided through avenues such as PEPC or a public library.

**59) Concern Statement:** *The horse concessioner needs to be notified when actions under the plan are scheduled to be implemented due to potential safety concerns with construction and other work activity occurring near horse operations.*

**NPS Response:** This suggestion will be forwarded to the park’s Division of Concessions Management.

**60) Concern Statement:** *Actions under the plan do not consider ways to protect infrastructure from the elements, natural events, or vandalism.*

**NPS Response:** The park’s radio and information technology programs include safeguards against these risks through project design and routine maintenance, and additional actions to protect infrastructure are not necessary at this time.

**61) Concern Statement:** *The EA does not discuss effects of electromagnetic fields on human health and safety, but it is assumed OSHA guidelines will be followed.*

**NPS Response:** There are no specific OSHA standards for radiofrequency and microwave radiation issues (*OSHA 2021. [Radiofrequency and Microwave Radiation - Overview | Occupational Safety and Health Administration \(osha.gov\)](https://www.osha-slc.gov/occupational-safety-and-health-administration). OSHA website, safety and health topics, radiofrequency and microwave radiation. US Dept. of Labor. Last accessed 10-5-2021.*) As a standard safety practice at the park, locations for NPS radio antennas are selected such that the antennas are far enough away from occupied work or visitation areas to avoid dangerous exposure (such as heat burns, which can



occur if in very close proximity to a transmitting antenna). While the specific frequency of transmitting equipment used for public connectivity cannot be known until specific proposals and technologies can be evaluated, transmit power is expected to be relatively low due to the small size of the coverage areas; i.e. small coverage areas would not require high transmit power (see also text change to Appendix D, Wildlife, page D-3). Transmitting equipment will be placed far enough out of reach (e.g. atop masts, poles, or towers) and far enough away from human-use areas to avoid unsafe exposure. As a standard safety practice at the park, text has been added to Mitigation Measures on page 33 to clarify that such measures will also be in place under this plan (see Text Changes, below). (Telecommunications technology is also placed out of reach to avoid the potential for vandalism and signal interference.) Any applicants for right-of-way permits for commercial telecommunications equipment will be required to provide an electromagnetic radiation emissions study to ensure the equipment will not exceed limits deemed safe for human exposure. To reflect this, a condition has been added to Table 2, conditions and parameters for commercially provided cellular and Internet service (see Text Changes, below).

**62) Concern statement:** *The EA only mentions lightning once, but it is assumed structures will be protected from lightning.*

**NPS Response:** Telecommunications installations are (and will continue to be under this plan) properly grounded to protect the equipment and building infrastructure from damage from any lightning strikes.

**63) Concern Statement:** *A number of comments indicated misinterpretation of what the plan will do, including the following:*

- *Allowing connectivity for the public on roadways will increase distracted driving and associated risks.*
- *Coverage should not be provided at Logan Pass.*
- *If cell towers are located in recommended wilderness, it will be more difficult to designate these areas as wilderness.*
- *Propane generators should not be installed in the park's backcountry.*

**NPS Response:**

- Public connectivity will not be provided along park roads; the plan/EA specifies on pages 6, 25, 28, and 69 that signal spillover onto roadways will be minimized. The analysis of impacts to Visitor Use and Experience states on page 69 that commercial connectivity as proposed will not be expected to increase distracted driving in the park in any way that changes existing, inherent risks associated with vehicle travel. This is due to the plan's requirement to minimize signal spillover onto roads and because the park enforces a prohibition on using devices while operating a vehicle.
- The plan does not propose commercial coverage at Logan Pass; a suggestion to do so was dismissed in Appendix B of the plan/EA, page B-4.
- As stated on pages 3, 6, and 25 of the plan/EA, commercial telecommunications infrastructure will not be authorized or installed in the park's recommended wilderness.
- The plan/EA does not call for the installation of propane generators at backcountry locations. While the scoping newsletter for the plan included propane generators for backup power at communications sites, including within the backcountry, this was not carried forward to the plan due to consideration of other, less impactful options. If propane generators are proposed in recommended wilderness in the future (e.g. under one of the programmatic actions in the plan), approval would be subject to environmental review and analysis, including an MRA.

## TEXT CHANGES

**Underlined italics identify the position of the text change in the document. Strikeout is text that has been removed; bold text is new text added.**

Text changes to the Plan/EA have been made for the following reasons:

- Add functionality of park webcams to the Purpose and Need section of the plan/EA.
- Further explain why replacing the job-box on Looking Glass Hill with an equipment shelter is necessary; include an update that, due to recent developments, moving the repeater outside the park may be possible before replacing the shelter.
- Further explain the considerations necessary to avoid installation of an NPS radio repeater on Elk Mountain, and factors that could lead to additional permanent repeaters in recommended wilderness.
- Clarify that cell signals from sources outside the park may occasionally be accessible in the four developed areas where the park will consider commercially provided coverage.
- Clarify that, depending on site specific review, commercially provided cellular and/or Internet coverage within the developed areas at Many Glacier, Rising Sun, Two Medicine, and Lake McDonald Lodge could be point specific.
- Further explain how commercial signal spillover could be minimized.
- Clarify the feasibility of certain mitigation measures.
- Include additional mitigation measures.
- Clarify that a repeater is already present at Looking Glass Hill and action under the plan involves upgrading the shelter.
- Remove language stating that the MRA/MRDG would be appended to the decision document; the MRA/MRDG is a stand-alone document that will be posted to PEPC with the FONSI.
- Discuss impacts to audible landscapes of historic districts.
- Compare the number of radio repeaters that may be installed in recommended wilderness under the plan with the existing number of installations.
- Add to analysis of impacts to visitor use and experience a comparison of the amount of area where, as a result of this plan, connectivity could be available and where it will not.
- Clarify that, while coverage in additional campgrounds will not be provided under this plan, it could come from outside sources.
- Add references to Director's Order 53 and other authorities.
- Add a condition to Table 2 that applicants for right-of-way permits for commercial telecommunications equipment will be required to provide an electromagnetic radiation emissions study to ensure safe exposure limits are not exceeded.
- Clarify the dismissal of the exclusive use of satellite devices in remote areas.
- Explain why certain suggestions from public comment on the plan/EA have been considered but dismissed from detailed analysis.
- Discuss effects to wildlife, migratory birds, and plants from electromagnetic frequencies (EMF).
- Correct typographical errors on pages 18 and 48-49.

