



References



Appendix 1

Background Information for Necessary and Appropriate Commercial Services

Necessary and Appropriate Commercial Services

All commercial services operating within Glacier National Park must meet the definition of “necessary and appropriate.” What constitutes necessary and appropriate is determined by the park and based upon the National Park Service Organic Act, the park purpose and significance and the park’s General Management Plan.

Below is a description of the “necessary and appropriate” criteria used. This criteria was developed by Glacier National Park.

Criteria 1: The term “necessary” is defined for Glacier National Park as meeting one or more of the following:

1. Contributes to visitor understanding and appreciation of park purpose and significance.
2. Enhances visitor experiences consistent with park area philosophies.
3. Assists the park in managing visitor use and educating park visitors.
4. Is an essential service or facility not available within a reasonable distance from the park.

Criteria 2: The term “appropriate” is defined for Glacier National Park as meeting *all* of the following:

1. Services are consistent with the purpose and significance of Glacier National Park.
2. Services are consistent with laws, regulations, and policies applicable to Waterton-Glacier International Peace Park and the National Park Service.
3. Services do not compromise public health and safety.
4. Services do not significantly impact or impair park resources or values.
5. Services do not unduly conflict with other park uses and activities.
6. Services do not exclude the general public from participating in limited recreational opportunities.

TABLE 1. COMMERCIAL SERVICES CONSIDERED

X indicates that the service would meet that element of the criteria.

* indicates that the service would meet that element under specific conditions.

Current Commercial Services	Criteria 1: Necessary				Criteria 2: Appropriate						N & A Services for the Park	
	1	2	3	4	1	2	3	4	5	6	Yes	No
Lodging	X	X	X		X	X	X	*	X	X	X	
Retail/Vending/ATM	X	X	X	X	X	X	X	X	X	X	X	
Food/Beverage/Catering Meals				X	X	X	X	X	X	X	X	
Equipment Rentals	X	X	X	X	X	X	X	X	X	X	X	
Boat Tours	X	X	X		X	X	X	X	X	X	X	
Horse Packing Services	X	X	X		X	X	X	X	X	X	X	
Public Showers				X	X	X	X	X	X	X	X	
Public Laundry				X	X	X	X	X	X	X	X	
Emergency Road Services			X	X	X	X	X	X	X	X	X	
Commercially Guided Hiking	X	X	X		X	X	X	X	X	X	X	
Guided Cross-Country Skiing/Snowshoeing	X	X	X		X	X	X	X	X	X	X	
Commercially Guided Bicycle Tours	X	X	X		X	X	*	X	*	X	X	
Guided Overnight Backpacking	X	X	X		X	X	X	X	X	X	X	
Guided Photography Workshops	X	X	X		X	X	X	X	X	X	X	
Guided Art Seminars	X	X	X		X	X	X	X	X	X	X	
Guided Horseback Riding	X	X	X	*	X	X	X	X	X	X	X	
Guided Interpretive Vehicle Tours and Public Transportation	X	X	X	X	X	X	X	X	X	X	X	

Potential Commercial Services	Criteria 1: Necessary				Criteria 2: Appropriate						N & A Services for the Park	
	1	2	3	4	1	2	3	4	5	6	Yes	No
Guided Rock Climbing	X		X		X		X	X	X	X		X
Guided Ice Climbing	X		X		X		X	X	X	X		X
Guided Natural and Cultural History Hikes	X	X	X		X	X	X	*	X	X	X	
Guiding Fishing Trips	*	*			X		X		X	X		X
Guided Underwater Diving	X	X	X		X	X	X	X	X	X	X	
Guided Rafting	X	X	X		X	X	X	X	X	X	X	
Step-on Guide Service	X	X	X		X	X	X	X	X	X	X	
Guided Motorcycle Tours	X				X	X	X			X		X
Commercial Instruction (skill or technique based instruction)	*	*	*	*								X
Firewood Sales		X	X		X	X	X	*	X	X	X	
Personal Services (barbers, beauty salon, massage)	*	*	*	*								X
Crystal Reading												X
Child Care		X		X	X	X	X	X	X	X	X	
Kennels			X	X		X	*	*	*	X		X
Horse Boarding		X	X		X	X	X	*	*	X	X	
Marina Services					X	X	X	*	X	X		X
Boat Transportation (water taxi)		X	X		X	X	X	X	X	X	X	
Private Vehicle Shuttle		X	X		X	X	X	X	X	X	X	
Gas Stations						X	X		X	X		X
Taxi Services		X	X	X	X	X	X	X	X	X	X	
Horse Drawn Carriage (guided)	X	X	X		X	*	*	X		X		X
Horse Drawn Sleigh (guided)	X	X	X		X	*	*	X		X		X
Guided Dog Sleds	X	X	X		X		X		X	X		X
Institutions and Agencies That Do Not Qualify for Fee Waivers (Glacier Natural History Association and Glacier Institute)	X	X	X		X	X	X	X	X	X	X	
Commercial Entertainment Offered Within Concession Facilities (plays, movies, concerts)**	X	X			*	X	X	X	X	X	X	
Employee Support Facilities and Services				X	X	X	X	X	X	X	X	

**Commercial entertainment outside concession facilities and other special events would be regulated by management policies and special use permit requirements.

Current Commercial Services

- Lodging

In some locations, lodging in the park is necessary to meet basic needs for overnight accommodations within a reasonable distance of park activities. Lodging facilitates and complements the visitor experience. Perpetuating lodging in existing lodging facilities assists with the preservation of the historic landmark and national register properties and meets the goals of the General Management Plan by continuing traditional services.

Lodging in the park is consistent with the park purpose of providing for the public benefit and enjoyment of the park. Providing lodging within the park is consistent with National Park Service policy. Lodging services do not compromise public safety or public health and do not significantly impact park resources beyond approved park development areas. Lodging services do not conflict with other park uses, and they do not limit recreational opportunities of the general public.

- Retail (including vending and automatic teller machines)

Camp stores and gift shops located within a reasonable distance of park activities are necessary for park visitors to obtain food and basic items they need to enjoy the park. Gifts, souvenirs and other merchandise

are necessary if they enhance visitor understanding and appreciation of the park mission and values and complement the fundamental experiences of the park. Information tags on merchandise foster awareness about park resources and values. Souvenirs provide tangible keepsakes to remind visitors of their visit to the park so that they do not feel the need to take home a natural object or artifact that is part of the park fabric.

Sales of food and basic camping supplies are consistent with park policy and promote visitor well-being and enhance visitor's enjoyment of the park. These services do not significantly impact park resources or values and do not conflict with other park uses. These services do not adversely affect recreational opportunities in the park.

- Food and Beverage (including catering of meals)

Food and beverage services are necessary so park visitors and residents can meet their basic needs within a reasonable distance of park activities.

Food and beverage services are appropriate for the benefit of the public while they enjoy the park. These services are consistent with National Park Service policy, and they promote public well-being. Park resources and values are not significantly impacted by these services, and they do not conflict with other park uses. These services do not limit recreational opportunities for the public.

- Equipment Rental

Each type of rental equipment must be evaluated against the necessary and appropriate criteria on a case-by-case basis. Limited rental of items such as fishing and backpacking equipment can help facilitate visitor experiences in the park and contribute to the public's appreciation of park resources. In some cases, this type of equipment is not available within a reasonable distance from the park.

These services can be consistent with park purpose and policies. They may help promote public health and safety. Making the equipment available to the park may help protect park resources by educating the public on appropriate methods or "leave no trace" ethics. Most equipment rental services do not conflict with other park uses and may enhance recreational opportunities for the public. Bicycle rentals would not be provided in the park because they could conflict with public safety or impact park resources.

- Boat Tours

Interpretive services offered by boat tours help the visitor to understand and appreciate park resources. The services are consistent with park area philosophies as currently provided. The tours provide another avenue for the public to access remote areas. The services are consistent with all six of the appropriate criteria.

- Horse Packing Services

Packing services, particularly for drop trips into the backcountry, can enhance a visitor's experience or, for visitors who cannot carry all their own supplies, provide the opportunity to experience the backcountry. Packing services can assist the park in managing visitor use by delivering supplies where needed such as to the backcountry chalets. This service can be managed to meet all the appropriate criteria. Management actions would include limits on trails on which stock are allowed.

- Public Showers and Laundry Facilities

Showers and laundry facilities are necessary since they complement fundamental experiences of visitors. Hiking and camping are encouraged, and visitors need to occasionally clean up. Since there are very limited public shower facilities available outside the park and since available facilities are a considerable distance from the park, these services are necessary in the park. These services are appropriate since they promote public health and well-being. These facilities do not impact park resources beyond what is approved in park management plans. They do not conflict with other park uses.

- Emergency Road Services

Most of the park's visitors access the park by private vehicle. Lockout, towing, and repair services are frequently needed to move people through the park and prevent the abandonment of private vehicles. These services are essential for the visiting public and can be managed to meet all of the appropriate criteria.

- Guided Activities — General Elements

In general, most guided activities meet three of the necessary criteria. They enhance visitors' appreciation of park values through education of small groups of visitors by a knowledgeable guide. They facilitate and complement the fundamental experiences of park visitors through the enhancement of a quality park experience. Guided activities conform to the park's interpreter standards. A guide can provide a more in-depth educational experience than the visitors might gain through reading materials. In addition, a guide can provide an increased margin of safety for those wanting to participate in more adventurous recreational activities. Guides can provide an in-depth "leave no trace" educational experience that teaches skills that can be used in the future in this and other natural areas.

In general, most guided activities are appropriate since they are consistent with the purposes and values for which Glacier National Park was established. They provide enhanced opportunities for visitors to enjoy the park, while teaching skills to leave the park unimpaired for future generations. These services are consistent with National Park Service policy. These services do not compromise the public's well-being, and in many cases they enhance the visitors' margin of safety. Guided activities do not significantly impact park resources and should teach skills that will result in fewer impacts. These services should not unduly conflict with other park uses. Limits on commercial group sizes and the locations allowed for their activities prevent limited recreational opportunities from being monopolized by commercial parties.

Each guided activity must be considered on its own merits. Some were found to only meet two of the "necessary" criteria and some failed to meet all of the "appropriate" criteria. Each current guided activity is discussed below.

- Guided Hiking
This service meets three of the necessary criteria and all of the appropriate criteria as discussed above.
- Guided Cross-country Skiing/Snowshoeing
This service meets three of the necessary criteria and all of the appropriate criteria as discussed above.
- Guided Bicycle Tours
This service meets three of the necessary criteria as discussed above. Within certain perimeters, these services would meet all of the appropriate criteria. Roadways in the park, particularly the Going-to-the-Sun Road, are narrow with little or no room for bike lanes and with steep drop offs. The Going-to-the-Sun Road is primarily recognized as a motor vehicle roadway. Restrictions on bicycle travel to certain times of the day and conditions for bicycle tours would need to be considered to allow this service to meet appropriate criteria 3 and 5.
- Guided Overnight Backpacking
This service meets three of the necessary criteria and all of the appropriate criteria as discussed above.
- Guided Photography Workshops
This service meets three of the necessary criteria and all of the appropriate criteria as discussed above.
- Guided Art Seminars
This service meets three of the necessary criteria and all of the appropriate criteria as discussed above.
- Guided Horseback Riding
This service meets three of the necessary criteria and all of the appropriate criteria as discussed above. Similar services are available in close proximity of the park but not within the park.
- Guided Interpretive Vehicle Tours and Public Transportation
Public transportation and interpretive vehicle tours are necessary to facilitate the fundamental experiences for park visitors who do not have their own transportation to get to the park or choose to

learn about the park through other sources. Shuttle services between trailheads and other destinations within the park enable visitors to conveniently access major points of interest.

- Public transportation and interpretive vehicle tours are appropriate because they benefit the public by increasing opportunities to enjoy the park. These services are consistent with National Park Service policy. The services reduce crowding on park roads, enhance visitors' experiences through interpretation opportunities, simplify getting around the park, and make it easier and convenient to view park features. These services would reduce impacts on park resources due to fewer vehicles on the roads and reduced need for parking spaces at popular pull offs. Scenic values would be less impacted with fewer vehicles in the park. These services would not conflict with other park uses, and would compliment public transportation systems outside the park. Recreational opportunities would be enhanced due to simple shuttle logistics for hikers and boaters.
- Guided Rock Climbing
This service would fail to meet the appropriate criteria 2. Commercially guided off-trail travel is prohibited in the backcountry zone of the park, where rock climbing activities would likely occur. For this reason and for reasons of safety, this service is not considered to meet the necessary and appropriate criteria.
- Guided Ice Climbing
This service would fail to meet the appropriate criteria 2. Commercially guided off-trail travel is prohibited in the backcountry zone of the park, where ice climbing activities would likely occur. For this reason and for reasons of safety, this service is not considered to meet the necessary and appropriate criteria.
- Guided Natural and Cultural History Hikes
This service meets three of the necessary criteria and could be managed to meet all of the appropriate criteria as discussed under general guided activities.
- Guided Fishing Trips
This service would fail to meet the appropriate criteria 2 and 4. Commercially guided fishing increases the chances for mortality of protected species. Promoting guided fishing trips as a commercial activity would affect policies established with Waterton Lakes National Park.
- Guided Underwater Diving
This service meets three of the necessary criteria and all of the appropriate criteria as discussed under general guided activities.
- Guided Rafting
This service meets three of the necessary criteria and all of the appropriate criteria as discussed under general guided activities.
- Step-on Guide Services
This service meets three of the necessary criteria and all of the appropriate criteria as discussed under general guided activities.
- Guided Motorcycle Tours
Although this service meets one of the necessary criteria, it failed to meet two of the appropriate criteria discussed under general guided activities.

Other Potential Commercial Services

- **Commercial Instruction (skill-based or technique-based instruction)**
This service fails to meet the necessary criteria because its focus is to teach skills and it is not focused on park values or enhancing understanding or appreciation of the park. These services would not be considered necessary and appropriate for provision in the park.
- **Firewood Sales**
This service meets two of the necessary criteria and all of the appropriate criteria. Sale of firewood helps to control the collection of dead and down firewood or the cutting of vegetation, thereby helping to preserve habitat. The service helps to facilitate campfires, which have been a traditional camping activity in national parks. This service would be considered appropriate as long as campfires are considered appropriate (for example, if analysis of air quality were to necessitate management action to ban campfires, then the sale of firewood would no longer be deemed appropriate).
- **Personal Services (beauty shops, barber, massage)**
These services fail to meet the necessary criteria and therefore are not considered necessary and appropriate services in the park.
- **Crystal Reading**
This service fails to meet the necessary criteria and therefore is not considered a necessary and appropriate service in the park.
- **Child Care (daily)**
The provision of child care would enable visitors to participate in a wider range of activities that may not be appropriate for all ages. These services are not readily available in the vicinity of the park. However, the licensing requirements for provision of these services may render them impractical or infeasible to provide. These services could be provided in a manner that met all of the appropriate criteria.
- **Kennels**
Many park visitors arrive in the park with pets, which are not allowed on park trails and in the backcountry. As kennel services are not readily available in the area, pet owners' options are to abstain from participating in park activities or to leave their pets in their vehicles. Provision of kennel services would assist the park in managing park use.
However, these services could not be managed to be consistent with the appropriate criteria. Concerns would include spread of disease to native species, noise and odors, and lack of an appropriate location that would not conflict with other park uses and activities. For these reasons, this service would not be considered a necessary and appropriate service in the park.
- **Horse Boarding**
Boarding of private horses (for one or two days) in preparation for accessing park trails and backcountry would enhance visitor experiences consistent with park philosophies and would assist the park in managing this visitor use.
These services could be managed to be consistent with the appropriate criteria. Concerns would include the length of stay, hay and feed that is free of noxious weed and seed, and restriction of the stock boarded to be disease free in order not to infect park stock and wildlife. This activity would occur only in existing stables run by concessioners.
- **Marina Services**
These services would not meet any of the appropriate criteria and would, therefore, not be considered as a necessary and appropriate service in the park.
- **Boat Transportation (water taxi)**
Public transportation by boat would enhance visitor experience by providing access to areas of the park and could assist the park in managing visitor use. This service could be managed to meet all of the appropriate criteria.

- **Private Vehicle Shuttle**
The shuttling of private vehicles from one trailhead or area of the park to another area would provide an alternative to a segment of public transportation. It would enhance visitor experience by helping to facilitate access to some areas of the park and could assist the park in managing visitor use. This service could be managed to meet all the appropriate criteria.
- **Gas Stations**
These services would not meet any of the appropriate criteria and would, therefore, not be considered as a necessary and appropriate service in the park.
- **Taxi Services**
Taxi services, if managed in a way that is consistent with the management area philosophies, could enhance visitor experience and assist the park in managing use by assisting with access. The service can supplement other limited public transportation services that are not readily available to all visitors. The service could be managed to be consistent with all of the appropriate criteria.
- **Horse Drawn Carriage**
These services could be provided in a manner that would enhance visitor experience, provide an educational opportunity to the public, and contribute to visitors' understanding and appreciation of the park if a strong interpretive element were included.

These services could not be managed to be consistent with the appropriate criteria. Concerns would include where the services would be provided and at what level. Use on roads that are open to the motor vehicles would be in conflict with park regulations and policies and would compromise public safety. The only remaining roads would not provide sufficient opportunity for the experience without impacting park resources or conflicting with other park uses. For these reasons, this service would not be determined to be necessary and appropriate in the park.

- **Horse Drawn Sleigh**
These services could be provided in a manner that would enhance visitor experiences, provide an educational opportunity to the public, and contribute to visitors' understanding and appreciation of the park if a strong interpretive element were included.

