



Waterton-Glacier Guide

The official newspaper
of Glacier National Park

Fall, Winter, and Spring 2004-2005
Volume 1



A Busy Time of the Year

THE PARK IS A BUSTLE OF ACTIVITY AS PREPARATIONS for winter are being made. Park lodges are winterized, winter supplies are stored, and most people retreat to the warmth and security of their homes outside the park. Those that stay face the added challenge of adapting to a Rocky Mountain winter.

Winter places enormous stress on wildlife in the park as well. In the highest alpine sections of the park, winter is even more severe with brutal winds, heavy snow- cover, and a lack of food supplies. Most animals migrate down to lower areas or fly south for the winter. Not many remain. Pika and marmots do remain, and face these challenges in dramatically different ways. Both species have evolved mechanisms and behaviors that allow them to thrive in environments that force others away.

Throughout the summer and early fall, pika scurry around the barren looking talus slopes feeding on grasses and wildflowers that grow between the rocks. When not eating, they clip grass stems and plant leaves, grab as many as they can in their mouths, and travel to favorite rocks to spread them out in the sun to dry. After the clippings have cured in the sun the pika take them under the rocks and build huge “haystacks” as food for the coming winter. If you see a pika while you are out hiking, try to follow its movements with binoculars. It may lead you to the location of one of these big piles of clippings.

Pika are active year-round and remain relatively warm and wind-free under an insulating blanket of tens of feet of snow. Throughout the winter they feast on the haystacks they constructed during the summer.

Marmots, on the other hand, are not the active and industrious creatures that pika are. Where pikas are very secretive and hard to spot, marmots tend to be slow moving and easily seen alpine residents. Like the pika, marmots spend the summer feasting on alpine vegetation and storing it away for the winter, but they don't store their's in haystacks, they store it as fat. The less they move in the summer the more fat they are likely to have in the winter. How can they store enough fat to last the whole winter? They hibernate! During hibernation their body processes (temperature, respiration, heart rate) all slow down. Marmots actually start hibernation at the end of August. Within a matter of a few days marmots just seem to disappear from the alpine sections of the park. They don't leave the area, they go underground. Once in the burrows they begin their seven to eight month hibernation. The ground around them and the snow-cover above helps protect them and keep them at a constant temperature. In spring, as new plants start to grow and food becomes available again, the marmots reawaken and begin another summer of fattening up.

When you visit Glacier, in the fall and winter, think about ways you adapt to this sometimes harsh environment. High calorie snacks fuel your body's internal engine to produce heat. Jackets with extra insulation help keep you warm. Special adaptations like snowshoes and skis allow access to hiking trails covered by snow. People, like wildlife residents of the park, must make special adjustments for winter, but they are worth the effort to see Glacier at this uncrowded time of year. We may not be able to hibernate like the marmots, but a day of winter activity in the park will help to reduce a bit of the fat reserves stored up earlier this summer.



Flinsch Peak



The rocky slopes of Flinsch Peak and Pitamakan Pass are perfect habitat for pika (left) and marmots (right).



Pitamakan Pass

Pages 2 & 3 Fall in Glacier

Fall is one of the best times of the year to view wildlife in Glacier. It is also a time of great stress for birds and mammals. Whether they are preparing to migrate south or fattening up for the long winter to come, this is a critical time. Please read the information in this guide on how to spot wildlife safely, for both you and the animals.

Pages 4 & 5 Winter/Spring

Glacier's long cold winter and brief springtime are characterized by Pacific weather systems, which bring rain and snow to the valleys and heavy snows to the high country. Visiting at this time of year brings special challenges and amazing rewards. Pages four and five highlight special information you will need, to get the most out of a visit during this special time of the year.

Pages 6 & 7 Bears

Glacier is at the core of one of the largest intact ecosystems in the country, providing large undisturbed areas vital for bears, especially grizzly bears, to survive in the wild. Bears are just one of the things that makes Glacier a truly special place. Read the information contained in this guide so that you can visit safely and help us protect these magnificent creatures.