### Page 2, Chapter 1, Purpose and Need for Action, Background; additions to paragraphs 1 and 2

Slow Internet and network speeds, limited bandwidth, lack of phone or data access, lack of or outdated equipment, and inconsistency between phone and/or data systems limit NPS Internet and phone services in several locations. These limitations reduce administrative capabilities, interfere with the ability of NPS staff to serve visitors (including in remote but heavily used areas, such as Many Glacier and Two Medicine), **reduce webcam functionality (which the public relies on for information on current conditions)**, interfere with concessions transactions, and limit utility monitoring/alarm reporting and remote access to digital video recording (DVR) security systems...

Page 6, Chapter 2, Alternative A, Table 1, Section I, No. 3

Replace the existing job-box for the temporary NPS radio repeater on Looking Glass Hill (in recommended wilderness) with a manufactured equipment shelter with 20-foot mast and three solar panels.

- Entails helicopter flights to deliver equipment.
- **Note: Recent developments indicate that the repeater may be relocated outside the park without first requiring replacement of the job-box at the current site (see also Section II, Programmatic Action No. 2).**

Page 13, Chapter 2, Alternative A, Section I, Action No. 3, Replace the existing job-box for the temporary NPS radio repeater on Looking Glass Hill; additions to first and second paragraphs below the header

Replacing the existing job-box ~~would~~ **is necessary** to provide a more secure environment for the radio repeater, better protecting it from weather, lightning strikes, vandalism, and animal damage. **Damage to the repeater can disrupt radio communications. Providing a more secure environment for the equipment is necessary to maintain communications in the Two Medicine area. Replacing the job-box with an equipment shelter is also necessary to minimize the number of helicopter flights to the site to replace damaged equipment.** The taller mast would improve radio communications (for both ADMIN and LE) in the Two Medicine area.

**NOTE:** This proposed telecommunications plan includes eventually moving the existing repeater and associated equipment to a site outside the park (see Section II, Programmatic Action No. 2). **Recent developments indicate that this may be possible without the need to first replace the shelter at the current site. The option to replace the shelter is being retained, however, in the event that plans to relocate the repeater are delayed or do not come to fruition.**

Pages 14-15, Chapter 2, Alternative A, Section I, Action No. 5, If necessary, install a radio repeater on Elk Mountain; addition to paragraph preceding Implementation Methods

This would be a contingency action, implemented only if NPS radio coverage on the south side of the park is not sufficiently improved by actions under this plan together with use of a radio channel in the Middle Fork that is owned by an outside agency but shared with Glacier LE staff, **and/or by other options outside of recommended wilderness that may be identified in the future.** Radio communications on the south side of the park are necessary for NPS staff to communicate with Dispatch during daily travel along Highway 2 where personnel must respond to incidents such as railcar derailments, avalanches, wildland fire, and, increasingly, traffic accidents. Coverage is also necessary for the NPS to patrol and manage backcountry trails in the area and east of Scalplock Lookout. **Installation of a repeater on Elk Mountain would depend on whether communications between NPS personnel travelling the Highway 2 corridor, patrolling backcountry sites in recommended wilderness, or performing other administrative duties in this area of the park are able to clearly and reliably communicate with park Dispatch. Preliminary signal coverage propagation studies indicate that radio coverage along the south side of the park would become more reliable upon relocating the Looking Glass Hill repeater outside the park as proposed under this plan (Programmatic Action No. 2, Section II). Thus, relocating the Looking Glass Hill repeater, among other improvements, could remove the need for a repeater on Elk Mountain.**

Page 18, Chapter 2, Alternative A, Section II; correction to last bullet, 2<sup>nd</sup> sentence

At this time, helicopter transport of equipment would likely be necessary for actions at Looking Glass Hill and Apgar Mountain (as described below for actions at ~~this~~ **these** sites).

*Page 20, Chapter 2, Alternative A, Section II, Programmatic Action No. 2, Relocate the NPS Two Medicine repeater on Looking Glass Hill to a site outside the park; additions to first paragraph*

Under this plan, in collaboration with the Blackfeet Tribal Business Council (see Appendix C), the park is proposing to move the repeater and associated equipment to an existing telecommunications site on the Blackfeet Reservation adjacent to Montana Hwy 49, as preliminarily agreed to with the Tribe. **Recent developments indicate that this may be possible without the need to first replace the shelter at the current site. (The option to replace the shelter is being retained, however, in the event that plans to relocate the repeater are delayed or do not come to fruition.)** ~~Because~~ ~~upgrading the repeater at the current site under this plan~~ (Section I, Action No. 3) would require helicopter flights to transport equipment to the site. ~~it is likely that~~ ~~Helicopter flights would~~ **may** also be needed to remove ~~it~~ **the existing or upgraded equipment.** Detailed analysis of relocating the repeater must be deferred to project-level review and analysis because **it is not known whether flights will be required to remove the equipment and the final details of the relocation are still in progress.** ~~a detailed scope and design (e.g. the precise location, shelter size, tower height, equipment components, co-location with other agencies, etc.) are still under development with the Blackfeet Tribal Business Council.~~