These services could not be managed to be consistent with the appropriate criteria. Concerns would include where the services are provided and at what level. Use on roads that are open to motor vehicles would be in conflict with park regulations and policies and would compromise public safety. Use on roads that are closed to vehicles would conflict with other park uses and activities, such as cross-country skiing and snowshoeing. For these reasons, this service would not be determined to be necessary and appropriate in the park.

- **Guided Dog Sled Services**
These services could be provided in a manner that would enhance visitor experiences, provide an educational opportunity to the public, and contribute to visitors' understanding and appreciation of the park if a strong interpretive element was included.

These services would not, however, be consistent with the appropriate criteria. Concerns would include where the services would be provided and at what level. Use on roads that are open to motor vehicles would be in conflict with park regulations and policies and would compromise public safety. Use on roads closed to vehicular traffic would conflict with regulations that prohibit dogs on trails and in the backcountry. For these reasons, this service would not be determined to be necessary and appropriate in the park.

- **Commercial Entertainment (plays, movies, concerts for fee within concessioner facilities)**
These services could be provided in a manner that would enhance visitor experiences and contribute to visitors' understanding and appreciation of the park if themed appropriately.

If themed appropriately to be consistent with the purpose and significance of the park, these services could be managed to be consistent with all the appropriate criteria. Concerns would include appropriate entertainment themes that would not conflict with other park uses and activities, including other concessioner services and interpretive programs.

- Employee Support Facilities and Services

Employee support facilities and services are necessary because of the distance to, expense and limited availability of out-of-park-housing. Most rental housing outside the park is not available on a short term basis, which seasonal employees require. Some employees work split shifts; others provide essential emergency response services and must be available 24 hours a day.

These services are appropriate since they are consistent with National Park Service policy, which allows concession employees essential to the management and operation of the park to live within the park. This service is consistent with the management of Glacier National Park. These facilities and services do not compromise public health or safety, and they enhance visitor well-being by allowing for efficient visitor services. These facilities do not significantly impact park resources since they are allowed in areas addressed by approved park plans. There are no undue conflicts with other uses of the park.

Appendix 2

Prescriptions and Standards for Necessary and Appropriate Commercial Services

Commercial services prescriptions and standards describe how to achieve the conditions outlined in the Commercial Services Statement for the park. They also describe the conditions to be attained for each of the services described in the section, “Necessary and Appropriate Services” in Chapter 2 Alternatives. These standards provide direction for specific areas within the park. They address visitor service and experience objectives concerning access, natural resources, cultural resources, facilities and maintenance.

The standards provide future *performance expectations* for each type of service and do not necessarily reflect what is currently available in the park. They are based on a comprehensive evaluation of commercial services and include consideration of opportunities beyond park boundaries.

PRESCRIPTIONS AND STANDARDS FOR NECESSARY AND APPROPRIATE COMMERCIAL SERVICES

Lodging Prescription

- **Description**
Budget to deluxe lodging is offered at prices affordable to a broad spectrum of visitors. Accommodations include budget cabins and hostel units, standard to deluxe motel and cabin units, standard to deluxe hotel units, and rustic backcountry chalet accommodations. A variety of accommodation types and price ranges are available.

Per the General Management Plan, a minimum of approximately 500 guest units will be maintained.

Most lodging within the park is open from June to October. Some accommodations are available from mid-May to October. Backcountry chalet accommodations are typically available from July through early September. No year-round accommodations are available in the park.

- *Budget* – Budget accommodations include housekeeping cabins without bathrooms and hostel accommodations with common bathrooms and shower facilities in close proximity. These accommodations provide only very basic amenities and provide for very basic visitor needs. Although the rooms are minimally or rustically furnished, guests are provided comfortable beds, bedding and linens with daily housekeeping services, and bathroom facilities. Prices vary, but are under \$50 per night (in 2001).
- *Standard* – Standard accommodations include rustic housekeeping cabins with private bathrooms, motel units and small hotel and small cabin units without lake views. All are comfortably furnished to complement park themes. All have private bathrooms. Amenities are basic and designed around meeting basic visitor needs. They may include in room phones. Standard rates range from \$50-100 per night (in 2001).
- *High* – High accommodations include motel units, cabins units, and hotel rooms. All are nicely furnished to complement park themes. All have private bathrooms. They tend to be more spacious and have lake views. Some have kitchens and/or additional rooms for sleeping or sitting. Amenities provide a higher level of guest comfort and may include items such as in room phones, cabling for computer linkups, alarm clocks, coffee makers, hair dryers, irons and ironing boards. High rates range from \$100-150 (in 2001).

- *Deluxe* – Deluxe accommodations are located in full service hotels or lodges. Furnishings are high quality and upscale. Rooms are furnished and accessorized to complement park themes. Additional rooms for sleeping or sitting may be included. All have private bathrooms and lake views. Special amenity packages are provided for guest comfort and convenience. Amenities may include in-room phones, cabling for computer linkups, alarm clocks, coffee makers, hair dryers, irons and ironing boards, microwave ovens, refrigerators, in room safes, honor bar, upscale personal amenity packages (soaps, etc.), and guest robes. Deluxe rates range upward from \$150 per night (in 2001).
- *Backcountry chalets* – Accommodations range from hiker shelter accommodations to full service chalets. Both include common bathrooms with no shower facilities available. Guests are encouraged to pack out what they bring into the chalets, particularly garbage.

Hiker shelters provide private rooms, beds with optional bedding, common cooking (including stove), and dining facilities. Guests must bring their own food, cooking supplies and water, although limited items are available for retail sale at the chalet. Hiker shelter rates vary but are under \$70 per person per night (in 2001).

Full service chalets include a private room and three meals prepared by staff. All bed linens are provided. Housekeeping services are provided. Guests must bring their own personal items. Rooms are modestly and rustically furnished in keeping with the backcountry and historic atmosphere of the chalets. Full service chalet rates range upwards of \$150 per person per night (in 2001).

- **Visitor Experience**
Visitors enjoy clean, comfortable, well maintained park lodging that complements the natural setting with opportunities to view wildlife and learn about the resources of the park. Visitors are well informed about accommodations and services available to them. The reservations services are efficient, informative, easy to access and accurate.
- **Standard/Expectation**
Lodging meets National Park Service standards and applicable health, life and safety codes, as well as ADA requirements. Reservation and front desk services are efficient, friendly and easily accessed. Housekeeping services are efficient, thorough and timely. Facilities are well maintained and cyclic maintenance programs are in place. Exterior design and color blend with the environment and historic districts. Interiors are compatible with area themes. Utilities are provided as appropriate in each developed area. Facilities are designed and located to minimize visual impacts. Sustainable design is used for any additional facilities. Facilities are managed and maintained to minimize resource impacts and conflicts with wildlife.

Although demand for accommodations in July and August sometimes exceeds available accommodations in the park, a range is available in communities surrounding the park within a one-hour drive.

Facilities are handicapped-accessible and services are available to accommodate visitors with special needs. Efforts are made to recycle and reduce solid waste, water, and energy consumption. Cleaning supplies are effective and safe for the environment, visitors and employees.

Retail Prescriptions (including vending and automatic teller machines)

- **Description**
Retail sales include grocery and convenience items as well as gifts, souvenirs, books, apparel, outdoor supplies, and gear and are available in each developed area to meet basic visitor needs. Each retail store has a mission statement with gifts and souvenirs relating to park themes. Merchandise varies from store to store with some merchandise specific to each location. Regionally hand-crafted and theme-related merchandise which is manufactured in the U.S.A. is preferred.

- **Visitor Experience**
Visitors are able to meet their essential and spontaneous needs for food and convenience items. Quality gifts, books, and souvenirs enhance visitors' enjoyment and understanding of the park. Visitors enjoy shopping in a pleasant, uncongested environment. Outdoor gear, supplies and apparel provide essentials for specific activities and changing weather. Merchandising décor and displays promote park and mission statement themes and provide information to park visitors to enhance their park experience.
- **Standard/Expectation**
Retail facilities are clean, well maintained and accessible to park visitors. Window and interior displays are attractive and emphasize park themes. Displays, tags and labels interpret park resources and park themes. Facilities complement the area in which they are located. Corporate advertisement on vending machines is discrete. Vending machines outside of facilities or in public areas are located, screened and sized to limit the impact on the historic setting. Staffing is adequate, well informed about the park and area, and able to answer visitors' questions about the merchandise, visitor services and park resources. Services comply with applicable National Park Service regulations, U.S. Public Health Service requirements and Montana liquor laws. Grocery items are sold in suitable sizes to meet the needs of campground users as well as day use visitors. Post consumer recycled products will be featured where possible. Camp stores carry hot and cold beverages and many ready-to-eat items. Fresh produce, meat, baked goods, other grocery items, firewood, ice, and outdoor supplies meet visitor needs for picnics, snacks, and meal preparation during extended stays. Merchandise is high quality, fairly priced and available in a range of prices. Food storage and waste are managed to reduce wildlife conflicts. Appropriate recycling will occur.

Food and Beverage Prescription

- **Description**
Food and beverage service provides for visitor needs in a pleasant setting and are complementary to the type of accommodations in the same developed area. A range of types and prices of food service is available from fast food/takeout to full service dining to catered meals. Options are included for children, vegetarians, and others with special dietary needs or preferences. Quality food is offered at a price that is reasonable for the type of dining experience.
 - *Fast food/take out* – Fast food includes self-service, counter service, cafeteria, or take-out. It is quick service at low cost from a limited menu of items such as sandwiches, hot dogs, snacks, deli items, and beverages. Dining can be on premises or off premises.
 - *Family Dining* – Family dining provides moderately priced meals prepared to order and served by wait staff on premises. The menu includes a variety of entrees and side dishes, many reflective of regional themes. Family-oriented dining facilities provide children's menu, highchairs, and booster seats. Table service could be paper or linen. Alcoholic beverages in an affordable price range may be available.
 - *Full Service Dining* – Full service dining is distinguished by meals prepared to order and served by trained wait staff. Facilities and atmosphere offer a higher level of comfort and amenities such as linen tablecloths and napkins, glassware, and upgraded table and flatware. Dining room décor, furnishings, table decorations, linens, and quality table service create an upper scale atmosphere and enhance park themes. Creative menus are unique to each establishment. A full range of appetizers, salads, entrees, and desserts is distinctively presented. Many items reflect regional themes. A full range of alcoholic beverages at a range of prices is available. Prices are moderate to high-end, in line with comparable full or fine dining restaurants outside the park.

At some locations, full service lounges/bars are associated with dining rooms and food service. Lounges offer appetizer and light menu options.
 - *Catered meal service* – Catered meal services include special food and beverage services for special events or activities held within concessions facilities or at designated picnic areas. These activities can include weddings, conventions, and meetings. Although commercial in nature, they are provided to a specific group with customized needs, *not the general public*. Menus are developed around the

customer's needs and may range from buffet to full, sit-down service. Alcoholic beverage services may be provided. Catered food and beverage services within concession facilities are provided by a concessioner under the terms of a concession authorization. Rates for these services are approved by the National Park Service as for other services. Catered food and beverage services at designated picnic areas are authorized under the terms and conditions of a Special Use Permit.

- **Visitor Experience**
Visitors enjoy quality food in reasonable portions at a price range suitable to the type of dining experience. The level of service corresponds to the type of eating establishment but is always friendly and efficient. The needs of children and visitors with special dietary needs are met.
- **Standard/Expectation**
Quality food service complies with applicable National Park Service and Public Health Service requirements, ADA standards, and Montana Liquor Laws. Smoking is permitted only in designated areas. Solid waste is minimized and every effort is made to conserve energy, water and promote recycling. All cleaning supplies are effective and safe for the environment, visitors and employees. Menus are approved by the National Park Service. Food storage and waste are managed to reduce wildlife conflicts and prevent impacts to park utility systems.

Equipment Rental Prescription

- **Description**
Rental equipment is available in specific developed areas of the park. Equipment includes, but is not limited to fishing and backpacking gear and small boat and canoe rentals. Other equipment rentals must be evaluated against necessary and appropriate criteria.
- **Visitor Experience**
Limited rental equipment allows visitors to participate in activities for which they would otherwise be unequipped. Renters receive instruction on proper use of the equipment.
- **Standard/Expectation**
All equipment is in good operating condition. The amount and type of rental equipment are consistent with the developed area philosophies, necessary and appropriate criteria, and any identified capacities.

Boat Tours Prescription

- **Descriptions**
Through a scenic boat tour, visitors gain a different perspective of the park. A skilled guide and/or boat captain provides visitors with quality interpretation of park resources.
- **Visitor Experience**
Visitors participate in safe, enjoyable trips on safe, clean, comfortable, well maintained boats. They gain a deeper understanding and appreciation of park resources in the company of a skilled guide. Visitors may have opportunities to view wildlife in their natural habitat, without disturbing, harassing, or enticing them.
- **Standard/Expectation**
Approved life vests are available in a range of sizes. Services are provided in accordance with U.S. Coast Guard standards. Guides/captains effectively promote a deeper understanding and appreciation of the park. They are currently certified in first aid and cardiopulmonary resuscitation (CPR).

Horse Packing Services Prescription

- **Descriptions**
Packing services deliver supplies to backcountry campsites and chalets through the use of horses and other pack animals.
- **Visitor Experience**
Visitors arrange for their camping equipment and supplies to be delivered and retrieved by stock to and from

designated backcountry campsites. Visitors enjoy the services provided at the two backcountry chalets which are supplied by pack stock.

- **Standard/Expectation**
Prearranged delivery and retrieval of supplies to either the chalets or backcountry campsites is provided by healthy, well cared-for stock. Pack trains are sized appropriately for the terrain with adequate control by an experienced packer/wrangler. Stock loads are appropriate for the type of stock and the terrain. Drop trip packing is provided only to backcountry locations approved for stock travel. Stock does not overnight on the trail but returns to base each day. Only hay that is certified to be free of noxious weed seed and other appropriate feed may be used. Stock trucks or horse trailers and vehicles are well maintained and meet all applicable standards.

Public Showers and Laundry Prescription

- **Descriptions**
Public showers and laundry facilities may be available at developed areas of the park.
- **Visitor Experience**
Visitors are able to take care of basic personal hygiene without leaving the park. These facilities are particularly appropriate for visitors who are on extended stays and/or are participating in activities under primitive conditions.
- **Standard/Expectation**
Facilities are clean, well maintained, available at appropriate hours, adequately staffed and carry appropriate supplies for the function.

Emergency Road Services Prescription

- **Descriptions**
Emergency road services provide visitors with assistance for vehicle problems and towing services within the park.
- **Visitor Experience**
Visitors have access to services ranging from lock-out, emergency repairs, and towing when they have vehicle problems in the park.
- **Standard/Expectation**
Operators are qualified professionals, licensed to provide emergency road services, locksmith services and towing. Vehicles are well maintained and equipped to safely perform the services and meet all applicable standards. Visitors have access to emergency road services that meet their needs for affiliation with organizations such as American Automobile Association, Good Sam, etc.

Guided Activities General Prescription

- **Descriptions**
A variety of guided activities is available for visitors. Guided activities include hiking, backpacking, cross-country skiing, snowshoeing, bicycle tours, photography workshops, art seminars, horseback riding, road-based interpretive vehicle tours, and transportation (including step-on guide service), birding, fishing, underwater diving, and rafting. Interpretive programs are provided as a part of all guided activities.
- **Visitor Experience**
A knowledgeable guide enables visitors to enjoy a specialized experience, which they would not otherwise be able to enjoy due to lack of equipment, experience, and/or knowledge.
- **Standard/Expectation**
Resource impacts are minimal. Guide-to-client ratio and party size are appropriate for each activity. Guides are trained in first aid and CPR and are able to provide information on park resources and answer visitors' questions accurately. All guides are well trained, professional and friendly. All equipment provided

including stock, vehicles and gear is well maintained in serviceable condition. All National Park Service, U.S. Environmental Protection Agency (EPA), and Public Health Service requirements are met or exceeded. Professionally presented interpretation supports park policies and assists the National Park Service in educating visitors in safety, stewardship, and resource protection. Interpretation fosters an appreciation and understanding of the park.

Guided Hiking Prescription (natural and cultural history and recreational)

- **Description**
Guided hiking on trails allows visitors to have enhanced experiences in the backcountry of Glacier that focus on an appreciation and understanding of natural and cultural resources, while utilizing “Leave-No-Trace” (LNT) recreation ethics. Visitors are provided in-depth educational opportunities, in a manner consistent with bear safety guidelines, that minimizes disturbance to resources and other visitors, through experienced guides with strong interpretive skills. Meals may be provided.
- **Visitor Experience**
Visitors participate in single day trips within the day use and backcountry zones in the park. The focus is on learning about park resources, natural processes, and/or cultural resources and enjoying all the benefits that Glacier’s backcountry provides. Visitors should end their trip with a better understanding and appreciation of park resources, and how to visit the backcountry of Glacier safely, without leaving a lasting impact. Fishing and photography are incidental to the trip, not the main focus of the guided experience.
- **Standard/Expectation**
Guides are knowledgeable of the resources, patient and friendly, and support wildland preservation values. They are trained in LNT, certified in CPR and first aid, and knowledgeable of the safety precautions for recreating in wildland areas where inclement weather, bears, and other dangers are present. Group sizes and guide/client ratios are intended to provide a quality experience that does not adversely affect other visitors or natural resources. Off-trail hiking does not occur. Support vehicles are clean, comfortable, and well maintained. Quality food is provided.