Visit <http://www.nps.gov/glac/home.htm> for the official Web site of Glacier National Park.



National Park Service
U.S. Department of the Interior

Glacier National Park

Glacier preserves over a million acres of forests, alpine meadows, and lakes. Its diverse habitats are home to over 70 species of mammals and over 260 species of birds. The spectacular glaciated landscape is a hikers paradise containing 700 miles of maintained trails that lead deep into one of the largest intact ecosystems in the lower 48 states.

The park contains over 350 structures listed on the National Register of Historic Sites and six National Historic Landmarks.

In 1932 Glacier and Waterton Lakes National Park, in Canada, were designated Wateron-Glacier International Peace Park. This designation celebrates the longstanding peace and friendship between our two nations. Glacier and Waterton Lakes have both been designated as Biosphere Reserves and together were recognized, in 1995, as a World Heritage Site.

Mailing Address

Park Superintendent
Glacier National Park
West Glacier, MT 59936

Phone
406-888-7800

Park Website
www.nps.gov/glac/home.htm

"EXPERIENCE YOUR AMERICA"

The National Park Service cares for the special places saved by the American people so that all may experience our heritage.

Keeping the "Wild" in Wildlife

GLACIER NATIONAL PARK IS A MEETING PLACE - where prairie, northern and southern Rocky Mountains, and west coast plants overlap. Add to this mix the effects of natural processes such as fire, floods, and avalanches, and you end up with a complex, varied landscape which provides homes for many animals.

It is also a meeting place for visitors from around the world - like you! As a visitor to this habitat, take the time to learn about the wildlife and respect their need for the space they require to live undisturbed. Although some animals may spend part of their year close to roads and developed areas where they are easy to observe, enjoy them at a distance. Although wild animals may appear to tolerate people, approaching too close can cause them stress and disturb them from their rest, natural feeding areas, or travel routes.

We recommend you keep at least three bus lengths (100 ft/30 metres) away from large animals and a minimum of three times that distance from bears. Instead of moving

closer, use binoculars or a telephoto lens to improve your view. Keep the animal's line of travel or escape route clear. If wildlife approaches you, move away.

"Animal jams" occur when large numbers of people stop to view wildlife from the road. In their excitement, many folks forget they need to be aware not only of safety concerns related to wild animals, but also traffic hazards. Slow down and pull over safely. Both wildlife and people, particularly children, may suddenly run onto the road. Remain in your vehicle, safe from both wildlife and traffic and move on in a short time so others can watch. If a jam occurs close to an animal or on a hill, curve, or in heavy traffic, you may be asked to move on.

Feeding wildlife (either directly or indirectly by leaving garbage or food out where they can find it) or approaching animals too closely causes them to lose their fear of people. Once habituated, these animals often become increasingly aggressive. Because they are still wild, they remain unpre-

dictable and may strike out with antlers, horns, teeth, hooves, or claws without warning. Your individual close interaction with wildlife may be a positive experience, but you may be setting someone else up for injury. In 1999, after campers fed a deer, a 4-year-old girl was attacked and injured when she simply walked by the deer later without offering food.

If you entice or feed an animal you may also share responsibility for its death. Animals may be hit by cars if they begin to seek out handouts along roads and in parking lots. Habituated animals often have to be removed or killed.

Animal jams and habituated wildlife are serious problems in both Waterton and Glacier. Please heed the advice of park staff who may be handling these situations.

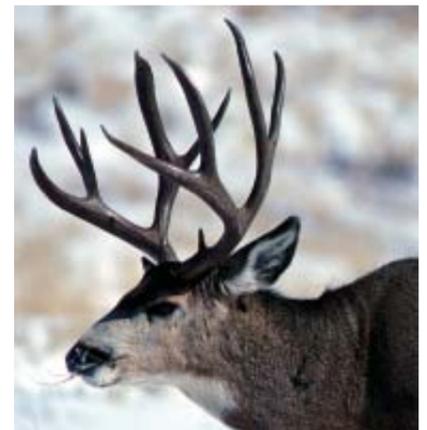
Enjoy wildlife from a distance, and let others know about the problem. We all share responsibility to keep these national parks healthy and wild.