*Page 23, Chapter 2, Alternative A, Section II, Programmatic Action No. 7; additions to final paragraph*

While not anticipated, radio repeaters may need to be permanently installed in additional areas if other actions taken under this plan do not sufficiently improve radio communications. Should additional permanent repeaters be necessary, they would not be expected at more than three sites. **Factors that could lead to additional repeaters include, for example, an increase in NPS operations in areas with limited radio coverage, where additional coverage is needed to support the safety of NPS personnel; continued limited coverage in high visitation areas, in both the front country and recommended wilderness, if coverage does not improve as expected from other actions under this plan; and changing technology that may perform better with the removal of repeaters from some areas in exchange for the placement of repeaters elsewhere.** Options outside recommended wilderness would be thoroughly explored before placing additional repeaters within the park's recommended wilderness (e.g. if radio signals can be sufficiently propagated to necessary coverage areas from sites outside recommended wilderness or outside the park and, if outside the park, any necessary approvals from outside jurisdictions can be secured). Results from a signal propagation analysis and recent Preventive Maintenance Inspections (PMIs) would also be examined before installing additional repeaters in order to determine whether adjustments to the current system would resolve coverage issues without the need to install additional repeaters in recommended wilderness. The park would also consider whether coverage needs could be met with a temporary scene-of-action (SOA) repeater before installing additional permanent repeaters in recommended wilderness. **Because SOA repeaters are installed on a temporary basis, they would only be used for temporary coverage needs.** If necessary **as determined by propagation studies and results of PMIs, and if SOA repeaters are not appropriate** and no options outside recommended wilderness exist, areas preliminarily identified for possible new repeaters include the Belly River, Nyack, or Two Medicine backcountry areas, or on Mt. Brown, all within recommended wilderness.

*Page 24, Chapter 2, Alternative A, Section II, Programmatic Action No. 8; insertions to 1st paragraph*

NPS Management Policies (2006) and **Director's Order 53, 10.2 Rights-of-Way**, authorize the issuance of ROW permits for the installation of utilities, including communication facilities, on NPS lands where, generally, there is "no practicable alternative to such use of NPS lands (section 8.6.4.1)" and provided the use "would not cause unacceptable impacts on park resources, values, or purposes (section 8.6.4.2)." All applications for ROW permits in the park, including those for wireless telecommunications uses, would be processed in accordance with 36 CFR 14, **all applicable policies including, but not limited to Management Policies 2006, Director's Order 53**, and the National Park Service's right-of-way permitting guidance document, Reference Manual 53B...

...If a ROW permit application is inconsistent with the conditions and parameters established in this plan and any applicable **law, regulation, or NPS policies**, it would be denied unless modified to ensure consistency.

Page 24, Chapter 2, Alternative A, Section II, Programmatic Action No. 8; clarification to end of 2<sup>nd</sup> paragraph

These areas are currently without cellular or Internet connectivity (**except for the occasional signal that may be picked up from sources outside the park, at Rising Sun for example**).

Page 25, Chapter 2, Alternative A, Section II, Programmatic Action No. 8; additions to paragraph below Figure 7

The coverage areas are within the park's Visitor Service Zone as defined by Glacier's 1999 General Management Plan (GMP) and are roughly delineated according to development footprints (as defined in park GIS files). **Opportunities to retain disconnected space within each of the coverage areas would be considered during project-level review. As a result, instead of blanket coverage throughout the developed footprint, connectivity within the coverage areas could be more point specific (e.g. focused at certain buildings, parking areas, and/or high-use areas within the development footprint). The precise coverage delineations within the four developed areas cannot be determined at this time due to a number of variables, including what technologies would be used, specific locations for equipment and infrastructure, and additional resource protection measures that may be identified during site-specific review...**

...Some signal spillover may occur in portions of recommended wilderness, the Backcountry Zone, and on roadways that are immediately adjacent to approved coverage areas, but providers would be required to minimize spillover outside approved areas as much as technologically feasible (see Conditions and Parameters for Commercially Provided Cellular and Internet Service, Table 2, below). **Spillover could be minimized by means of directional antennas and through placement of equipment, for example, or other methods depending on the type of technology proposed for a given area.**

Page 26, Chapter 2, Alternative A, Section II, Programmatic Action No. 8; insertions to 3<sup>rd</sup> and 5<sup>th</sup> sentences of final paragraph

The conditions and parameters include requirements from Director's Order No. 53 Special Park Uses, Reference Manual 53B (Right-of-Way), and Section **6.4.8 Rights-of-Way and 8.6.4.3 Telecommunication Sites** of the 2006 NPS Management Policies, which provides direction for management decisions regarding non-NPS telecommunications sites and would be in effect regardless of whether the park implements a telecommunications plan...

All applicable laws, regulations, policies, and orders pertaining to NPS ROW permits including, but not limited to, 54 U.S.C, 100902, 36 CFR 14, **Director's Order 53**, Reference Manual 53B (RM 53B), and Management Policies 2006 must be considered when evaluating any applications for new ROWs or renewals and amendments of existing ROW permits.