Guided Backpacking Prescription

- **Description**
Guided backpacking along trails allows visitors to have enhanced, overnight experiences in the backcountry of Glacier that focus on an appreciation and understanding of natural and cultural resources, while utilizing “Leave-No-Trace” (LNT) recreation ethics. Visitors are provided in-depth educational opportunities, in a manner consistent with bear safety guidelines, that minimizes disturbance to resources and other visitors, through experienced guides with strong interpretive skills. Equipment, meals, and transport services by a concessioner may be provided.
- **Visitor Experience**
Visitors participate in multi-day trips within the day use and backcountry zones in the park. The focus is on learning about park resources, natural processes, and cultural resources and enjoying all the benefits that Glacier’s backcountry provides. Visitors should end their trip with a better understanding and appreciation of park resources, and how to visit the backcountry of Glacier safely, without leaving a lasting impact. Fishing and photography are incidental to the trip, not the main focus of the guided experience.
- **Standard/Expectation**
Guides are knowledgeable of the resources, patient and friendly, and support wildland preservation values. They are trained in LNT, certified in CPR and first aid, and knowledgeable of the safety precautions for recreating in wildland areas where inclement weather, bears, and other dangers are present. Group sizes and guide/client ratios are intended to provide a quality experience that does not adversely affect other visitors or natural resources. Off-trail hiking does not occur. Support vehicles are clean, comfortable, and well maintained. All equipment is appropriate, well maintained, and meets LNT guidelines. Quality food is provided.

Guided Cross-Country Skiing and Snowshoeing Prescription

- **Descriptions**
Guided cross-country ski and snowshoe tours include both day tours and overnight tours. The purpose of the tours is to allow small parties of visitors to experience the backcountry of the park in a way that focuses on an appreciation of the park values, natural processes and “leave no trace” techniques. Skilled guides interpret the resources of the park and provide assistance as necessary.
- **Visitor Experience**
Visitors participate in safe, enjoyable Nordic ski and snowshoe trips using gear obtained outside the park. Equipment provided by the operator is well maintained, late-model ski gear. Visitors gain a deeper understanding and appreciation of the park resources in the company of a skilled guide.
- **Standard/Expectation**
Support vehicles are clean, comfortable, and well maintained. All National Park Service and Environmental Protection Agency standards are met or exceeded. All participants are equipped with well maintained, up to date equipment and properly equipped with suitable supplies and protective gear in anticipation of staying out overnight in inclement weather. Guides are skilled skiers, knowledgeable of winter survival skills, certified in avalanche awareness, first aid and CPR, and are able to interpret park resources and accurately answer visitors’ questions.

Guided Bicycle Tours Prescription

- **Descriptions**
Guided bicycle tours are conducted on specific roadways in Glacier National Park. Off-road travel is not permitted. These tours travel through the park. One day or multiple-day tours are provided. A skilled leader interprets natural and cultural resources of the park and assists participants as needed.
- **Visitor Experience**
Visitors participate in safe, enjoyable trips on well maintained, properly equipped bicycles. They gain a deeper understanding and appreciation of park resources in the company of a skilled tour guide.
- **Standard/Expectation**
Support vans are clean, comfortable and well maintained. All National Park Service and EPA standards are met or exceeded. Bicycles are well maintained, and properly equipped. Helmets are required and other safety equipment is available. Tour guides are certified in first aid and CPR. Participants adhere to restrictions for bicycle use in the park and safety conditions such as riding single file and using pull outs to allow traffic to pass.

Guided Photography Workshops/Tours and Art Seminars Prescription

- **Description**
Photography and art tours or seminars are specialized programs, which include some instruction in a creative field. The focus of the park portion of the activity is not for instruction purposes but for use of the skills learned elsewhere to capture images of park resources. These tours are led by a guide who possesses particular artistic skills.
- **Visitor Experience**
Visitors have the opportunity to exercise skills to capture images of park resources.
- **Standard/Expectation**
Instructors are skilled in their area of expertise. In cases where activities occur off roadways, instructors are certified in first aid and CPR. Activities are not to occur off-trail or detract from recreational opportunities for other park visitors.

Guided Horseback Riding Prescription

- **Description**
Horseback rides take visitors on park trails under the supervision of a trained guide.

- **Visitor Experience**
Visitors participate in a safe, enjoyable guided horseback ride with the opportunity to participate in a traditional western activity on park trails. A variety of tour lengths provides opportunities for a variety of skill levels. Horseback transportation provides access to backcountry chalets and other remote areas of the park.
- **Standard/Expectation**
Resource impacts are minimized. Group size and guide-to-client ratio is appropriate for the area and activity. Stock is suitable for the terrain and the experience level of the riders, and is well cared-for and maintained. Guides/wranglers are experienced with stock handling. Guides are certified in CPR and first aid. Safety education of the clients and attention to safe operational practices is adhered to by the employees. Feed and waste are managed to prevent conflicts with wildlife and to keep odors to a minimum. Only hay that is certified to be free of noxious weed seed and other appropriate feed may be used. Potential conflicts with hikers are managed by designating specific trails for commercial horse use, sharing information with the public on which trails are designated for horse use, and limiting party size. Trips include appropriate interpretation of park resources.

Guided Interpretive Vehicle Tours (natural and cultural) and Public Transportation Prescription

- **Description**
Interpretive vehicle tours (road-based tours) and public transportation are conducted on all primary roads in the park with the exception of the inside North Fork Road. Historic “red buses,” in addition to other types of vehicles, are used to provide interpretive tours of the park. A skilled tour guide interprets natural and cultural resources of the park. Other public transportation services (such as shuttle buses, taxis and private car shuttling) are provided to assist visitors with point to point travel within the park.
- **Visitor Experience**
Visitors participate in safe, enjoyable trips in safe, clean, comfortable vehicles. They gain a deeper understanding and appreciation of the park resources in the company of a skilled tour guide. Convenient, reliable, and affordable point-to-point transportation services allow visitors to access destinations within the park without driving their own vehicles.
- **Standard/Expectation**
Tour guides and drivers are certified in first aid and CPR and are trained to safely operate the vehicles being used. Tour guides and drivers are trained to accurately share information about the park and to answer visitors’ questions.

Guided Underwater Diving Prescription

- **Description**
Guided underwater diving allows park visitors, who are already fully certified divers, to experience the underwater natural and cultural resources of the park under the supervision of a skilled, knowledgeable guide.
- **Visitor Experience**
Visitors experience the underwater natural and cultural resources of the park and gain a deeper understanding of the park’s history and environment. Skilled interpretation of the area is provided by knowledgeable guides.
- **Standard/Expectation**
Diving instruction is not provided as part of this service. All participants are fully certified divers. Divers are properly equipped. Safe diving practices are adhered to. Skilled diving instructor/guides provide accurate interpretation of the park resources and take steps to ensure that resources are protected during guided dives. Guides are knowledgeable about the protection of underwater resources and promote responsible practices with their clients toward this end. Guides are certified in first aid and CPR.

Guided Rafting Prescription

Guided raft trips are available on the rivers surrounding Glacier National Park under the administration of the U.S. Forest Service.

Step-on Guide Services Prescription

- **Description**
Local interpretive guides are hired to ride along with vehicle tours (road-based tours) on the primary roads in the park, with the exception of the inside North Fork Road. This skilled tour guide interprets natural and cultural resources of the park.
- **Visitor Experience**
Visitors participate in informative, enjoyable tours in the comfort of their own tour vehicle. Tours are customized. A guide with in-depth knowledge of the local area is available to answer questions, provide information, and to help passengers gain a deeper understanding and appreciation of park resources.
- **Standard/Expectation**
Tour guides are certified in first aid and CPR, and are trained to accurately share information about the park and to answer visitors' questions.

Firewood Sales Prescription

- **Description**
Firewood sales in the campgrounds provide a convenient source of firewood to campground users. The service helps eliminate the collection of dead and down wood and cutting of vegetation and helps protect habitat.
- **Visitor Experience**
Visitors are able to access firewood without traveling out of the campground.
- **Standard/Expectation**
Quality, dry firewood, collected outside the park boundaries, is made available to campground users. The service is available at reasonable cost and at convenient times to the users. The wood is packaged with burnable packaging to eliminate trash. Firewood sales in campgrounds do not prohibit the sale of firewood in camp stores elsewhere in the park.

Child Care Prescription

- **Description**
Drop-in child care services are provided by licensed operators to allow visitors to participate in daytime activities that are not appropriate for all ages.
- **Visitor Experience**
Visitors may leave their children in the care of a licensed provider in order to participate in hikes, horseback rides, or other activities that would not be appropriate for all ages.
- **Standard/Expectation**
Providers are appropriately licensed and staffed to provide daytime child care services. Facilities used for the service meet all applicable standards and provide a safe, pleasant environment for the children. All employees have appropriate credentials and experience and are adequately supervised. An efficient, easily accessed reservation system is in place to allow parents to plan ahead. All equipment, toys, and supplies are appropriate for the age of the children in the program. All employees are certified in first aid and child and adult CPR. All activities are age-appropriate, well supervised and safe for the children. All snacks and meals are appropriate and all licensing and Public Health Service standards are met.

Horse Boarding Prescription

- **Description**
Short-term stock boarding is available only at the Many Glacier stables as a mid point stay during a multi day backcountry stock trip.
- **Visitor Experience**
Visitors have access to a short-term (one or two day) stock boarding facility while on layover days when accessing specific trails and stock routes in the park, (i.e., the Continental National Scenic Trail).
- **Standard/Expectation**
Facilities are clean, well maintained, and appropriate for the service. Operators are professional, knowledgeable and trained in the provision of these services. Stock being boarded must have veterinary certification that they are disease free. Only hay that is certified to be free of noxious weed seed and appropriate feed may be used. Feed storage and waste disposal are appropriate to avoid conflicts with wildlife. Animals are appropriately fed and cared for. Boarding is only short-term (one or two days) to allow for layover days or the start or end of the access to specific trails and stock routes in the park.

Boat Transportation Prescription

- **Description**
Boat transportation services provide visitors access to trailheads on lakes in the visitor services zones where appropriate.
- **Visitor Experience**
Visitors travel by boat to access lake trailheads and other designated locations.
- **Standard/Expectation**
Boats are safe, well maintained and appropriately sized for the service. Motors are sized appropriately. Operators are appropriately trained, knowledgeable, and licensed for the service. The service is only provided on lakes in the appropriate visitor service zones and to appropriate drop points. No boat transportation services are provided on lakes in the North Fork.

Private Vehicle Shuttle Prescription

- **Description**
This service provides shuttling of a visitor's private vehicle to specific trailhead destinations in the park. The shuttling facilitates hiking trips that do not require back tracking on trails to exit at the same point where the hike originated.
- **Visitor Experience**
Visitors arrange to have their private vehicle shuttled to a trailhead exit point.
- **Standard/Expectation**
Shuttle drivers are licensed and qualified to operate the visitors' vehicles. Shuttle vehicles are well maintained and meet all applicable standards.

Taxi Services Prescription

- **Description**
Taxi services provide a convenient way for visitors to access the park and their selected destinations. Taxi service is available from outside the park to destinations inside the park subject to limitations in the North Fork and on the upper sections of the Going-to-the-Sun Road.
- **Visitor Experience**
Visitors can prearrange to be delivered to and picked up at their selected destination within the park.
- **Standard/Expectation**
Taxi services are provided on a prearranged, on-demand basis. Vehicles are well maintained and meet

applicable standards. Appropriate fees are paid upon entering the park. Service is subject to limitations in the North Fork and on the upper sections of the Going-to-the-Sun Road.

Commercial Entertainment Prescription

- **Description**
Commercial entertainment (concerts, plays, programs) related to the purpose and significance of Glacier National Park is provided to visitors in concession facilities.
- **Visitor Experience**
Visitors experience professional entertainment that deepens their understanding and appreciation of the park, its resources, and its history.
- **Standard/Expectation**
Fees are commensurate with the quality and type of the performance. Programs are related to park themes and contribute to the visitors' understanding and appreciation of the park. All performances occur within concessioner facilities.

Employee Support Facilities and Services Prescription

- **Description**
Administrative offices, employee housing and food service, employee recreation facilities, maintenance facilities, sites for construction contractors, and other support services are provided in the park. These facilities and services support public lodging, food service, retail stores, and other visitor recreational activity operations. Concessioners hire more than 700 seasonal employees who need food service and housing, in order to support concession operations. Housing is not readily available outside the park for seasonal staff, particularly on the east side of the park. Due to distance, expense, and limited availability of outside-park locations, most support services are located within park boundaries or in close proximity to the park.
- **Visitor Experience**
To achieve quality visitor service, the scope of commercial operations requires some level of support services and facilities within the park. These facilities are needed to house and feed a large number of employees with variable work shifts. These facilities enhance employee recruitment and retention resulting in a quality work force to provide visitor services. Support facilities also enable visitor services to be provided more efficiently.
- **Standard/Expectation**
All operations meet or exceed National Park Service and Public Health Service standards. Operations are well managed and adequately supervised. Quality employee housing, food service, and recreation programs ensure satisfactory living and working conditions. Administrative and other necessary support facilities ensure that commercial operations are efficiently managed and equipped to provide quality visitor services.

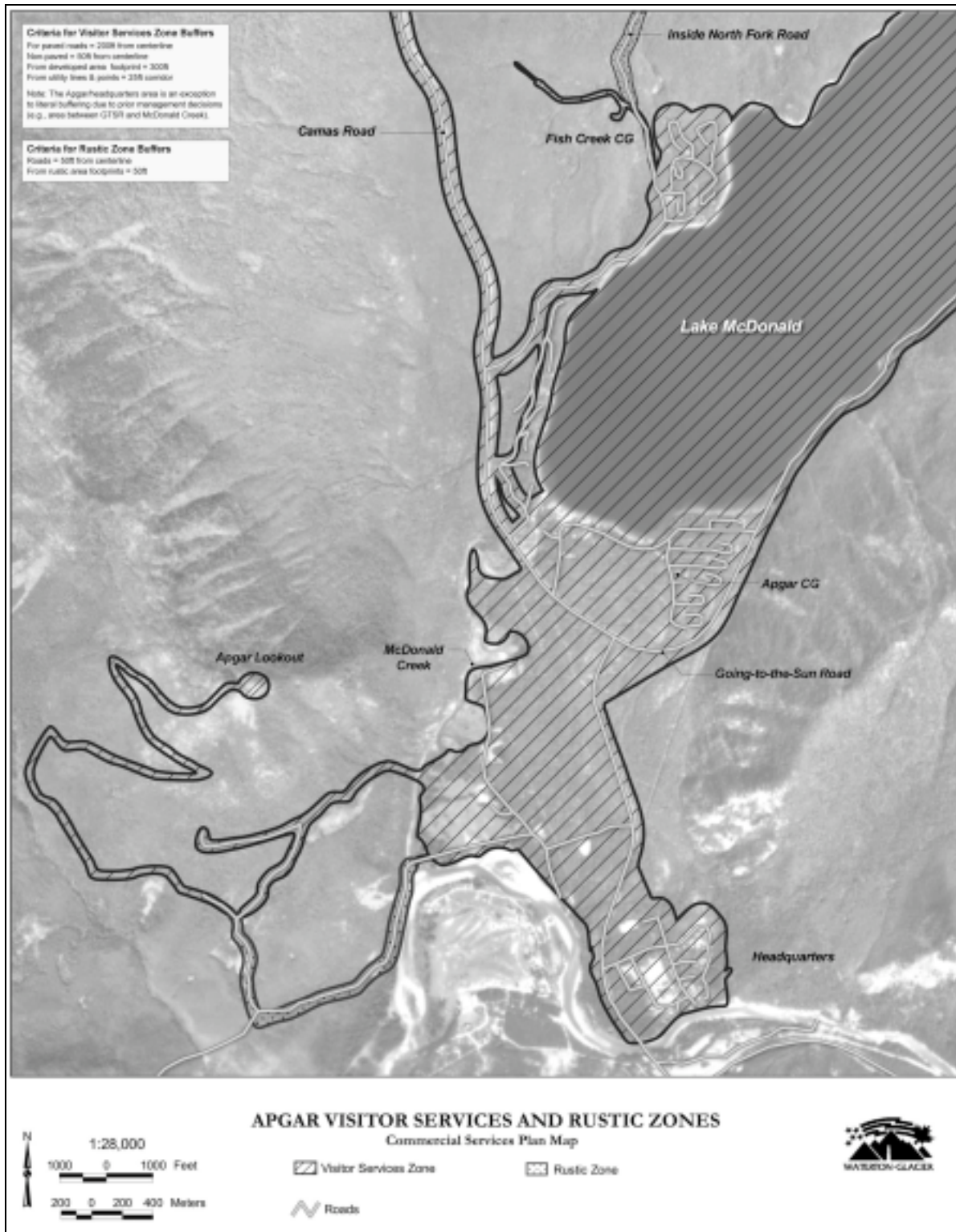
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Appendix 3