Bighorn sheep



Mountain goat



Mule deer

Fall Visitor Information

Visitor Center Hours

Headquarters Building - West Glacier
Weekdays (closed holidays) 8:00am to 4:30pm
St. Mary Visitor Center
Open until Sept. 30 8:00am to 5:00pm
Oct. 1 until Oct. 17 8:30am to 5:00pm
Logan Pass Visitor Center
Open until Sept. 30 9:30am to 4:30pm

Apgar Visitor Center

Open until Oct. 31 9:00am to 5:00pm
Open on *weekends only* from November 1 to April 30 9:00am to 4:30pm
May 1 to May 31 9:00am to 5:00pm
Closed Christmas.

Entrance Fees

Single Vehicle Pass	\$20.00	Valid for 7 days.
Single Vehicle Pass Dec.1 to Feb. 28 ...	\$10.00	Valid for 7 days.
Single Person Entry	\$5.00	By foot, bicycle, or motorcycle for 7 days.
Single Person Entry after March 1	\$10.00	By foot, bicycle, or motorcycle for 7 days.
Glacier National Park Pass	\$25.00	Valid for 1 year from month of purchase.
National Parks Pass	\$50.00	Valid for 1 year from month of purchase.

Golden Age, Golden Access, and Golden Eagle Passports are also valid. The National Parks Pass may be upgraded to a Golden Eagle for \$15.00. Special fees are charged for commercial tour vehicles. Waterton Lakes National Park has separate entrance fees.

Visitor Services

In October, the only services available in the park will be at Apgar, near the foot of Lake McDonald. Some closure dates are dependent on weather conditions. Check locations for exact dates.

Gift Shops

Schoolhouse Gifts open until late Oct.
Montana House of Gifts open until late Dec.

Lodging

Apgar Village Lodge open until Oct. - Call for reservations 406-888-5484

Backpacking and Hiking Guides

Glacier Wilderness Guides offers guided day hikes and backpacking trips into Glacier's backcountry for one to seven days. Custom trips are available. Camping equipment is available for rent at their West Glacier office. For information call 406-387-5555 or 800-521-RAFT (7328).

Bus Tours

Sun Tours operates interpretive tours through mid-October. Tours highlight Blackfeet culture and history relating to Glacier National Park's natural features, and begin from East Glacier and St. Mary. Call 1-800-786-9220 or 406-226-9220 for reservations and information.

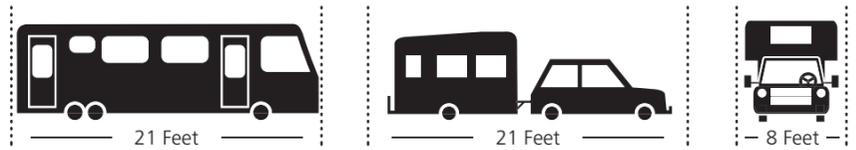
Scenic Drives

Going-to-the-Sun Road

This 52-mile road combines both history and unparalleled scenery. While portions of the road remain open year-round, the higher sections are not open until late May or June and close when weather conditions prevent safe travel for visitors and staff.

Vehicle Size Restrictions on the Going-to-the-Sun Road

To help reduce congestion along this narrow winding road, vehicle size restrictions are in effect. Vehicles, and vehicle combinations, longer than 21 feet (including bumpers) or wider than 8 feet (including mirrors), are prohibited between Avalanche Campground and the Sun Point parking area.



Weather

In the fall, expect a mixture of warm sunny days and cloudy overcast skies. Overnight lows in the park can drop well below freezing and snow can fall anytime. Prepare for a variety of conditions and dress in layers. Always bring raingear. Statistics for average weather conditions are below.