Pages 27-29, Chapter 2, Alternative A, Section II, Programmatic Action No. 8, additions to Table 2, conditions and parameters for commercially provided cellular and Internet service

Page 27, addition to left column heading

Conditions and parameters required in accordance with the 2006 NPS Management Policies, Section 8.6.4.3 Telecommunications Sites, **including policy amendments approved November 20, 2020**

Page 27, update to 1<sup>st</sup> column, 2<sup>nd</sup> row

Superintendents will accept an application for a telecommunications site only when the application is from a Federal Communications Commission licensee or from an agency regulated by the Department of Commerce through the NTIA, or when an application **includes or is accompanied by an application for receiving or transmitting equipment from a properly licensed provider. Some telecommunications services do not require any license to operate, such as Wi-Fi. However, other telecommunications services, such as cellular antennas, require a license from the Federal Communications Commission to operate. If the telecommunications service requires a license to operate, then that license must be provided with the application.**

Page 27, addition to 2<sup>nd</sup> column, 1<sup>st</sup> row (no. 1)

The requirement outlined in Management Policies, Section 8.6.4.1 **and Director's Order 53, Section 10.2 Rights-of-Way** that a right-of-way "may be issued only pursuant to specific statutory authority, and generally only if there is no practicable alternative to use of NPS lands" will also apply. **The guidance for conditions when a special use permit will not be issued which is found in Director's Order 53, section 4. Policy Guidance, shall also apply.**

Page 28, addition to 1<sup>st</sup> column, 9<sup>th</sup> row

**As appropriate, superintendents should consider making use of available interpretive media to caution park users of the limited (or nonexistent) cellular service and their personal responsibility to plan accordingly.**

Page 28, addition to 2<sup>nd</sup> column, 1<sup>st</sup> row (no. 6)

Equipment poles, masts, or other vertical infrastructure would be sited at or near existing communication sites whenever feasible **(e.g. provided doing so would not interfere with communications capabilities supported by existing telecommunications infrastructure or, if near non-coverage areas, does not result in excessive signal spillover).**

Page 28, addition to 2<sup>nd</sup> column, 4<sup>th</sup> row (no. 9)

**If monitoring determines that spillover is occurring beyond what is approved in the right-of-way permit, providers would be required to reduce signal strength.**

Page 29, addition to 2<sup>nd</sup> column 7<sup>th</sup> row (no. 17)

If and when the park approves and issues ROW permits, except as provided in 36 CFR 14.26(c)(1), the commercial telecommunications company or other telecommunications use permittee will be responsible for building and maintaining the related infrastructure according to the terms and conditions of the permit and will pay a fair market value for the use of federal land **and the NPS costs for monitoring the permitted activity.**

Page 29, additional condition added to 2<sup>nd</sup> column

**20. Applicants for right-of-way permits for commercial telecommunications equipment would be required to provide an electromagnetic emissions study to ensure the equipment would not exceed limits deemed safe for human exposure.**

Page 30, Chapter 2, Alternative A, Mitigation Measures; addition to Wildlife

- To protect birds from exposure to radiofrequency electromagnetic fields (RF-EMF), antennas would be mounted such that they are not immediately adjacent to structural features that may encourage birds to nest (e.g. platforms) and measures would be taken to discourage nesting (such as affixing netting or metal sheeting, for example) beneath eaves where antennas may be placed and some bird species may attempt to nest. These measures would be subject to technological feasibility and review under Section 106 of the NHPA.

Page 31, Chapter 2, Alternative A, Mitigation Measures; clarifications to Vegetation and Soils

- In consultation with the park's Vegetation Management Specialist, **enough** large diameter trees (7 inches or more in diameter) would be left standing ~~when feasible~~ to maintain a representative age class.
- All trenching and other ground disturbing activities would occur in previously disturbed areas, such as roads and utility corridors, whenever possible (**e.g. wherever previously disturbed ground is present and within feasible proximity to infrastructure that must be connected**).
- Foundations would be poured on-site whenever feasible (**e.g. if equipment necessary to mix and pour foundations can be transported to a given site**) to minimize the size of the hole that must be dug for the foundation (rather than bringing pre-cast footers to the site, for example, **which require a hole large enough for placement with machinery**).
- When selecting equipment for excavating foundations and trenches, equipment that causes the least ground disturbance will be used ~~whenever feasible~~ (**i.e. e.g. tracked machinery, which causes less disturbance than wheeled vehicles, will be used if feasible**).
- Vertical infrastructure would be self-supporting (i.e. no guy wires) whenever feasible to minimize ground disturbance (**e.g. if the size of the foundation and the height of the tower can be such that the additional stabilization provided with guy wires is not necessary**).
- When trenching, empty conduit would be laid whenever feasible (**e.g. provided doing so would not interfere with existing utility lines, or the ability to access lines for repair, for example**) for the possible installation of fiber optic cable in the future; this will reduce the need to re-open trenches if installing fiber.

Page 32, Chapter 2, Alternative A, Mitigation Measures; clarifications to Recommended Wilderness

- For remote sites without road access, equipment that is small and lightweight enough for packing on foot or livestock would be selected whenever possible (**e.g. when available and/or provided it meets technological objectives**) to avoid helicopter flights or reduce the number of flights.
- Scene of Action (SOA) repeaters and additional permanent repeaters would be sited outside of recommended wilderness whenever possible (**e.g. if radio signals can be sufficiently propagated to necessary coverage areas from sites outside recommended wilderness or outside the park and, if outside the park, any necessary approvals from outside jurisdictions can be secured**).