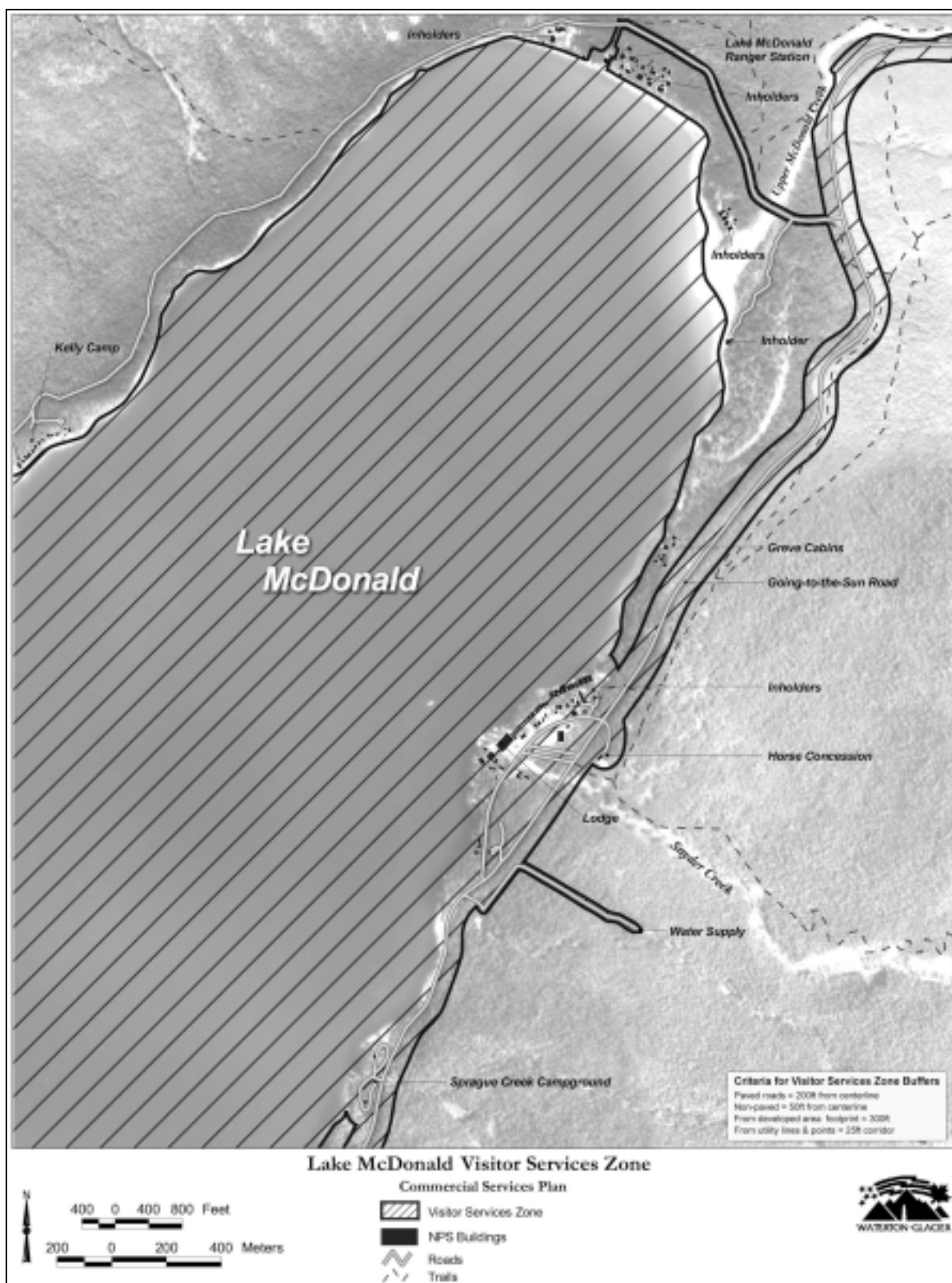
Management Zones

MANAGEMENT ZONES

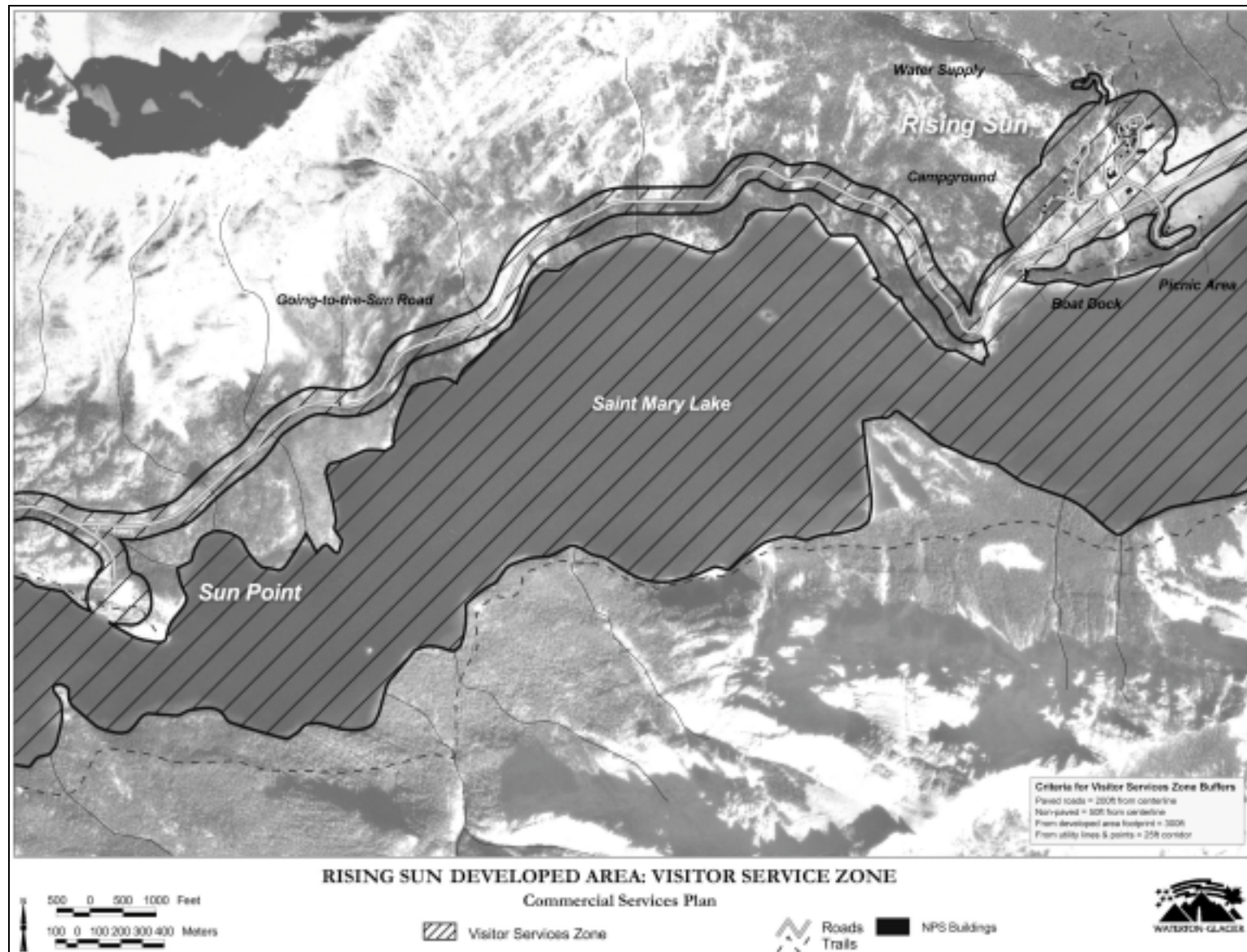
The following management zones were conceptually defined in the 1999 General Management Plan for each of the six geographic areas in the park. This plan more specifically defines two of these zones: the visitor use and, in some areas, the rustic.



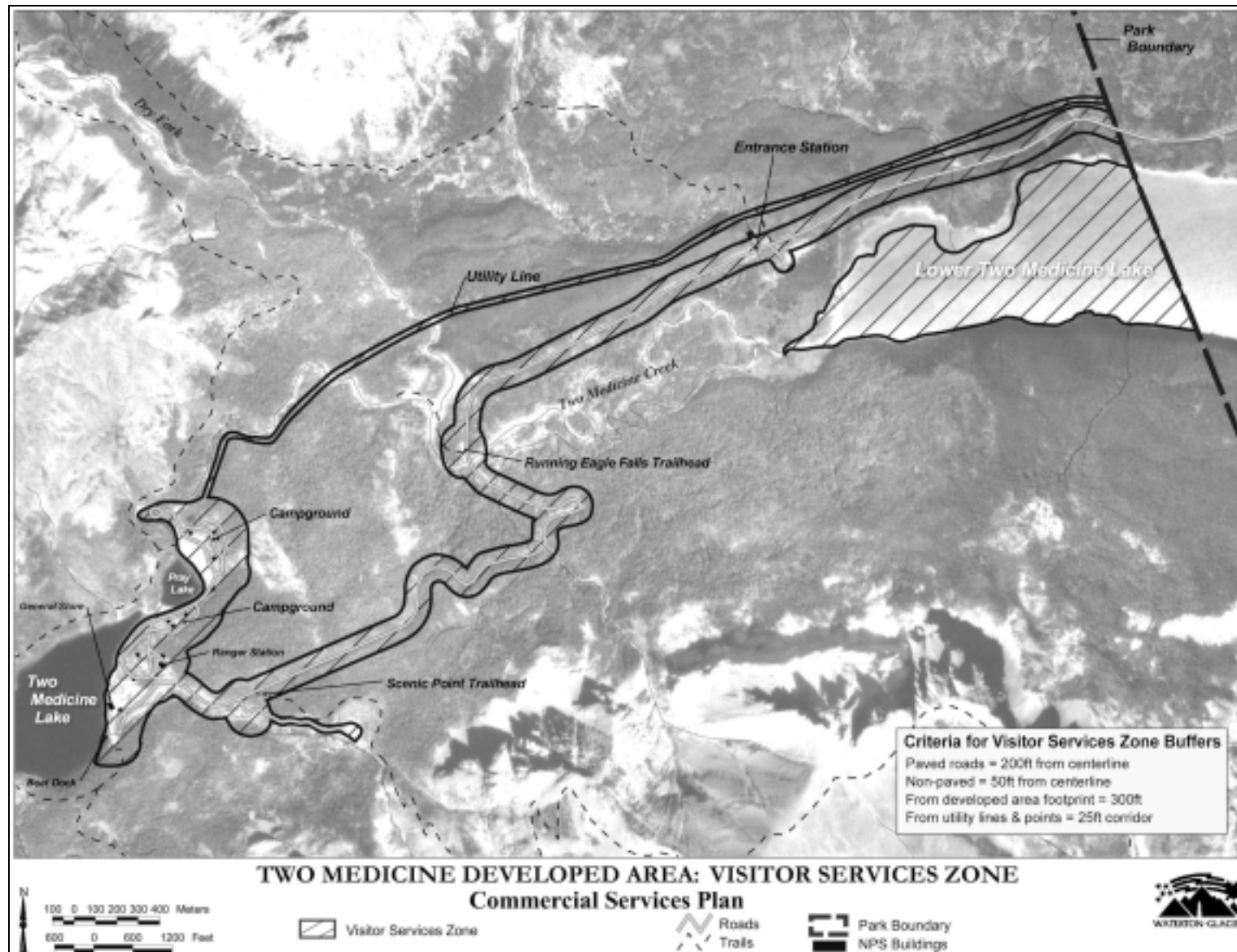
MAP A3-1 APGAR VISITOR SERVICES AND RUSTIC ZONES



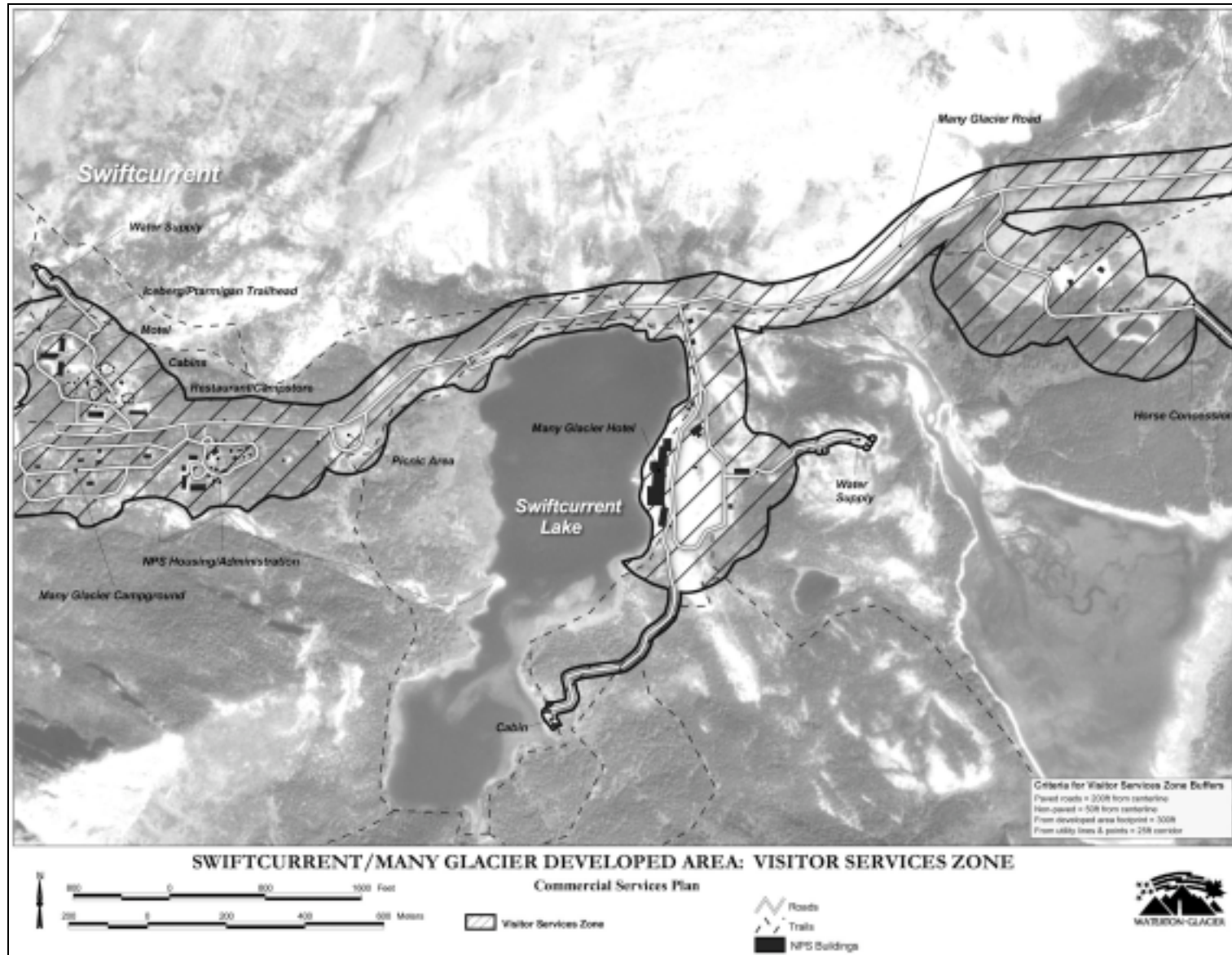
MAP A3-2 LAKE McDONALD VISITOR SERVICES ZONE



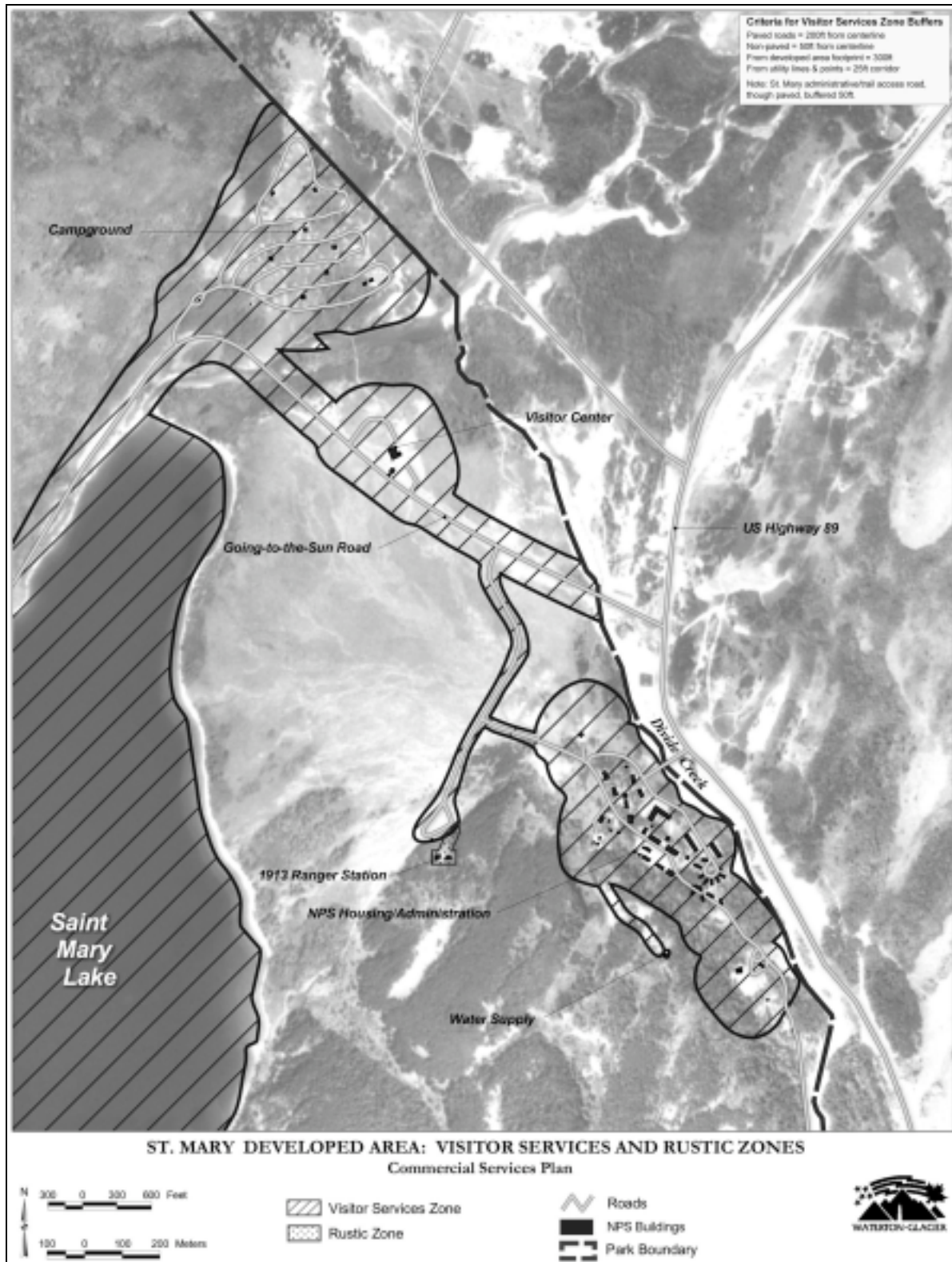
MAP A3-3 RISING SUN/SUN POINT DEVELOPED AREA: VISITOR SERVICE ZONE



MAP A3-4 TWO MEDICINE DEVELOPED AREA: VISITOR SERVICES ZONE



MAP A3-5 SWIFTCURRENT/MANY GLACIER DEVELOPED AREA: VISITOR SERVICES ZONE



MAP A3-6 ST. MARY DEVELOPED AREA: VISITOR SERVICES AND RUSTIC ZONES

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Appendix 4

Comparative Site Alternative Analysis

Supplemental Information

In keeping with the direction from the General Management Plan to retain the current level and types of services, a parkwide cap on the number of guest rooms has been set not to exceed 540 guest rooms (excluding the backcountry chalets and the businesses on private lands at Apgar). The estimated room counts listed below in alternatives B and C are subject to adjustment depending on the actual structural design for remodeling or construction. Actual room numbers would be adjusted during design to remain under the parkwide cap of 540.