Month	Precipitation	Rain	Snow	Highs & Lows	Extremes
October	2.93"	14 days	1 day	55° to 33°	79° and -3°
November	3.76"	9 days	11 days	35° to 25°	56° and -17°
December	3.09"	2 days	17 days	30° to 17°	45° and -30°
January	3.25"	5 days	16 days	32° to 18°	49° and -29°
February	1.86"	4 days	11 days	35° to 18°	55° and -27°
March	2.06"	7 days	8 days	43° to 22°	62° and -11°
April	2.07"	14 days	2 days	54° to 30°	75° and 11°
May	2.97"	16 days	1 day	65° to 36°	87° and 22°

Observing Wildlife

- Look at dusk and dawn. Animals tend to be more active at those times. Note: Hiking alone or after dark is not recommended in bear country.
- Look in a variety of habitats. You will see different birds and animals in the moist cedar-hemlock forest than in the sunny thickets and shrubs alongside aspen forests. Don't overlook rivers and marshes. Water is a magnet for wildlife.
- Stop and walk a trail. Spend some time away from the main roads. Both parks offer fine short walks that can be rewarding to wildlife watchers.
- Learn about animal behavior. Not only can time of day affect animal behavior, but time of year can as well. Knowing when and where to look is important. In autumn, elk congregate in large groups, which are particularly noticeable on the Two Dog Flats area near St. Mary. Birds are usually more numerous or noticeable during spring and fall migration periods. Many golden eagles and hawks soar over the Lake McDonald Valley in fall.
- Ask park staff about recent sightings. Rangers throughout the park will be happy to assist you.



Lynx

Poaching

Poaching in national parks is at an all time high. If you observe suspicious behavior, contact a ranger or call 406-888-7801. Try to get an accurate description of individuals or vehicles, but don't approach anyone engaged in criminal activity.

Hunting

HUNTING AND LOADED FIREARMS are prohibited in Glacier National Park. Unloaded firearms may be transported in a vehicle if the weapon is cased, broken down, or rendered inoperative, and kept out of sight. Hunters may not pursue, dress out, or transport legally wounded or killed animals that end up within park boundaries, unless accompanied by a park ranger. To report such incidents, call 888-7800.

Lawfully taken and tagged wildlife may be transported through the park only on U.S. Highway 2. All other park roads are closed to transportation of lawfully taken wildlife, unless specifically approved in writing by a park ranger.

Park rangers may inspect hunting licenses and permits, weapons, and wildlife to ensure compliance with regulations. A free handout entitled Federal Regulations Pertaining to Hunting and Weapons in Glacier National Park is available.



Top: Bull elk. Bottom: Golden eagle

Park Regulations

It is your responsibility to know and respect park regulations. Violations are punishable by fines up to \$500.00 and/or six months in jail. Park regulations are strictly enforced.

- Pets must be on a leash, and are not permitted on trails or anywhere off plowed roadways. You may not ski with your pet.
- Feeding or disturbing wildlife is prohibited.
- It is illegal to remove any natural or cultural feature including plants, rocks, artifacts, driftwood, or antlers.
- Open containers of alcohol in a motor vehicle are prohibited.
- All food and utensils must be properly stored to protect wildlife.
- Hunting and firearms are not allowed in Glacier. See hunting article at left.
- The standard park fishing season for all waters in the park is from the third Saturday in May through November 30, with some exceptions. Please obtain Glacier's current *Fishing Regulations* prior to fishing.



Roadside aspens in Many Glacier

Fall Visitor Information continued...

Hiking

Over 700 miles of trail provide many outstanding opportunities for both short hikes and extended backpacking trips. Hikers need to assume individual responsibility for planning their trips and hiking safely. Read all the warnings and recommendations in this newspaper; you will increase your odds of a safe hike, decrease your disturbance to wildlife, and lessen damage to resources.

Trail maps, trail guides, topographic maps, and field guides are available at park visitor centers. Publications are also available by mail. Pick up a catalog at any visitor center in the park.

Six self-guided trails (the Trail of the Cedars, Huckleberry Mountain, Hidden Lake, Running Eagle Falls, Sun Point, and Swiftcurrent Nature Trails) encourage hikers to experience Glacier at their own pace. The Trail of the Cedars and Running Eagle Falls are wheelchair accessible.