Page 32, Chapter 2, Alternative A, Mitigation Measures; additions to Recommended Wilderness

- **Before installing additional infrastructure or equipment in recommended wilderness, options outside of recommended wilderness would be thoroughly considered and implemented if feasible (e.g. if radio signals can be sufficiently propagated to necessary coverage areas from sites outside recommended wilderness or outside the park and, if outside the park, any necessary approvals from outside jurisdictions can be secured).**

- **If additional permanent repeaters are installed within recommended wilderness, the park would attempt to avoid a net gain of installations in recommended wilderness by considering whether another installation could be removed elsewhere if possible (e.g. if technically feasible and doing so would not interfere with other operations).**
- **All motorized use and new installations in recommended wilderness would be documented as part of the park’s Wilderness Character Monitoring Plan, which tracks use in the park’s recommended wilderness; documentation would be provided to the park’s Wilderness Coordinator before the end of the calendar year.**
- **The park would monitor signal spillover into recommended wilderness from commercial coverage provided under this plan. Monitoring would likely occur at least once per year. If signal spillover is occurring beyond what is agreed to and approved in the right-of-way permit, and/or is not consistent with the conditions and parameters established in this plan, the provider would be required to reduce signal strength.**

*Page 33, Chapter 2, Alternative A, Mitigation Measures; clarification to Cultural Resources*

- **Archeological surveys and, if necessary (e.g. if cultural materials are found), inventories, must be conducted in consultation with the park’s Cultural Resources Specialist prior to:**
  - any ground disturbance (such as digging trenches and foundations),
  - removal of trees, and
  - placement, installation, or construction of structures, including those placed on top of the ground (such as equipment shelters at Looking Glass Hill, Elk Mountain, or other undeveloped sites).

*Page 33, Chapter 2, Alternative A, Mitigation Measures; addition to Visitor Use and Experience*

- **The park would monitor signal spillover from commercial coverage provided under this plan into areas identified as disconnected space and onto roadways. Monitoring would likely occur at least once per year. If signal spillover is occurring beyond what is agreed to and approved in the right-of-way permit, and/or is not consistent with the conditions and parameters established in this plan, the provider would be required to reduce signal strength.**

*Page 33, Chapter 2, Alternative A; addition to Mitigation Measures*

**Health and Human Safety**

- **Electromagnetic frequency transmitting equipment would be placed far enough out of reach (e.g. atop masts, poles, or towers) and far enough away from human-use areas to avoid unsafe exposure.**

*Page 47, Chapter 3, Affected Environment and Environmental Consequences, Historic Districts, Impacts from Alternative A, Impacts from commercial telecommunications infrastructure; additional paragraph inserted before final paragraph*

**The audible landscape of historic districts could be altered slightly by intermittent sounds from connected devices, such as ringtones, conversations on speaker, or audio from live streaming music, videos, or other content. Intermittent noise from visitors using connected devices would have relatively low audibility, however, compared with that of vehicle traffic and other noises typical of developed areas. The noise would also be transient, likely to occur primarily during daytime hours, and would not appreciably change existing conditions, which include the sound of people having conversations with each other and using devices with previously downloaded content, such as music, podcasts, games, and movies, etc.**



Pages 48-49, Affected Environment and Environmental Consequences, Historic Districts; correct typographical errors to acronym for National Register of Historic Places (NRHP)

There would be no degradation of the architectural and historical features that contribute to the historic districts' integrity or significance, no alteration of elements that make the properties eligible (or potentially eligible) for listing with the ~~NHRP~~ **NRHP**, and no changes that would undermine NHL designations...

...Collectively, these actions have impacted and would continue to impact historic districts from the alteration or removal of features or elements of historic settings or environments and the addition of non-historic features or elements to a historic setting, but have not affected eligibility or potential eligibility for listing with the ~~NHRP~~ **NRHP**...

... Historic districts would retain their overall rustic character and appearance, and there would be no degradation of the architectural and historical features that contribute to the historic districts' significance, no alteration of elements that make the properties eligible (or potentially eligible) for listing with the ~~NHRP~~ **NRHP**, and no changes that would undermine NHL designations.

Page 50, Chapter 3, Affected Environment and Environmental Consequences, Recommended Wilderness, Impacts from Alternative A; clarification of first sentence.

The ~~installation of repeaters~~ **shelter upgrade** at Looking Glass Hill (Action No. 3, Section I) and **installation of a repeater** at Elk Mountain (Action No. 5, Section I) would adversely impact the undeveloped quality of recommended wilderness and opportunities for solitude because the repeater infrastructure would be signs of improvement and human habituation and would be visibly apparent to backcountry recreationists, depending on the vantage point.

Page 51, Chapter 3, Affected Environment and Environmental Consequences, Recommended Wilderness, addition to Impacts from Alternative A

**The possible addition of up to four permanent repeaters and three SOA repeaters would only slightly increase the number of similar installations in the park's recommended wilderness. Currently, there are an estimated 356 installations in Glacier's recommended wilderness that are similar in type, scale, and level of impact to a radio repeater (e.g. seasonal use cabins, lookouts, barns, fire caches, boat houses, outhouses and low-rider toilets, woodsheds, hitchrails, food-hanging poles, bridges, hiker shelters, weather stations, and two existing radio repeaters). Given the number of existing installations, the addition of up to four permanent repeaters and three SOA repeaters would not notably change the overall degree of impact to wilderness character from installations. SOA repeater installations would be temporary, and the plan includes a mitigation measure whereby, if additional permanent repeaters are installed, the park would attempt to avoid a net gain of installations in recommended wilderness by considering whether another installation can be removed elsewhere if possible (e.g. if technically feasible and doing so would not interfere with operations).**

Pages 52-53, Chapter 3, Affected Environment and Environmental Consequences, Recommended Wilderness, Impacts from Alternative A; strike text from bottom of p. 52/top of p. 53

Due to the programmatic nature of actions that would occur in recommended wilderness, a programmatic MRA would be prepared ~~and, in accordance with current NPS guidance, appended to the decision document for this EA.~~

Page 54, Chapter 3, Affected Environment and Environmental Consequences, Recommended Wilderness, Conclusion for Impacts to Recommended Wilderness; clarification of first sentence

The ~~installation of repeaters at~~ **shelter upgrade at Looking Glass Hill; and installation of additional repeaters at Elk Mountain;** and possibly three other sites, as well as SOA repeaters, would adversely impact the undeveloped quality of recommended wilderness and opportunities for solitude because the infrastructure would be signs of improvement and human habituation and would be visibly apparent to backcountry recreationists.