For definitions of “budget,” “standard,” “high,” “deluxe” and “backcountry chalet” accommodations, see Appendix 2.

GRANITE PARK CHALET

Alternative A – Status Quo/No Action

Number of guest accommodations (rooms)	12
Number of guest accommodations (beds/pillows)*	37
Number of staff accommodations (beds)	2

Type/Range of Room Accommodations:

Guest accommodations are backcountry chalet

Alternative B

Number of guest accommodations (rooms)	12
Number of guest accommodations (beds/pillows).....	37
Number of staff accommodations (beds)	2

Type/Range of Room Accommodations:

Guest accommodations are backcountry chalet

Alternative C

Number of guest accommodations (rooms)	12
Number of guest accommodations (beds/pillows).....	35
Number of staff accommodations (beds)	8

Type/Range of Room Accommodations:

Guest accommodations are backcountry chalet

SPERRY CHALET

Alternative A – Status Quo/No Action

Number of guest accommodations (rooms)	20
Number of guest accommodations (beds/pillows)*	42
Number of staff accommodations (beds)	8

Type/Range of Room Accommodations:

Guest accommodations are backcountry chalet

APGAR

Alternative A – Status Quo/No Action

Number of guest accommodations (rooms)	36
Number of guest accommodations (beds/pillows)*	78/138
Number of staff accommodations (beds), Primary concessioner	Approximately 2
(Housing provided for manager only)	
Horse concessioner	Approximately 8

Number of parking spaces provided:

Total number of spaces

Type/Range of Room Accommodations:

Guest accommodations include standard and high rooms, in lakeside motel units.

Alternative B

Number of guest accommodations (rooms)	Approximately 36
Number of guest accommodations (beds/pillows).....	N/A
Number of staff accommodations (beds), Primary concessioner	Approximately 2
(Housing provided for manager only)	
Horse concessioner	Approximately 8
Number of parking spaces provided:	
Existing spaces	Approximately 104
New off-street spaces	Approximately 60 - 70
New RV spaces	Approximately 10 - 15

Type/Range of Room Accommodations:

Guest accommodations include standard and high rooms, in lakeside motel units.

Alternative C

Number of guest accommodations (rooms)	Approximately 36
Number of guest accommodations (beds/pillows).....	N/A
Number of staff accommodations (beds), Primary concessioner	Approximately 2
(Housing provided for manager only)	
Horse concessioner	Approximately 8
Number of parking spaces provided:	
Existing spaces	Approximately 89
New off-street spaces	Approximately 75 - 85
New RV spaces	Approximately 10 - 15
New motel spaces	Approximately 45 - 50

Type/Range of Room Accommodations:

Guest accommodations include standard and high rooms, with possible lake views.

LAKE MCDONALD AREA**Alternative A – Status Quo/No Action**

Number of guest accommodations (rooms)	100
Number of guest accommodations (beds/pillows)*	183/335
Number of staff accommodations (beds), Primary concessioner	Approximately 158
(Housing provided for manager only)	
Horse concessioner	Approximately 7
Boat concessioner	Approximately 4
Number of staff accommodations (beds)	Approximately 158
(2001 staffing count is between 150-180, including primary concessioner, horse concessioner and tour boat concessioner employees)	
Number of parking spaces provided:	
Total number of spaces	Approximately 275

Type/Range of Room Accommodations:

Guest accommodations include standard, high and deluxe rooms, in hotel, motel and multi-unit cabins.

Alternative B

Number of guest accommodations (rooms)	Approximately 90 - 100
Number of guest accommodations (beds/pillows).....	N/A
Number of staff accommodations (beds), Primary concessioner	Approximately 155
Horse concessioner	Approximately 7
Boat concessioner	Approximately 4

Number of parking spaces provided:

For guests.....	Approximately 210 - 220
For employees	Approximately 40 - 45

Type/Range of Room Accommodations:

Guest accommodations include budget, standard, high and deluxe rooms, in hotel, motel, hostel and multi-unit cabins.

Alternative C

Number of guest accommodations (rooms)	Approximately 110 - 120
Number of guest accommodations (beds/pillows)	N/A
Number of staff accommodations (beds),	
Primary concessioner	Approximately 170
Horse concessioner	Approximately 7
Boat concessioner	Approximately 4

Number of parking spaces provided:

For guests.....Approximately 240 - 250

For employees Approximately 40 - 45

Type/Range of Room Accommodations:

Guest accommodations include budget, standard, high and deluxe rooms, in hotel, motel, hostel and multi-unit cabins.

RISING SUN

Alternative A – Status Quo/No Action

Number of guest accommodations: (rooms) 72

Number of guest accommodations: (beds/pillows)* 142/226

Number of staff accommodations (beds),	Primary concessioner	Approximately 53
	Boat concessioner	Approximately 8
	(2001 primary concessioner staffing count is 64)	

Number of parking spaces provided:

Total number of spaces..... Approximately 190
(Count does not include parking at the boat launch area)

Type/Range of Room Accommodations:

Guest accommodations include standard rooms only, in both 2-unit cabins and motel units.

Alternative B

Number of guest accommodations (rooms) Approximately 75 - 80 rooms

Number of guest accommodations (beds/pillows)..... N/A

Number of staff accommodations (beds),	Primary concessioner	Approximately 64
	Boat concessioner	Approximately 8

Number of parking spaces provided:

For guests and employees..... Approximately 220
(Count does not include parking at the boat launch area)

Type/Range of Room Accommodations:

Guest accommodations would include standard rooms only, in both 2-unit cabins and motel units. New guest accommodations would be in 2-unit cabins similar to the existing cabins, or in existing cabins reclaimed from employee housing use.

Alternative C

Number of guest accommodations (rooms) Approximately 75 - 80 rooms

Number of guest accommodations (beds/pillows)..... N/A

Number of staff accommodations (beds),	Primary concessioner	Approximately 77
	Boat concessioner	Approximately 8

Number of parking spaces provided:

For guests and employees..... Approximately 240
(Count does not include parking at the boat launch area)

Type/Range of Room Accommodations:

Guest accommodations would include standard to high rooms, in both 2-unit cabins and motel units. New guest accommodations would be in 2-unit cabins (high quality accommodations) similar to the existing cabins, in existing cabins reclaimed from employee housing use, and at a renovated main dormitory building.

TWO MEDICINE

Alternative A – Status Quo/No Action

Number of guest accommodations (rooms) None Provided
Number of guest accommodations (beds/pillows)* N/A
Number of staff accommodations (beds), Primary concessioner Approximately 8
Boat concessioner Approximately 6
Number of parking spaces provided:
Total number of existing spaces Approximately 44
(Does not include informal employee parking)
Type/Range of Room Accommodations:
None Provided.

Alternative B

Number of guest accommodations (rooms)	None Provided
Number of guest accommodations (beds/pillows)	N/A
Number of staff accommodations (beds), Primary concessioner	Approximately 8
Boat concessioner	Approximately 6
Number of parking spaces provided:	
Existing spaces	Approximately 44
New spaces at service area	Approximately 10
<i>Type/Range of Room Accommodations:</i>	
None Provided.	

MANY GLACIER

Alternative A – Status Quo/No Action

Number of guest accommodations (rooms) 216
Number of guest accommodations (beds/pillows)..... 396/560
(Bed/pillow count from primary concessioner update of 8/9/01)
Number of staff accommodations (beds), Primary concessioner Approximately 200
Horse concessioner Approximately 16
Boat concessioner Approximately 7
(2001 primary concessioner staffing count is 185)
Number of parking spaces provided:
Total number of spaces Approximately 123
(Does not include informal employee parking – count undetermined)
Type/Range of Room Accommodations:
216 guest rooms; guest accommodations include standard, high and deluxe rooms.

Alternative B

Number of guest accommodations (rooms)	Approximately 210-220
Number of guest accommodations (beds/pillows)	N/A
Number of staff accommodations (beds), Primary concessioner	Approximately 200
(Assumes approximately 25 housed at Swiftcurrent)	
Horse concessioner	Approximately 16
Boat concessioner	Approximately 7
Number of parking spaces provided:	
For guests	Approximately 123
For employees	(Informal employee parking – count undetermined)
<i>Type/Range of Room Accommodations:</i>	
Approximately 215 guest rooms; guest accommodations would include standard, high and deluxe rooms. There would be little change in accommodation room type at Many Glacier. However, approximately 7 rooms would become 2-room family suites, using space now used for employees. An additional 3 guest units would be developed at the fourth floor Crow's Nest level in what is currently employee housing.	

Alternative C

Number of guest accommodations (rooms)	Approximately 230 - 240
Number of guest accommodations (beds/pillows)	N/A
Number of staff accommodations (beds), Primary concessioner	Approximately 220
(Assumes approximately 160-165 housed in new dormitories at the Upper Dormitory site)	

Horse concessioner	Approximately 16
Boat concessioner	Approximately 7
Number of parking spaces provided:	
For guests	Approximately 123
For employees	(Informal employee parking – count undetermined)

Type/Range of Room Accommodations:

Approximately 241 guest rooms - guest accommodations would include standard, high and deluxe rooms. There would be little change in accommodation room type at Many Glacier. However, approximately 7 rooms would become 2-room family suites, using space now used for employees. An additional 3 guest units would be developed at the Crow's Nest level. There would be potential for additional standard, budget/hostel style, high and deluxe rooms, including suites with the conversion of the Lower Dormitory building for guest accommodations.

SWIFTCURRENT**Alternative A – Status Quo/No Action**

Number of guest accommodations (rooms)	88
Number of guest accommodations (beds/pillows)	158/271
(Bed/pillow count from primary concessioner update of 8/9/01)	
Number of staff accommodations (beds), Primary concessioner	55
Number of parking spaces provided:	
Total number of spaces	Approximately 193

Type/Range of Room Accommodations:

Guest rooms consist of 62 motel units with private baths, 24 individual guest cabins without private baths, and 2 individual guest cabins with private baths (shared toilet/shower facilities are provided nearby). Guest accommodations include budget and standard accommodations.

Alternative B

Number of guest accommodations (rooms)	Approximately 75 - 80
Number of guest accommodations (beds/pillows)	N/A
Number of staff accommodations (beds), Primary concessioner	Up to 120
Number of parking spaces provided:	
For guests	Approximately 180 - 190
For employees	Approximately 40

Type/Range of Room Accommodations:

This alternative would provide between 75 and 80 rental units. All guest accommodations would be in individual cabins. Hostel style accommodations could be provided. Some existing cabins might be upgraded with private baths and all new cabins would have private baths. Guest accommodations would include budget/hostel style and standard accommodations.

Alternative C

Number of guest accommodations (rooms)	Approximately 85 - 95
Number of guest accommodations (beds/pillows)	N/A
Number of staff accommodations (beds), Primary concessioner	Up to 118
Number of parking spaces provided:	
For guests	Approximately 200 - 210
For employees	Approximately 55 - 65

Type/Range of Room Accommodations:

This alternative would provide between 90 and 100 rental units. Guest accommodations would be in both individual cabins and motel units. Some existing cabins might be upgraded with private baths. All new cabins would have private baths. Guest accommodations would include budget and standard accommodations.

*Bed/pillow count from primary concessioner update of 8/9/01

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Appendix 5 Park Visitation

PARK VISITATION, JANUARY 1979-DECEMBER 2002

The following table shows monthly records of Glacier National Park visitation uses for the past 22 years. The table allows cross-comparison of numerous activities by monthly time periods or cumulative periods of time. The table shows in particular a consistent set of the peak, shoulder and off-season months for each year in the category of concessioner lodging, while varying significantly from year-to-year. It also shows a modest upward trend in lodge usage over the 22-year period.

Month	Year	Recreation Visits	Non-Recreation Visits	Total Visits	Lodging	Tent Campers	RV Campers	Total RV/Tent Campers	Backcountry Campers	Total Overnight Stays
January	1979	6357	10	6367	0	2	2	4	19	23
February	1979	3480	11	3491	0	0	7	7	18	25
March	1979	11790	4	11794	0	1	15	16	197	213
April	1979	15000	23	15023	0	37	81	118	95	213
May	1979	65923	10	65933	215	1030	1699	2729	329	3273
June	1979	235210	8	235218	12949	10022	18271	28293	2761	44003
July	1979	414460	15	414475	36218	35656	52488	88144	7515	131877
August	1979	404303	40	404343	34781	32676	46965	79641	10631	125053
September	1979	176600	19	176619	9223	9477	12195	21672	3311	34206
October	1979	75265	10	75275	0	2169	2450	4619	421	5040
November	1979	32616	0	32616	0	905	465	1370	116	1486
December	1979	5082	0	5082	0	25	9	34	26	60
January	1980	6156	10	6166	0	16	3	19	52	71
February	1980	6156	50	6206	0	59	40	99	101	200
March	1980	8900	95	8995	0	136	91	227	186	413
April	1980	21109	95	21204	0	105	98	203	76	279
May	1980	67903	50	67953	87	1687	2495	4182	279	4548
June	1980	237851	40	237891	15872	12741	17777	30518	2427	48817
July	1980	446853	40	446893	37187	32646	42600	75246	7822	120255
August	1980	423107	50	423157	36948	29962	37434	67396	9265	113609
September	1980	151586	200	151786	9013	9509	9253	18762	1959	29734
October	1980	78063	300	78363	0	1451	2160	3611	327	3938
November	1980	22503	30	22533	0	386	309	695	87	782
December	1980	4391	0	4391	0	20	54	74	59	133
January	1981	8964	10	8974	0	30	47	77	56	133
February	1981	8278	10	8288	0	7	68	75	51	126
March	1981	15483	10	15493	0	96	102	198	125	323
April	1981	26804	10	26814	0	151	190	341	56	397
May	1981	75907	20	75927	87	2430	2699	5129	175	5391
June	1981	260397	40	260437	17564	12044	16091	28135	1585	47284
July	1981	571302	40	571342	38377	37121	64151	101272	5169	144818
August	1981	510227	48	510275	37731	37820	49985	87805	7753	133289
September	1981	201982	54	202036	8482	14363	16489	30852	2452	41786
October	1981	61304	48	61352	0	1644	1953	3597	208	3805
November	1981	37964	20	37984	0	901	429	1330	48	1378
December	1981	7911	10	7921	0	8	3	11	66	77
January	1982	5368	10	5378	0	55	7	62	11	73
February	1982	5463	5	5468	0	26	0	26	114	140
March	1982	9761	20	9781	0	89	0	89	120	209
April	1982	20038	7	20045	0	129	61	190	77	267
May	1982	57529	32	57561	31	1336	1822	3158	53	3242
June	1982	237560	45	237605	14771	12048	16318	28366	1274	44411
July	1982	529862	40	529902	36512	35118	54675	89793	5316	131621
August	1982	513554	37	513591	35461	35590	48743	84333	7057	126851
September	1982	196896	40	196936	9423	9250	11558	20808	1927	32158
October	1982	65203	40	65243	0	1173	1183	2356	201	2557
November	1982	18752	20	18772	0	374	204	578	23	601
December	1982	6128	20	6148	0	24	3	27	25	52
January	1983	7183	0	7183	0	0	17	17	31	48
February	1983	7178	0	7178	0	7	57	64	105	169
March	1983	12116	0	12116	0	4	85	89	86	175
April	1983	26414	423	26837	0	173	313	486	24	510
May	1983	87249	189	87438	0	1529	2123	3652	146	3798
June	1983	310923	346	311269	13878	10488	17490	27978	1323	43179

Month	Year	Recreation Visits	Non-Recreation Visits	Total Visits	Lodging	Tent Campers	RV Campers	Total RV/Tent Campers	Backcountry Campers	Total Overnight Stays
July	1983	689489	596	690085	36929	33969	55655	89624	4724	131277
August	1983	673399	497	673896	36626	37120	57627	94747	7012	138385
September	1983	280628	895	281523	12342	5667	8582	14249	1806	28397
October	1983	63185	40	63225	0	1454	1463	2917	170	3087
November	1983	39810	40	39850	0	476	399	875	36	911
December	1983	6273	20	6293	0	11	0	11	44	55
January	1984	6468	20	6488	0	7	0	7	22	29
February	1984	9255	20	9275	0	7	0	7	44	51
March	1984	12067	20	12087	0	3	0	3	129	132
April	1984	31817	20	31837	0	143	167	310	18	328
May	1984	62456	20	62476	235	911	1642	2553	218	3006
June	1984	321531	1203	322734	12879	9257	16443	25700	1501	40080
July	1984	628414	2668	631082	34501	35032	56603	91635	5099	131235
August	1984	545651	2913	548564	46346	32322	43822	76144	6605	129095
September	1984	221746	981	222727	5230	4518	8407	12925	1157	19312
October	1984	70526	40	70566	0	951	1156	2107	175	2282
November	1984	29100	20	29120	0	212	248	460	4	464
December	1984	7672	20	7692	0	10	0	10	60	70
January	1985	4720	20	4740	0	0	22	22	48	70
February	1985	5587	20	5607	0	3	6	9	20	29
March	1985	12084	20	12104	0	27	24	51	102	153
April	1985	36976	20	36996	0	57	73	130	37	167
May	1985	91914	20	91934	568	1121	1731	2852	398	3818
June	1985	296523	1440	297963	14808	9742	13715	23457	1969	40234
July	1985	487859	2339	490198	38096	26698	41324	68022	4443	110561
August	1985	423209	2086	425295	36898	21745	31744	53489	5828	96215
September	1985	142337	2399	144736	2969	2779	6145	8924	1114	13007
October	1985	61381	80	61461	0	530	661	1191	50	1241
November	1985	36941	20	36961	0	81	205	286	0	286
December	1985	3480	20	3500	0	3	19	22	10	32
January	1986	5442	20	5462	0	0	22	22	111	133
February	1986	3725	20	3745	0	5	10	15	45	60
March	1986	10192	20	10212	0	3	30	33	229	262
April	1986	26049	20	26069	0	155	139	294	40	334
May	1986	90992	40	91032	775	1359	2083	3442	200	4417
June	1986	270600	1089	271689	17705	9643	17581	27224	1333	46262
July	1986	465816	2064	467880	38040	23305	43577	66882	4524	109446
August	1986	459919	2175	462094	32948	26160	40210	66370	6522	105840
September	1986	148825	1110	149935	5720	3534	6265	9799	1441	16960
October	1986	71771	80	71851	0	962	1460	2422	244	2666
November	1986	18347	20	18367	0	122	119	241	27	268
December	1986	7473	20	7493	0	3	10	13	55	68
January	1987	6541	20	6561	0	0	0	0	63	63
February	1987	7118	20	7138	0	11	0	11	124	135
March	1987	8354	20	8374	0	13	3	16	51	67
April	1987	29332	20	29352	0	113	103	216	73	289
May	1987	88708	80	88788	288	1994	3318	5312	200	5800
June	1987	282364	1247	283611	10104	11000	17546	28546	2088	40738
July	1987	501229	2481	503710	39215	26260	44014	70274	5375	114864
August	1987	436118	2512	438630	39219	26983	37814	64797	7087	111103
September	1987	200384	1153	201537	9806	7596	11096	18692	1777	30275
October	1987	67647	20	67667	0	1165	1934	3099	409	3508
November	1987	25070	20	25090	0	84	119	203	38	241
December	1987	7872	20	7892	0	6	20	26	29	55

Month	Year	Recreation Visits	Non-Recreation Visits	Total Visits	Lodging	Tent Campers	RV Campers	Total RV/Tent Campers	Backcountry Campers	Total Overnight Stays
January	1988	6306	20	6326	0	3	21	24	43	67
February	1988	8433	20	8453	0	21	16	37	86	123
March	1988	10256	20	10276	0	22	25	47	49	96
April	1988	25452	20	25472	0	202	267	469	13	482
May	1988	79954	183	80137	722	1851	3904	5755	225	6702
June	1988	290208	1861	292069	11456	11801	19226	31027	1841	44324
July	1988	583916	2156	586072	35555	32727	46670	79397	5826	120778
August	1988	508564	2098	510662	37695	31095	45174	76269	6814	120778
September	1988	204186	1114	205300	10415	6298	11184	17482	1579	29476
October	1988	75624	119	75743	0	1118	1809	2927	384	3311
November	1988	18150	20	18170	0	78	105	183	24	207
December	1988	6684	20	6704	0	32	0	32	25	57
January	1989	7524	20	7544	0	0	13	13	53	66
February	1989	7237	20	7257	0	3	0	3	120	123
March	1989	12111	20	12131	0	0	54	54	69	123
April	1989	25457	20	25477	0	82	89	171	11	182
May	1989	71760	249	72009	822	965	2003	2968	219	4009
June	1989	300384	1562	301946	17545	10040	19973	30013	1492	49050
July	1989	586500	2435	588935	35238	33208	48214	81422	5995	122655
August	1989	499464	2261	501725	40894	29468	34862	64330	6572	111796
September	1989	236284	832	237116	12299	6929	11225	18154	2030	32483
October	1989	54142	145	54287	0	591	1361	1952	243	2195
November	1989	13320	20	13340	0	38	33	71	103	174
December	1989	7340	20	7360	0	19	8	27	62	89
January	1990	7286	20	7306	0	14	73	87	24	111
February	1990	7738	20	7758	0	14	0	14	51	65
March	1990	14021	20	14041	0	13	19	32	46	78
April	1990	24443	20	24463	0	92	184	276	51	327
May	1990	81628	58	81686	595	1034	1914	2948	146	3689
June	1990	288607	1651	290258	13743	10264	17412	27676	1566	42985
July	1990	627322	1840	629162	33551	33412	51516	84928	6517	124996
August	1990	593055	1638	594693	40633	31037	35359	66396	7976	115005
September	1990	280411	633	281044	16326	9124	12803	21927	2867	41120
October	1990	42362	20	42382	0	659	783	1442	166	1608
November	1990	16718	20	16738	0	70	45	115	32	147
December	1990	3146	20	3166	0	3	0	3	14	17
January	1991	4936	20	4956	0	5	8	13	66	79
February	1991	8447	20	8467	0	22	11	33	77	110
March	1991	10704	20	10724	0	30	8	38	108	146
April	1991	24405	20	24425	0	41	30	71	31	102
May	1991	82333	490	82823	758	859	1277	2136	221	3115
June	1991	300610	1744	302354	14521	10940	15112	26052	1759	42332
July	1991	646943	2132	649075	39456	41824	43838	85662	6906	132024
August	1991	643324	2119	645443	34198	44994	46275	91269	10096	135563
September	1991	286582	894	287476	16890	10987	13169	24156	3268	44314
October	1991	71872	20	71892	0	1618	2160	3778	344	4122
November	1991	9971	20	9991	0	16	54	70	8	78
December	1991	6839	20	6859	0	44	25	69	25	94
January	1992	7177	20	7197	0	16	11	27	48	75
February	1992	8995	20	9015	0	13	6	19	71	90
March	1992	20027	20	20047	0	54	33	87	130	217
April	1992	34501	20	34521	0	191	286	477	104	581
May	1992	133553	379	133932	628	2681	3097	5778	567	6973
June	1992	366534	1914	368448	14543	17039	20558	37597	2743	54883

Month	Year	Recreation Visits	Non-Recreation Visits	Total Visits	Lodging	Tent Campers	RV Campers	Total RV/Tent Campers	Backcountry Campers	Total Overnight Stays
July	1992	647193	1816	649009	39255	38094	41658	79752	9307	128314
August	1992	609629	1578	611207	34111	36903	32164	69067	10497	113675
September	1992	285958	637	286595	22650	8692	9545	18237	3508	44395
October	1992	68290	20	68310	142	1325	1272	2597	359	3098
November	1992	12410	20	12430	0	38	44	82	14	96
December	1992	5500	20	5520	0	5	41	46	5	51
January	1993	7080	20	7100	0	14	10	24	71	95
February	1993	9402	20	9422	0	3	17	20	108	128
March	1993	14808	20	14828	0	24	22	46	143	189
April	1993	26675	20	26695	0	194	78	272	39	311
May	1993	113148	36	113184	946	1549	1462	3011	413	4370
June	1993	340288	1290	341578	21980	12207	14720	26927	2517	51424
July	1993	626668	1271	627939	21742	28951	34349	63300	5931	90973
August	1993	624559	1209	625768	34394	36408	31458	67866	10574	112834
September	1993	288356	656	289012	17097	9986	10715	20701	3748	41546
October	1993	71304	20	71324	0	1163	833	1996	371	2367
November	1993	11216	20	11236	0	130	90	220	48	268
December	1993	8200	20	8220	0	19	16	35	89	124
January	1994	8625	20	8645	0	3	30	33	71	104
February	1994	6922	20	6942	0	0	3	3	90	93
March	1994	17906	20	17926	0	22	49	71	113	184
April	1994	26334	20	26354	0	116	73	189	90	279
May	1994	114236	111	114347	951	2188	2446	4634	599	6184
June	1994	327882	1130	329012	22054	14734	16445	31179	2811	56044
July	1994	666871	1375	668246	37838	41172	37545	78717	9467	126022
August	1994	595936	1230	597166	42487	40826	31099	71925	12511	126923
September	1994	309585	675	310260	17880	10613	13884	24497	4359	46736
October	1994	62171	20	62191	0	902	840	1742	413	2155
November	1994	8434	20	8454	0	38	46	84	60	144
December	1994	8087	20	8107	0	57	16	73	76	149
January	1995	8441	20	8461	0	30	27	57	92	149
February	1995	10573	20	10593	0	3	27	30	90	120
March	1995	16013	20	16033	0	71	33	104	128	232
April	1995	25869	20	25889	0	222	170	392	72	464
May	1995	110206	151	110357	768	1983	2287	4270	674	5712
June	1995	249808	1869	251677	20169	14455	14232	28687	2218	51074
July	1995	552643	2989	555632	37783	40473	35963	76436	8873	123092
August	1995	515842	3601	519443	41052	41014	27505	68519	11918	121489
September	1995	289248	1447	290695	16768	12613	11373	23986	4529	45283
October	1995	51025	20	51045	0	478	562	1040	300	1340
November	1995	7395	20	7415	0	14	13	27	25	52
December	1995	2455	20	2475	0	5	3	8	4	12
January	1996	5227	20	5247	0	3	24	27	17	44
February	1996	11058	20	11078	0	16	24	40	106	146
March	1996	12934	20	12954	0	11	24	35	96	131
April	1996	25388	80	25468	0	159	97	256	67	323
May	1996	100027	581	100608	333	941	1577	2518	84	2935
June	1996	251397	2780	254177	21215	13304	13598	26902	2452	50569
July	1996	515064	3964	519028	38020	40228	32222	72450	8807	119277
August	1996	477618	3908	481526	37066	39239	29160	68399	12004	117469
September	1996	254310	2409	256719	16348	6621	7460	14081	3800	34229
October	1996	60231	812	61043	0	865	706	1571	327	1898
November	1996	2589	80	2669	0	35	11	46	25	71
December	1996	4962	80	5042	0	5	14	19	21	40

Month	Year	Recreation Visits	Non-Recreation Visits	Total Visits	Lodging	Tent Campers	RV Campers	Total RV/Tent Campers	Backcountry Campers	Total Overnight Stays
January	1997	6591	20	6611	0	5	0	5	66	71
February	1997	8618	20	8638	0	54	0	54	104	158
March	1997	11710	20	11730	0	22	19	41	170	211
April	1997	16116	20	16136	0	19	38	57	261	318
May	1997	64446	323	64769	504	1304	1328	2632	295	3431
June	1997	209675	5734	215409	18836	12117	11756	23873	2035	44744
July	1997	517028	3169	520197	38809	37053	29806	66859	8045	113713
August	1997	517010	2852	519862	38945	41431	27495	68926	12156	120027
September	1997	281018	1622	282640	15706	10558	9560	20118	4198	40022
October	1997	53262	591	53853	0	664	769	1433	405	1838
November	1997	15168	20	15188	0	62	60	122	98	220
December	1997	8214	20	8234	0	5	5	10	79	89
January	1998	7481	20	7501	0	3	0	3	26	29
February	1998	9686	20	9706	0	24	14	38	126	164
March	1998	13316	20	13336	0	41	30	71	71	142
April	1998	24166	20	24186	0	95	68	163	79	242
May	1998	89146	328	89474	750	1383	1575	2958	567	4275
June	1998	255237	2558	257795	23212	10805	11337	22142	2920	48274
July	1998	540488	3004	543492	38729	37047	32278	69325	8678	116732
August	1998	528716	2773	531489	38478	41337	26244	67581	12374	118433
September	1998	286602	1308	287910	18041	14443	12081	26524	4487	49052
October	1998	57164	416	57580	0	481	497	978	423	1401
November	1998	12029	20	12049	0	32	27	59	68	127
December	1998	6913	20	6933	0	8	8	16	17	33
January	1999	7050	20	7070	0	22	5	27	73	100
February	1999	8371	20	8391	0	27	5	32	37	69
March	1999	13788	20	13808	0	27	14	41	111	152
April	1999	20112	20	20132	0	103	49	152	108	260
May	1999	81002	118	81120	442	1555	2116	3671	414	4527
June	1999	232339	1775	234114	23394	11569	10629	22198	2170	47762
July	1999	526595	3123	529718	39888	37144	29764	66908	7326	114122
August	1999	491717	2455	494172	45303	36374	25225	61599	11425	118327
September	1999	232246	1624	233870	20686	10768	10447	21215	4199	46100
October	1999	50378	20	50398	1375	481	489	970	239	2584
November	1999	13484	80	13564	0	19	27	46	34	80
December	1999	7522	20	7542	0	5	8	13	73	86
January	2000	8118	80	8198	0	51	14	65	93	158
February	2000	8656	80	8736	0	11	11	22	186	208
March	2000	12112	80	12192	0	24	11	35	175	210
April	2000	20796	20	20816	0	68	59	127	45	172
May	2000	86594	20	86614	963	1858	1904	3762	461	5186
June	2000	243723	2500	246223	20870	13058	11762	24820	2415	48105
July	2000	514937	2587	517524	40028	37430	29219	66649	7802	114479
August	2000	522578	2536	525114	37915	34877	23681	58558	10913	107386
September	2000	231886	1463	233349	15698	6258	7244	13502	2618	31818
October	2000	59849	20	59869	0	340	534	874	213	1087
November	2000	11922	20	11942	0	27	14	41	30	71
December	2000	7522	20	7542	0	5	8	13	59	72
January	2001	8380	20	8400	0	19	5	24	68	92
February	2001	8451	20	8471	0	3	3	6	72	78
March	2001	13677	20	13697	0	16	19	35	100	135
April	2001	18388	20	18408	0	57	51	108	8	116
May	2001	90692	20	90712	1319	2035	2373	4408	554	6281
June	2001	230625	1321	231946	21913	11909	13356	25265	2542	49720

Month	Year	Recreation Visits	Non-Recreation Visits	Total Visits	Lodging	Tent Campers	RV Campers	Total RV/Tent Campers	Backcountry Campers	Total Overnight Stays
July	2001	490693	1494	492187	38355	34815	28543	63358	9349	111062
August	2001	485240	2560	487800	35072	38330	25516	63846	12016	110934
September	2001	261525	1980	263505	13380	7666	6760	14426	3761	31567
October	2001	53852	25	53877	0	167	206	373	365	738
November	2001	15704	20	15724	0	13	7	20	48	68
December	2001	3387	20	3407	0	4	7	11	32	43
January	2002	6171	20	6191	0	20	9	29	82	111
February	2002	9065	20	9085	0	8	21	29	26	55
March	2002	9097	20	9117	0	43	9	52	64	116
April	2002	18887	20	18907	0	73	69	142	73	215
May	2002	82027	356	82383	488	1228	1626	2854	215	3557
June	2002	225695	1347	227042	19950	10223	11772	21995	1699	43644
July	2002	585823	1632	587455	41146	35460	34743	70203	7986	119335
August	2002	549161	1382	550543	40816	32365	30123	62488	12213	115517
September	2002	305959	611	306570	10977	10123	11811	21934	4328	37239
October	2002	87651	182	87833	172	640	852	1492	339	2003
November	2002	17819	53	17872	0	30	60	90	29	119
December	2002	8334	2	8336	0	33	42	75	22	97

Glossary

Adfluvial

Of, relating to, or living in a lake; produced by the action of a stream

Alluvial

Composed of clay, silt, sand, gravel, or similar detrital material deposited by running water

Berm

A mound or wall of earth

Biota

The flora and fauna of a region

Extirpation

To destroy completely; to wipe out; to pull up by the root

Fen

Lowland covered wholly or partly with water unless artificially drained

Forbs

An herb other than grass

Fluvial

Of, relating to, or living in a stream or river; produced by the action of a stream

Hibernacula

A shelter occupied during the winter by a dormant animal (such as an insect or reptile)

Ichthyofauna

The fish life of a region

Krummholz

Stunted forest characteristic of the timberline

Lacustrine

Of, relating to, formed in, living in, or growing in lakes

Lithic

Stony; of, relating to, or being a stone tool

Nonpoint Source Pollution

Pollution that occurs when rainfall, snowmelt, or irrigation runs over land or through the ground, picking up pollutants and depositing them into rivers, lakes and coastal waters, or introducing them into the groundwater

Phosphorus

An element occurring in manure and chemical fertilizer that is essential to the growth and development of plants, but which, in excess, can cause water to become polluted and threaten aquatic animals