Page 69, Chapter 3, Affected Environment and Environmental Consequences, Visitor Use and Experience, Impacts from Alternative A, Impacts from commercial telecommunications infrastructure and connectivity; additions to 2<sup>nd</sup> paragraph

Most of the park would remain without connectivity, except in areas where signals from commercial sources outside the park can be picked up. **If blanket coverage is provided throughout the entire developed footprint of each of the four developed areas, coverage would be expected to be available over an area of approximately 150-160 acres, not including Apgar or St. Mary or other areas where sporadic signals from outside the park can be picked up. This acreage comprises the developed footprints for the Many Glacier, Two Medicine, Rising Sun, and Lake McDonald Lodge developed areas depicted in Figure 8. Coverage areas could be smaller if coverage is point-specific instead of throughout each developed footprint (precise coverage delineations within each of the four developed areas cannot be determined until project-level review). Therefore, given that the park is over one million acres in size, coverage under this plan would not be available in the vast majority of the park...**

... The developed areas where coverage would be considered under this plan include only three of the park's 13 front country campgrounds (Many Glacier, Two Medicine, and Rising Sun). Signals from out-of-park sources can sometimes be accessed from three other campgrounds – Fish Creek, Apgar, and St. Mary. But seven of the park's front country campgrounds would ~~remain without~~ **not be provided with connectivity under this plan (although signals from out-of-park sources may become available in additional areas).**

Page B-1, Appendix B, Alternative Elements Considered but Dismissed from Detailed Analysis; clarification to 2<sup>nd</sup> paragraph  
(original header is in bold, new text for header is underlined)

**Use satellite communication devices exclusively, instead of radios to support NPS field communications in remote areas.**

The park uses its radio system to provide daily status information to multiple personnel stationed in different, geographically separated areas. These “all call” messages are necessary to issue important parkwide updates and are also used when requesting assistance for an emergency or when multiple responders in different locations need to hear communications traffic associated with an incident that is underway. **While NPS personnel do use satellite communication devices in remote areas, including within a “coverage hole” in the Nyack drainage,** use of a Land Mobile Radio (LMR) system, including radio repeaters, allows single transmissions to reach multiple personnel at one time to provide needed, sometimes critical, information as quickly and efficiently as possible. Satellite technology, on the other hand, does not provide the capability of communicating with multiple receivers at one time. Therefore, ~~this action~~ **exclusive use of satellite communications devices instead of radios in remote areas** has been dismissed because it would not meet the purpose and need for this plan.

Additions to Appendix B, Alternatives and Alternative Elements Considered but Dismissed from Detailed Analysis

**Do not upgrade the existing temporary repeater on Looking Glass Hill; proceed instead with relocating the repeater to a site outside of recommended wilderness.**

Discussions are ongoing between the park and the Blackfeet Tribal Business Council on relocating the Looking Glass Hill repeater outside the park (and thus outside of recommended wilderness) (Programmatic Action No. 2, Section II of the EA). Recent developments indicate that the park may be able to relocate the repeater without first replacing the shelter at the current location. However, in the event that relocating the repeater is delayed or does not come to fruition, failure to replace the equipment shelter at the current site would put the equipment at continued risk of damage from weather, lightning strikes, vandalism, and wildlife, which could disrupt radio communications essential to park operations and the safety of visitors and NPS personnel in the Two Medicine Area. Therefore, this suggestion has been dismissed from detailed analysis because it would not meet the purpose and need to improve NPS radio communications.

**Install a radio repeater on US Forest Service land instead of on Elk Mountain.**

Sites on US Forest Service land were evaluated early in the process of plan development but were dismissed because coverage would not reach areas identified in coverage needs assessments. From some sites, Elk Mountain would block the signal from reaching desired coverage areas. Therefore, this suggestion is dismissed from detailed analysis because it would not meet the purpose and need to improve NPS radio communications.

**Do not install any additional structures in recommended wilderness.**

Eliminating the option altogether for structures in recommended wilderness, even if identified as necessary for the administration of the area as wilderness through the MRA/MRDG process, would preclude the ability to implement a number of actions under the plan that are or may be necessary to improve NPS radio communications, including those that support wilderness stewardship. Therefore, this suggestion has been dismissed from detailed analysis because it would not meet the purpose and need to improve NPS radio communications.

**Do not allow commercial coverage in campgrounds.**

The developed areas where coverage would be considered include only three of the park's 13 front country campgrounds – Many Glacier, Two Medicine, and Rising Sun. Signals from out-of-park sources can sometimes be accessed from other campgrounds (e.g. Fish Creek, St. Mary and Apgar), but seven of the park's front country campgrounds would not be provided with connectivity under this plan (however, it is important to note that, regardless of this plan, signals from out-of-park sources may become available in more areas, including additional campgrounds). During project level review of specific coverage proposals, opportunities to retain disconnected space within the four selected developed areas would be considered, including within associated campgrounds. However, because the campgrounds are areas where a potentially large number of visitors may benefit from coverage, a blanket decision to not allow coverage at any the campgrounds would not be consistent with plan objectives to enable connectivity where most needed. Also, the technological feasibility of excluding all or part of the campgrounds from coverage cannot be determined until project level review of specific proposals, when it is known what technologies would be used. This suggestion has therefore been dismissed because it is inconsistent with the purpose and need for taking action and the technical feasibility is unknown at this time.

**Limit commercial connectivity to St. Mary and Apgar or West Glacier; direct visitors to these areas for updates and park information.**

Cell coverage is already available at West Glacier, Apgar, and St. Mary from commercial sources outside the park boundary. The park's communications needs assessment identified the Many Glacier, Two Medicine, Rising Sun, and Lake McDonald Lodge developed areas as locations where connectivity is most needed and appropriate based on high levels of visitor use, the availability of stopovers, concessions operations, and connectivity needs for on and off-duty NPS staff, and because the ability to access signals from outside sources in these areas is very limited or does not exist. Therefore, this suggestion has been dismissed because it would not meet the purpose and need for this plan.

**Limit commercial coverage to concessioner administrative operations; prohibit concessioners from offering connectivity to guests or in public spaces.**

This suggestion has been dismissed because it would not meet the purpose and need of the plan to provide connectivity for the public in appropriate developed areas.

**Establish staffed information kiosks that display park updates in real time to all visitors, including those without phone or other devices.**

This suggestion has been considered but dismissed from detailed analysis because additional kiosks would be more visually intrusive and impactful to park resources than small-scale telecommunications equipment with low visibility (such as wireless access points), which can be disguised to blend with surroundings, mounted to existing infrastructure, or sited indoors. Staffing kiosks would not currently be feasible due to funding limitations. This suggestion has been dismissed due to economic infeasibility and because it unnecessarily duplicates less environmentally damaging measures.

**Prohibit the installation of towers for public connectivity.**

The appropriateness and potential impacts of any proposed towers would be evaluated during project-level review of commercial coverage proposals. Highly visible large-scale towers (e.g. taller than 80 feet) would not be appropriate in Glacier National Park and would not be permitted. Technologies that do not require additional vertical infrastructure (including towers) would be given foremost consideration or existing and appropriate NPS vertical infrastructure would be used whenever possible (Table 2 of the EA). The plan/EA also includes a requirement that the height of any vertical infrastructure be proportional to or less than that of existing infrastructure (Table 2 of the EA). The suggestion to entirely prohibit towers for public connectivity is dismissed because in some instances, towers may be the least impactful means of ensuring adequate signal transmission in a given area. For example, if trees and other vegetation could interfere with signal transmission, a tower that meets the conditions and parameters in Table 2 of the plan/EA may result in a lesser degree of impact than would the removal of trees and vegetation. This suggestion has therefore been dismissed because it cannot be known whether towers are appropriate until project level review, and prohibiting towers could duplicate a less environmentally damaging alternative and possibly result in too great of an environmental impact.

**Include cell coverage at all campgrounds.**

The four developed areas where the park would consider cell and/or Internet connectivity under the plan have been identified as areas where public connectivity is most needed and appropriate based on factors such as high levels of visitor use, concessions operations, the availability of stopovers such as lodging or dining, and connectivity needs for on and off-duty NPS staff. Three of the park's front country campgrounds are associated with these areas (at Two Medicine, Rising Sun, and Many Glacier). Other front country campgrounds have not been identified as appropriate sites for connectivity because they do not meet similar criteria, are in close proximity to recommended wilderness (increasing the chance of

signal spillover into recommended wilderness), or are in the park's Rustic Zone as defined by the 1999 General Management Plan (GMP), where facilities, including campgrounds, are managed for a more primitive visitor experience. Backcountry campgrounds (in the GMP Backcountry Zone) are also managed for a primitive experience, with a greater emphasis on pristine natural conditions, and many are located within recommended wilderness. The purpose and need of the plan includes cellular and/or Internet service in appropriate developed areas while minimizing impacts to park resources (including recommended wilderness) and signal spillover into undeveloped areas. This suggestion has been dismissed because it would be inconsistent with the purpose and need of the plan to limit service to appropriate areas and minimize impacts to recommended wilderness, and because it would conflict with the 1999 GMP.

**Prohibit commercial towers that are taller than surrounding trees.**

Depending on proximity, height, and density, trees can block signal transmission. To transmit a signal, a tower may need to be taller than certain trees, such as those in close proximity. However, towers would still be subject to the conditions and parameters on tower height stipulated in the EA, whereby the height of any vertical commercial infrastructure (including towers) would need to be as low as possible, or proportional to or less than that of existing infrastructure. Given the scale of existing infrastructure where connectivity would be considered, towers taller than 80 feet would not be permitted, and 80-foot towers would only be permitted if proportional to existing infrastructure (see Table 2). A blanket prohibition on towers that are taller than trees is dismissed because it would be technically infeasible.

**Include better phone service at the chalets.**

Commercial cellular and/or Internet service would not be appropriate at Granite Park or Sperry Chalets given the relatively small-scale of developed infrastructure and visitor use (compared with that of the four developed areas where the park would consider such service) and because of the chalets' proximity to recommended wilderness. Minimizing signal spillover into undeveloped areas and recommended wilderness is part of the purpose and need of the plan; allowing cellular and/or Internet services at the chalets could result in excessive signal spillover into backcountry areas and negatively impact the visitor experience for people seeking a disconnected, wilderness environment. Sporadic cell signals from sources outside the park can also be accessed at both chalets, and chalet staff are equipped with radios to contact park Dispatch. Therefore, this suggestion has been dismissed because it conflicts with the purpose and need of the plan and would cause too great of an environmental impact.

**The NPS should charge a fee for a cell service connection.**

The NPS would not be providing cell service; the NPS would be providing ROW access (if approved) to commercial service providers and would establish terms and conditions of the ROW. The NPS would not have authority to charge for service. As explained on page 25 of the plan/EA, connectivity would be available to users according to their monthly service plan and use fees, except possibly at concessioner-operated facilities where guests may or may not be charged for access. This suggestion has been dismissed because it is outside the scope of NPS authority.

**The NPS should install pay phones at the edge of parking lots instead of allowing cell service.**

This suggestion has been dismissed because it would not meet the purpose and need of the plan to enable cellular and/or Internet connectivity in appropriate developed areas.