Phosphorus Loading

The quantities of phosphorus in water

Point Source

The origin of a pollutant discharge from a discrete source, such as effluent from the end of a pipe

Riverine

Relating to, formed by, or resembling a river; living or situated on the banks of a river

Sedimentation

The action or process of forming or depositing sediment

Ungulate

A hooved animal

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Abbreviations and Acronyms

ADA	Americans With Disabilities Act
ARC	Architectural Research Consultants, Incorporated
BLM	Bureau of Land Management
CCE	Crown of the Continent Ecosystem
CEQ	Council on Environmental Quality
CPR	Cardiopulmonary Resuscitation
CSP	Commercial Services Plan
DCP	Development Concept Plan
DEIS	Draft Environmental Impact Statement
DOI	Department of the Interior
EIS	Environmental Impact Statement
FAA	Federal Aviation Administration
FEIS	Final Environmental Impact Statement
GIS	Geographic Information Systems
GMP	General Management Plan
GNP	Glacier National Park
GPI	Glacier Park, Inc.
GTSR	Going-to-the-Sun-Road
IMPROVE	Interagency Monitoring of Protected Visual Environments
LNT	Leave No Trace
MDFWP	Montana Department of Fish, Wildlife and Parks
MNHP	Montana Natural Heritage Program
NEPA	National Environmental Policy Act
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NPS	National Park Service
NRHP	National Register of Historic Places
pers. comm.	Personal Communication
PM10	Particulate Matter
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

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Statement of Findings



Proposal to Maintain, Rehabilitate and Construct
National Park Service and Concession Facilities
at
Rising Sun, Many Glacier and Lake McDonald
Developed Areas

Glacier National Park, Montana

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INTRODUCTION

Description of the Proposed Action

The preferred alternative in Glacier National Park's Commercial Services Plan (CSP) includes the maintenance, rehabilitation, and possible construction of National Park Service and concession facilities in the Rising Sun, Many Glacier and Lake McDonald (Lodge area) developed areas. In July, 2002, the Water Operations Branch, Water Resources Division, National Park Service, visited Glacier National Park to develop information related to flood hazard at several areas of the park including Rising Sun and the Lake McDonald developed areas. As a result of their study, one very important conclusion was noted: "Most of the areas studied in this work are geologically very dynamic with unstable fluvial systems present." Although National Park Service policy and management directives direct the National Park Service to build and relocate structures out of floodplains and flood hazard zones, Glacier National Park is the steward of some of America's national historic landmarks and other important cultural resources, and must protect these resources. Many of these outstanding cultural resources are associated with the Rising Sun, Many Glacier and Lake McDonald developed areas. Historic districts at Rising Sun, Many Glacier, and Lake McDonald symbolize western park development. In accordance with the Organic Act of 1916, which established the National Park Service, the agency, and subsequently the staff of Glacier are charged to preserve the park's cultural resources unimpaired for the enjoyment of present and future generations.

Improvements have been proposed for the Lake McDonald Lodge, Rising Sun and Many Glacier areas. These improvements are briefly described below and can be found in the *Draft Commercial Services Plan and Draft Environmental Impact Statement* and are noted as the preferred alternative: Rising Sun alternative C, Lake McDonald Lodge Area alternative C, and Many Glacier alternative C.

LAKE MCDONALD LODGE AREA — Alternative C (Preferred)

Alternative C would continue services similar to those in alternative B, with a slight increase in the number of overnight accommodations. This alternative would better consolidate employee housing, which would be removed from the flood-prone areas. It would emphasize pedestrian circulation and improve the visitor's experience by providing a central parking area to better orient guests to the area. The Coffee Shop would be replaced with a new restaurant, and the Stewart Motel and Annex would be replaced with a new motel.

Alternative C Area I actions would:

Include these services—

- Overnight visitor accommodations
- Employee housing and support facilities
- Maintenance support/laundry
- Food and beverage services
- Retail sales

- Boat tours and rentals
- Public restrooms and pay phones
- Public shuttle and tours
- Upgrade facilities and utilities to comply with life safety, accessibility and building codes.
- Construct new accessible trails and walks.
- Modify the main entrance road and reconfigure parking on boulevard.
- Construct new guest and employee parking.
- Remove the Johnson, Jammer, Hydro, and Boys' I and II Dormitories.
- Convert the Snyder and Cobb House Dormitories to guest accommodations.
- Convert the indoor employee recreation space to visitor or management use compatible with the auditorium.
- Close west access to vehicles and convert to foot and bicycle trail.

Alternative C Area II actions would:

Continue existing services—

- Overnight visitor accommodations
- Employee housing and support facilities
- Food and beverage services
- Retail sales
- Horseback riding

- Upgrade facilities and utilities to comply with life safety, accessibility and building codes.
- Construct new accessible trails and walks.
- Remove existing parking area for the Coffee Shop and create a pedestrian green space.
- Remove Post Office and expand visitor parking near the General Store.
- Construct new guest and employee parking to provide adequate space.
- Remove the Coffee Shop and construct a new restaurant with employee dining and post office.
- Remove Girls' Dormitories 1 and 2 and restore sites to open space.
- Remove the Stewart Motel and construct a new guest motel and parking on the same site.
- Construct new public restroom.
- Convert Garden Court Dormitory to guest accommodations.
- Construct new access road and formalize parking adjacent to the guest cabin units.
- Construct new employee housing and outdoor recreation area behind Coffee Shop.
- Construct a new laundry and maintenance facility to serve the hotel.

RISING SUN — Alternative C (Preferred)

Alternative C would continue the current services and include many of the adaptations proposed in alternative B. Further separation of guest and employee activities would be provided by adaptive use of existing Dormitory facilities, and construction of replacement housing and guest accommodations outside the floodplain. The types of overnight accommodations could be expanded to include a few high standard accommodations with the majority remaining at the standard level.

Alternative C Area I actions would:

Include these services—

- Overnight visitor accommodations (cabins and motel)
- Employee housing and related facilities
- Upgrade facilities and utilities to comply with life safety, accessibility and building codes.
- Construct new accessible trails and walks.
- Construct approximately ten two-unit cabins and associated parking on the upper loop.

Convert approximately three employee cabins to guest lodging.
Construct two new employee dormitories and associated parking near the Lower Motel that was converted to employee housing.
Construct an employee indoor recreation facility in the new employee dormitory and an outdoor recreation facility in the same general area.
Convert Lower Motel to employee housing.
Convert the main Dormitory to guest lodging.
Relocate Boat Concessioner Housing to new dormitories. Remove existing Boat Concessioner Housing.
Convert Power House Dormitory to storage.

Alternative C Area II actions would:

Include these services—

- Employee support facilities
- Food and beverage services
- Retail sales
- Public showers, restrooms and pay phones
- Public shuttle and tours

Upgrade facilities and utilities to comply with life safety, accessibility and building codes.
Construct new accessible trails and walks.
Remove guest and employee housing from General Store/Motel/Dormitory building.
Renovate the General Store/Motel/Dormitory building for public showers/restrooms, public laundry, guest registration and retail.
Reinforce and raise the existing earth berm behind the General Store/Motel/Dormitory building.
Modify intersection to campground.
Increase restaurant capacity with an addition to the existing restaurant.

Alternative C Area III actions would:

Include these services—

- Public boat launch and dock
- Boat tours
- Picnic area

Upgrade picnic facilities and utilities to comply with life safety, accessibility and building codes.
Construct new accessible trails and walks.
Replace the boat tour ticketing office out of the high-water zone and relocate employee housing to new dormitory site in Area I.

MANY GLACIER — Alternative C (Preferred)

Alternative C would continue all current services and incorporate most of alternative B. Better separation of employee and guest activities would be provided by relocating employee recreational facilities from the hotel and converting the Lower Dormitory to guest accommodations. The types of available accommodations would remain similar to currently available types. Converting the dormitory would provide the potential for some additional standard, high or deluxe units. New employee housing and recreational facilities would be constructed near the Upper Dormitory, with some additional housing needs accommodated at Swiftcurrent developed area or outside the park.

Alternative C Area I actions would:

Include these services—

- Food and beverage services

- Retail sales
- Visitor conveniences (pay phone, restrooms)
- Boat tours and rentals
- Public shuttle and tours
- Overnight guest accommodations
- Employee housing and support facilities

Upgrade facilities and utilities to comply with life safety, accessibility and building codes.

Upgrade existing trails and walks for accessibility.

Upgrade boat ticket booth.

Rehabilitate approach road, including screening and parking modifications.

Relocate the existing retail services currently provided in the lobby.

Restore historical features to the lobby including the historic stairwell.

Improve service road and pedestrian access to and around the hotel.

Remove most employee housing from the hotel.

Convert several rooms for interpretation of historic functions and services.

Remove employee indoor recreation facilities from the hotel and provide them in Area II.

Prepare a flood evacuation and protection plan.

Alternative C Area II actions would:

Include these services—

- Overnight guest accommodations
- Employee housing and related facilities
- Horseback riding

Upgrade facilities and utilities to comply with life safety, accessibility and building codes.

Upgrade existing trails and walks for accessibility.

Convert Lower Dormitory to guest lodging (approximately 30 rooms) and improve associated parking.

Upgrade existing employee housing in Upper Dormitory.

Construct new dormitory, including indoor recreation facilities, near Upper Dormitory, to accommodate employees from Lower Dormitory and hotel.

Construct employee outdoor recreational facilities.

Actions Outside Areas I and II would:

Improve utility infrastructure (water and wastewater).

Construct information/orientation pull-off on Many Glacier Road.

Upgrade for accessibility the trail around Swiftcurrent Lake, and the connecting trail between Swiftcurrent Lake and Lake Josephine.

Construct additional employee housing at Swiftcurrent or outside the park.

Provide shuttle service for employees.

Tour boats and/or docks serving Swiftcurrent Lake and Lake Josephine would be modified to improve access for the mobility-impaired public.

SITE DESCRIPTION (LAKE MCDONALD LODGE AREA)

The development at Lake McDonald lodge area was part of the earliest effort to provide visitor services. The site is on the west side of Glacier National Park, at the north end of Lake McDonald and adjacent to the Going-to-the-Sun Road. Lake McDonald Lodge was originally constructed in 1914. Early visitors arrived by boat from Apgar, and in 1920 a road was completed to the lodge. Overlooking Lake McDonald, the lodge offered some of the finest amenities available at the time and established a tradition of service, comfort, and interaction with the scenery and resources of the park.

This early “resort” approach used architectural themes that contributed to the Western character of the park and defined an experience that continues today. The Lake McDonald historic district was listed in the National Register of Historic Places in 1976 and the lodge is a national historic landmark.

Services today include: lodging, food service, retail, horseback riding, boat rentals, boat and vehicle tours, public shuttle, and general recreation. The goal of the park is to continue the commercial services necessary to accommodate visitors to the area, as well as maintain the character of this historic district and Lake McDonald Lodge.

SITE DESCRIPTION (RISING SUN AREA)

Rising Sun is located near the eastern entrance to Glacier National Park along the Going-to-the-Sun Road. The concept of the motor inn had been initiated as early as the 1920s by Park Director Stephen Mather, who called for the development of inexpensive accommodations that did not require tipping, dress codes, or lavish furnishings. A decade later, the success of the cabin-style accommodations at Swiftcurrent spurred the National Park Service to request that the Great Northern Railway build additional cabin camps. The Rising Sun Auto Camp was constructed in 1941 and is now an historic district.

Today, the entire complex contains 37 motel rooms and 35 cabins, a Coffee Shop, General Store/Motel/Dormitory, public showers, employee housing, and other support facilities. There is a public boat launch and dock, and boat tours are offered on St. Mary Lake.

SITE DESCRIPTION (MANY GLACIER AREA)

The Many Glacier Valley has one of the most impressive views in Glacier that is easily accessible by vehicles. In 1914, the Great Northern Railway began construction of a hotel on the lakeshore in an architectural style that followed the park’s alpine theme. The hotel provided a comfortable setting, amenities, bus and horseback tours, fine dining, and a spectacular view of the Many Glacier Valley.

The Many Glacier Historic District, including the Many Glacier Hotel (a national historic landmark) and associated outbuildings, are significant historical and architectural representations of the development and use of Glacier National Park. In addition to the hotel, significant structures include the Icehouse, Lower Dormitory, Upper Dormitory, Caretaker House, Jammer Dormitory and Boat Concession Housing.

GENERAL CHARACTERIZATION OF THE NATURE OF FLOODING IN THE AREA

(Note: The following information was taken from a report developed by the NPS, Water Operations Branch, Water Resources Division, 2002)

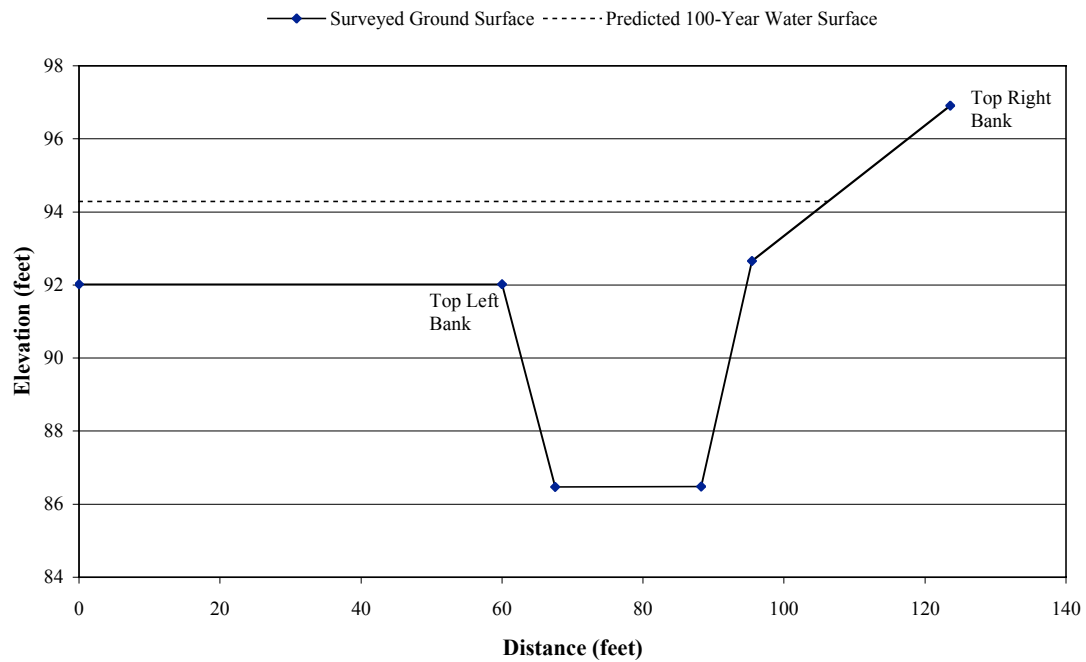
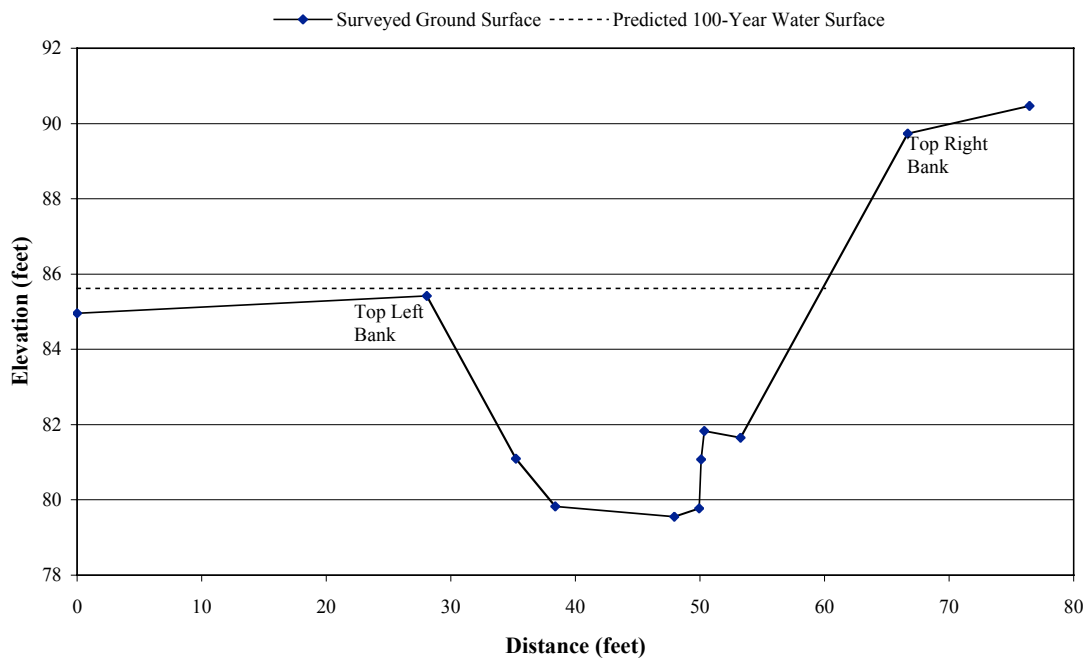
Lake McDonald Lodge Area

Snyder Creek runs through the Lake McDonald Lodge area. This creek drains about 6.4 square miles and its flood frequency information is shown in “Flood Risk” section. The creek passes under three bridges in the subject reach, under the Going-to-the-Sun Highway (GTS), under an access road just upstream from the lodge, and under a pedestrian bridge just upstream from confluence with Lake McDonald. This reach is suspiciously straight, suggesting channel realignment to provide protection to the lodge. Additionally, portions of the channel banks have been armored with stone. Snyder Creek is a very dynamic stream in this area and can be expected to continue to be difficult to manage. With the placement of bridges and other infrastructure, there is a need to keep the channel in a stable location and configuration. However, this state of stability is very unnatural and incompatible with natural processes and forces. Erosion of the channel banks upstream of the GTS bridge is an example of the natural tendency for the creek to migrate across a large area. In such an environment, protection of infrastructure will almost certainly require periodic manipulation of the channel.

The reach from just upstream of the GTS bridge down to just above the pedestrian bridge (including the access road bridge) was surveyed and simulated using HEC-RAS. The pedestrian bridge is below most development and was, therefore, not analyzed for flood hazard. It was found that the GTS bridge can pass up to about a 30-year flood (1800 cfs) if the bridge opening is unobstructed by debris. The lower bridge can only pass up to about the 15-year flood (1100 cfs). Should woody debris collect in the bridge openings, a likely scenario during a large flood, less capacity would be realized. Sediment deposition does not seem to be a large issue in this reach of Snyder Creek.

Modeling of the 100-year flood, assuming free-flowing bridges, suggests that over-bank flooding may be problematic in several areas. The GTS bridge would be overtopped and likely fail, severing access along that road. Flooding would occur upstream of the bridge due to the backwater effect, but no structures or facilities are located here. Flooding would also occur immediately upstream of the lower bridge, however, modeling suggests that the residences on the left bank (looking downstream) would not be inundated during the 100-year flood. Over-bank flooding would occur for at least 150 feet or so downstream of the lower bridge, as illustrated in Figures 1 and 2. This means that the buildings on the left bank in this area should be considered to be within the 100-year floodplain. The lodge building itself is out of the 100-year flood, assuming no blockage of the bridge. If the bridge were to fail, buildings downstream on the left bank would still be flooded during a 100-year flood, but risk to the lodge would be diminished. In this case, over-bank flooding upstream of the bridge is also somewhat reduced.

Should the lower bridge become obstructed, the likelihood of flooding into the lodge building itself increases substantially. The best means to avoid this problem would be to construct a much larger bridge at this crossing, but this may not be possible due to adverse affects on the historic scene. To reduce the probability of debris collecting on the existing bridge, the park could remove large downed wood from (and near) the channel upstream of bridges. This action would provide some additional protection to the lodge and surrounding area, however, during a flood event, large quantities of wood would continue to be supplied to the system through erosion of banks. The preferred alternative includes accepting risk to structures and minimizing risk to humans by evacuation of the site during times of potential flooding. An evacuation plan for the area currently exists and would be updated regularly as necessary to ensure the best protection is provided.

Figure 1: Snyder Creek cross-section downstream of access road bridge**Figure 2: Snyder Creek cross-section 130 feet downstream of access road bridge**

Rising Sun Developed Area

Two areas were investigated in the Rising Sun developed area, the bermed reach behind the General Store/Motel/Dormitory (General Store) and the embankment beneath the historic Power House Dormitory. Rose Creek flows through this area and drains about 8 square miles. Flood frequency information for Rose Creek at the Rising Sun developed area is shown in “Flood Risk” section. It appears that the channel upstream of the General Store area has been realigned in the past to reduce erosional pressure on the embankment beneath the several cabins located upstream of the Power House Dormitory. We cannot be sure of the reason for the realignment, but believe that this work was done some time within the past few decades. An earthen berm is located where the channel is closest to the back end of the General Store. We believe it was constructed at the same time or following the channel realignment in response to observed or predicted increased flooding potential to the General Store. The channel realignment also may have caused increased erosional pressure on the channel embankment below the Power House Dormitory.

Two cross sections were surveyed in the reach near the Rising Sun General Store (Figures 3 and 4). One cross section was shot across the existing earthen berm and the other in the area just upstream of the berm where sandbags have been placed to fill a low area. Hydraulic modeling indicates that the existing berm would be over-topped with a flow slightly less than the 100-year flood. Adding one-half foot to the berm would provide 100-year protection. The sandbagged reach would be over-topped with a flow greater than the 10-year event if the sandbags were removed and at about the 25-year flow with the sandbags in place. A berm of about 2.5 feet in this area would provide 100-year protection. Channel aggradation and/or lateral erosion are other factors to be aware of in this reach of Rose Creek. Given our belief that the channel has been realigned upstream, the creek can be expected to make adjustments downstream in response to the changes upstream. If deposition occurs in the channel near the bermed reach, the predicted flood susceptibility described above will no longer apply. Under this circumstance, flooding would be expected to occur more frequently and with greater consequence than predicted above.

Given this information, the following has been recommended in the reach of Rose Creek near the Rising Sun General Store: add about one-half foot of height to the existing levee (see Figure 3). The berm should be continued upstream through the area now filled with sandbags and tied into the hill slope to make a continuous barrier to flow. The new portion of the berm should have a top-elevation that slopes upstream at about the same slope as the channel and have a total height of about 2.5 feet (see Figure 4). The entire berm should be armored to prevent failure by erosion during a flood event. If armor is not provided, observation of the berm during flooding should be made and, if needed, sandbags or rock placed to arrest erosion if it is occurring. Also, it is recommended that excavation of sediment be performed periodically if deposition occurs in the channel.

Upon inspection, the Power House Dormitory appears to be at immediate risk due to likely failure of the embankment during a large flood event. There are two fundamentally different means of providing protection to the structure: 1) armor the embankment or 2) move the channel away from the embankment. Armoring could be accomplished by using rip rap or a “softer” bio-engineering approach. In either case, the channel would need to be somewhat filled-in to provide a suitable slope to apply the revetment material. This can often be accomplished by “laying back” the slope to achieve the necessary slope. In this case, the embankment cannot be cut back because of the proximity of the dormitory. If fill were needed in the channel, it would be necessary to excavate the opposite bank of the creek to provide sufficient flow area. A row of young cottonwood trees would need to be removed in this case. Channel realignment may or may not be feasible in this case. As stated above, the channel has apparently already been moved in the past and we are not sure that a stable channel

configuration can be achieved with further manipulation. The preferred alternative includes accepting risk to structures and minimizing risk to humans by evacuation of the site during times of potential flooding. An evacuation plan for the area currently exists and would be updated regularly as necessary to ensure the best protection is provided.

Figure 3: Rose Creek cross-section in area with berm behind store

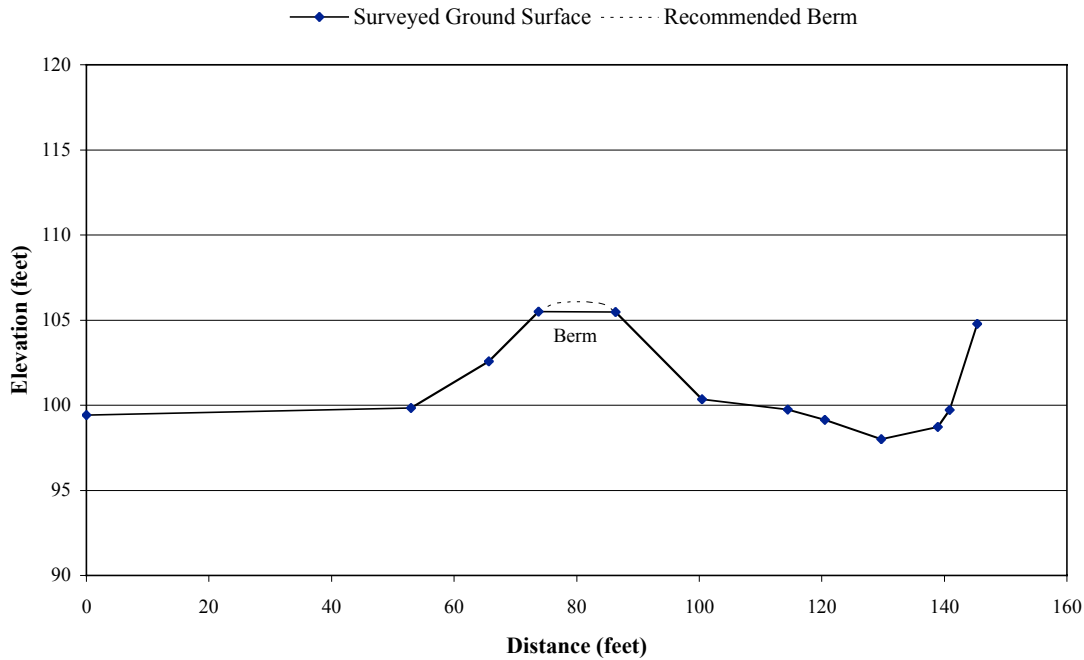
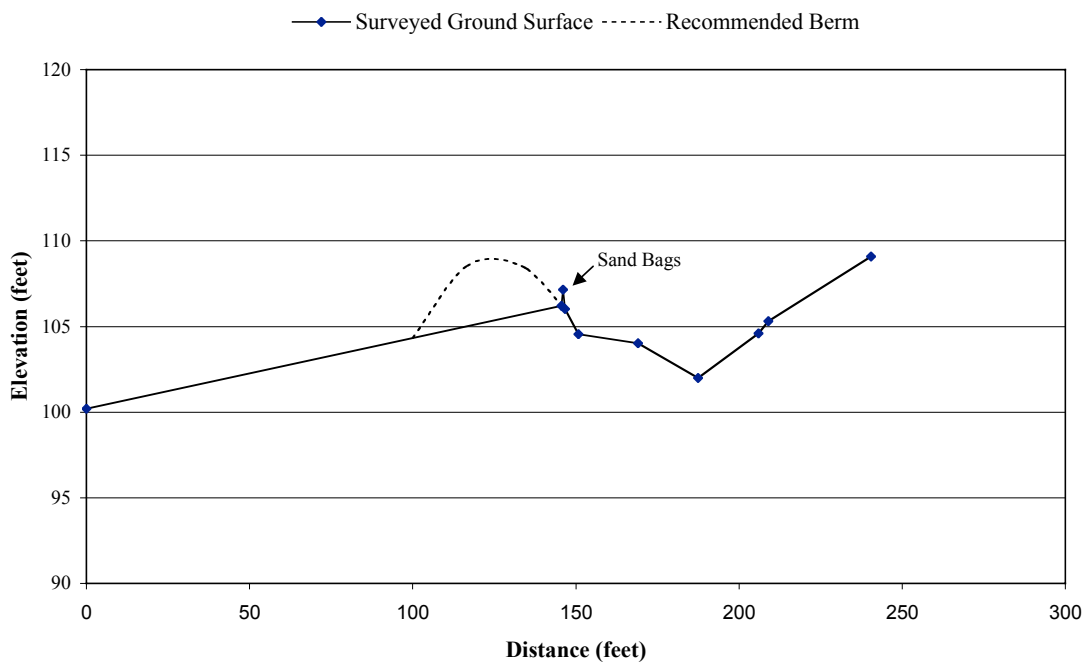


Figure 4: Rose Creek cross-section in area with sand bags



Many Glacier Hotel

Flooding at the Many Glacier Hotel would occur from high lake levels in Swiftcurrent Lake, large waves, or (most likely) a combination of both. Swiftcurrent Lake is not wide and therefore the fetch is limited and it can be assumed that wave heights are limited. The frequency of lake levels high enough to be close to the foundation level of the hotel was analyzed by investigating the lake level record collected by the US Geologic Survey. Lake level frequencies were estimated by using the Weibull plotting position method and are shown in Table 1. The elevation of the threshold of the door facing the lake was reported to be 4884.17 feet msl. This elevation corresponds to a lake level with a frequency of between the 25- and 50-year levels. Therefore, it is estimated that the Many Glacier Hotel is located at approximately the 35-year flood elevation, well within the 100-year floodplain.

Table 1. Recurrence Intervals in years estimated by Weibull plotting position for Swiftcurrent Lake water surface elevations (stage) in feet.

Recurrence Interval	Stage (ft)
10	4882.6
25	4883.8
50	4884.7
100	4885.8
500	4889.1

JUSTIFICATION FOR USE OF THE FLOODPLAIN

Why the Proposed Action Must Be Located In The Floodplain

There are four main reasons why the National Park Service is proposing to continue occupation of the development within the floodplain at Lake McDonald, Rising Sun and Many Glacier.

1. The National Park Service has a substantial investment in infrastructure as well as facilities in these areas, beginning as early as 1910.
2. All three of these areas are historically significant and contain national historic landmarks, national register properties and national historic districts.
3. The topography and landscape of Glacier National Park does not provide safe alternative locations for these functions and facilities.
4. The preferred alternative does not propose new development outside of these developed areas (thereby developing currently undeveloped areas).

Procedural Manual #77-2 does not apply to historic or archeological structures, sites, or artifacts whose location is integral to their significance. They are considered “excepted actions” under Executive Order 11988.

Investigation of Alternative Sites

Glacier National Park has looked at alternative sites out of the developed area floodplains throughout the development of the Commercial Services Plan. Changing geomorphic conditions and rapid aggregation zones in Glacier National Park mean that places that are “safe” today may not be “safe” in the future. However, where feasible, employee and/or visitor overnight accommodations have been

moved outside of the floodplain. In those instances where it is not feasible to locate outside of the floodplain, appropriate measures would be taken to protect life safety (the number one priority) and values at risk. Brief descriptions of actions proposed have been included at the beginning of this *Statement of Findings*. For a more detailed description of the preferred alternatives, please see the *Draft Commercial Services Plan and Draft Environmental Impact Statement*.

DESCRIPTION OF SITE-SPECIFIC FLOOD RISK

The National Park Service acknowledges that many of the existing and proposed structures are within the regulatory floodplain. The preferred alternatives have been selected in consideration of these risks. The likelihood of a life-threatening flood is low, based on the analysis conducted by the National Park Service Water Resources Division. The most hazardous hydraulic conditions are present at Rising Sun and Lake McDonald. The hydraulics is not significant at Many Glacier. Most of the areas studied are geomorphically very dynamic, with unstable fluvial systems present. Due to a general lack of “good” development locations in Glacier National Park, much of the park’s infrastructure is located in problematic settings. Therefore, managing flood hazard would require designing and maintaining desired flow conveyance in developed areas. The challenge of structurally managing flood risk is doing so with sensitivity to natural processes and resources.

Opportunity for Evacuation of Site in the Event of Flooding: Geomorphic Considerations

The preferred alternatives for Lake McDonald and Rising Sun call for evacuation plans to be developed to ensure protection of visitors and employees in the event of a flood. It should be noted that the nature of flooding in these areas would enable early detection and evacuation of a site to occur prior to an event. Furthermore, there are safe locations where people could be moved without putting them at greater risk. At Lake McDonald, people could be moved easily towards West Glacier and/or the Headquarters Area. At Rising Sun, people could be easily evacuated to St. Mary. Although evacuation plans exist now, they would be annually reviewed and updated.

DESCRIPTION OF HOW THE ACTION WILL BE DESIGNED OR MODIFIED TO MINIMIZE HARM TO FLOODPLAIN VALUES OR RISK TO LIFE OR PROPERTY

The following actions would be taken to mitigate the effects of continuing to use existing and proposed new development in the Lake McDonald, Rising Sun and Many Glacier regulatory floodplains.

1. Flood control structures in these areas would be improved and maintained.
2. A warning and evacuation system would be maintained and updated as necessary.
3. Flood warning and evacuation are feasible because the nature of flooding in these areas would provide enough lead-time to evacuate, and there are safe places to move people without putting them at further risk.
4. Wood and other debris would be removed from the bridges to maintain continued flow of Snyder Creek and Rose Creek. The berm adjacent to Rose Creek would be raised and maintained to assure protection of the Rising Sun General Store.
5. The channels of Snyder Creek and Rose Creek through the developed areas would be maintained as necessary.

SUMMARY

The preferred alternatives in Glacier National Park's Commercial Services Plan (CSP) include the maintenance, rehabilitation, and construction of National Park Service and concession facilities in the Lake McDonald (Lodge area), Many Glacier (Hotel area) and Rising Sun developed area. Essential services, visitor services and park functions must continue to operate within these areas. The changes are intended to minimize the impacts on the floodplains and hydrology of the Lake McDonald, Many Glacier and Rising Sun areas.

The National Park Service has a substantial investment in the infrastructure as well as the facilities in these areas dating from as early as 1910. All three of these areas are historically significant and contain national historic landmarks, national register properties and national historic districts. The topography and landscape of Glacier National Park does not provide good, safe alternative locations for these functions and facilities, and the preferred alternative does not propose new development outside of these developed areas (thereby developing currently undeveloped areas). All new facilities and improvements would be designed to be compatible with the historic district and would take into consideration sustainable design guidelines and "flood-proofing." The project locations and design would avoid, minimize or reduce adverse impacts on natural resources and adverse effects on cultural resources.

To minimize the risk to human life, the following actions would be taken:

1. Flood control structures in these areas would be improved and maintained.
2. A warning and evacuation system would be maintained and updated as necessary.
3. Flood warning and evacuation are feasible because the nature of flooding in these areas would provide enough lead-time to evacuate, and there are safe places to move people without putting them at further risk.
4. Wood and other debris would be removed from the bridges to maintain continued flow of Snyder Creek and Rose Creek. The berm adjacent to Rose Creek would be raised and maintained to assure protection of the Rising Sun General Store/Motel/Dormitory.
5. The channels of Snyder Creek and Rose Creek through the developed areas would be maintained as necessary.

The impacts of the new buildings, roads, parking lots and other associated facilities proposed on the floodplain would have minimal impact on increased flooding in the area. When added to the existing development in the area, the cumulative impact would have a minor, negative impact on the Lake McDonald Lodge, Many Glacier and Rising Sun floodplains and hydrology.

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

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