**Allow commercial infrastructure to be co-located on existing park telecommunications infrastructure.**

To avoid signal interference and safeguard NPS equipment and communications, which must be secured for life safety communications needs, commercial infrastructure will not be co-located on existing park telecommunications infrastructure. This suggestion has been dismissed because it would be technically infeasible and inconsistent with NPS telecommunications best management practices.

**Recommend that the NPS use this plan as an opportunity to remove facilities.**

This suggestion has been dismissed because it is outside the scope of this NEPA review.

*Page C-2, Appendix C, Consultation, Cooperating Agencies, Blackfeet Nation; addition to end of 1<sup>st</sup> paragraph*

Depending on the outcome of further discussions and ultimately a decision document, the Tribe and Park could pursue development of a formal agreement to relocate the Looking Glass Repeater. **Recent developments and ongoing discussion with the Blackfeet Tribal Business Council indicate that the repeater may be located without the need to first replace the shelter at the current site.**

*Page D-3, Appendix D, Impact Topics Dismissed from Detailed Analysis, Wildlife; insert at end of section*

**While some studies indicate that exposure to radiofrequency electromagnetic fields (RF-EMF) may affect birds, the potential for birds or other wildlife to be exposed to harmful levels of RF-EMF under this plan would be highly unlikely. This is because, while the actual transmit power for each coverage area for public connectivity cannot be known until the technology for specific proposals can be evaluated, transmit power is expected to be relatively low because the small coverage areas would not require high transmit power. Directional antennas (i.e. small-gain antennas), which would likely be used to direct coverage to specific areas, would further reduce the radiated power that drives RF-EMF. Radiated power is reduced with distance, so only birds nesting in very close proximity to RF-EMF transmitting technologies would potentially be at risk of exposure. The likelihood of birds nesting in proximity to transmitting technologies would be low because coverage areas would be in developed areas where nesting habitat is very limited, if present at all. Developed areas where public connectivity would be considered are also outside the known bird migratory areas in the park (Lisa Bate, GNP wildlife biologist, personal communication). Whenever technically feasible, antennas would be mounted such that they are not immediately adjacent to structural features that may encourage birds to nest (e.g. platforms), and/or measures would be taken to discourage nesting (such as affixing netting or metal sheeting, for example, beneath eaves where antennas may be placed and some species of bird may attempt to nest). Signal coverage areas would also be too small to affect bat foraging activities, as bats are known to travel several miles when foraging (Lisa Bate, GNP wildlife biologist, personal communication). The potential for impacts to birds and other wildlife from RF-EMF would be further assessed during project level review; any additional site-specific mitigation measures would also be identified at that time.**

**Impacts to birds and other wildlife from improvements to NPS telecommunications systems are similarly unlikely. In order to have a clear signal path, microwave dishes and radio antennas are generally placed away from trees and tall vegetation where many birds nest. Where trees could interfere with the signal path, they would be thinned (at the Many Glacier Entrance Station, Two Medicine Entrance Station, and Chief Mountain POE); this will reduce the risk of birds nesting adjacent to the signal path. Exposure to RF-EMF from NPS telecommunications is also unlikely (including for birds that nest in shrubs or ground vegetation) because microwave frequencies are highly directional, single, narrow beams between points (estimated at approximately 5 to 10-degree width), and do not fan out in all directions. Radio frequencies are at relatively low frequency (approximately 160-175 MHz for omnidirectional, or VHF, antennas, and 410-430 MHz for**

directional, or UHF, antennas) and only occur during active transmission; i.e. radio antennas do not transmit RF when radios are not in use. As with cellular technologies, microwave dishes would be placed in developed areas where bird nesting habitat is less prevalent, and radio repeater antennas would typically be situated on the summit of mountain peaks, where birds are less likely to nest due to exposure and sparse vegetation. Given the low likelihood of exposure, any impacts to birds, bats, or other wildlife that do occur from RF-EMF technologies under this plan would be at the individual level, with no community or population-level effects.

*Page D-3, Appendix D, Impact Topics Dismissed from Detailed Analysis, Wildlife, Migratory Birds: additions to last paragraph.*

**In addition to the discussion above (under Wildlife) pertaining to possible effects to birds of RF-EMF, there could be some increased potential for migratory birds in flight to collide with proposed NPS telecommunications towers (the plan proposes replacing three existing equipment poles with 40-foot lattice frame towers and extending one existing 40-foot tower to 80 feet)...**

...With this requirement in place, there would be no **measurable** impacts to nesting migratory birds and, ~~therefore~~, no impacts to species reproduction or to populations and abundance.

*Page D-4, Appendix D, Impact Topics Dismissed from Detailed Analysis, Vegetation and Soils; insert at end of section*

**The likelihood of observable impacts to plants from RF-EMF exposure due to public connectivity is very low due to the small size of coverage areas, small-scale/low transmit technologies, directional antennas that would direct frequencies to specific coverage areas and/or limit signal spillover, and because transmitting technologies would be located in developed areas where vegetation is less abundant. The potential for impacts to vegetation would be further assessed during project-level review, and any additional site-specific mitigation measures would be identified at that time. Damage to plants from RF-EMF associated with NPS telecommunications improvements would also be low due to the narrow beam associated with microwave frequencies, limited duration of radio frequencies (only during active transmission), placement of transmitting technologies away from trees and tall vegetation in order to achieve a clear signal path, and locating the technologies in developed areas or on mountain summits where vegetation is less abundant. Given the low risk of exposure and small areas over which impacts could occur, and because vegetation species that may be present persist beyond the immediate area where they could be impacted, any impacts to plants that do occur would be at the individual level, with no effects to vegetation communities or populations.**