Backcountry Camping

Visitors camping overnight in the backcountry must obtain a backcountry permit. Through October 31, permits may be obtained at the Apgar Backcountry Permit Center. After October 31, permits are available at Park Headquarters. In St. Mary, permits are available at the Visitor Center until October 17. After October 17 permits are available at the Hudson Bay District Office, 406-732-7000.

Permits are issued no more than 24 hours in advance of your trip. Advance reservations (more than 24 hours in advance) are available at the Apgar Backcountry Permit Center AND by mail. Advance reservations are only accepted for trips between June 15 and October 31. Write to: Backcountry Permits, Glacier National Park, West Glacier, MT 59936, for information and to obtain reservation forms. There is a \$20.00 reservation charge. Advance reservations for the 2005 summer season will not be accepted until April 1, 2005.

Bicycling

Bicycles are allowed on roadways, bike routes, and in parking areas. They are not allowed on trails. Observe all traffic regulations. Keep to the right side of the road and ride in single file. Pull over if four or more vehicles stack up behind you. During periods of low visibility, a white light or reflector, visible from a distance of at least 500 feet to the front, and a red light or reflector, visible from at least 200 feet to the rear, are required. Be visible! Attach a bright flag on a pole and wear light-colored clothing. Watch for falling rocks, drainage grates, and ice on roads.

Pets

Pets are permitted in campgrounds, along roads, and in parking areas, and must be on a leash of 6 feet or less, caged, or in a vehicle at all times. They are not allowed in buildings. Pet owners are required to pick up after their pets and dispose of waste properly. **Pets may not be left unattended and are not permitted on trails, along lake shores, or in the backcountry.**

Camping

Primitive campgrounds will remain open until closed by snow. Primitive campgrounds have no potable water available. Campers need to bring their own water, or be prepared to filter or boil stream or lake water. Campsites are limited to 8 people and 2 vehicles per site. Winter camping will be available at the Apgar Picnic Area and St. Mary Campground.

Fires and Firewood

Campfires are permitted only in designated campgrounds and picnic areas where fire grates are provided, and only when fire restrictions are not in effect. Collecting firewood is prohibited in the park, except along the inside North Fork Road from one mile north of Fish Creek Campground to Kintla Lake, and along the Bowman Lake Road, and around backcountry campgrounds that permit fires.

Campground Information

Campground and last day of regular camping

Special Information

Camping is permitted only in designated campgrounds.

Apgar**

October 18, 12:00 noon

\$15.00 - 194 sites - 25 sites will fit a maximum vehicle combination length of 40'. No disposal station or flush toilets after Oct 18.

Cut Bank

September 27, 12:00 noon

\$12.00 - 19 sites - Campground accessed by 5 mile dirt road. RVs not recommended. No flush toilets.

Many Glacier*

September 27, 12:00 noon

\$15.00 - 110 sites - 13 sites will fit a maximum vehicle combination length of 35'. No disposal station or flush toilets after Sept 27.

St. Mary**

September 27, 12:00 noon

\$17.00 - 148 sites - 25 sites will fit a maximum vehicle combination length of 35'. No disposal station or flush toilets after Sept 27.

Campgrounds already in primitive status include: Kintla Lake, Bowman Lake, Logging Creek, Quartz Creek, and Two Medicine. There is no treated, running water or flush toilets available. Cost for primitive camping in these campgrounds is \$6.00 a night. Between November 30 and March 1, there is no fee for primitive camping. Campgrounds will remain open until snow accumulation and/or unsafe road conditions exist.

* After the dates listed, primitive camping will be available until the campground closes due to weather. Cost is \$6.00 a night. Treated, running water and flush toilets will not be available.
Between November 30 and March 1, there is no fee for primitive camping.

Winter's "Wonderland"

Avalanches

Avalanches are a real danger in the mountainous portions of Glacier. Please check <http://www.glacieravalanche.org> for the latest avalanche hazard and weather advisory before entering Glacier's backcountry.

Avoid areas in old avalanche paths and stay off steep, open slopes and cornices. If you must cross a steep, open slope, travel up and above the steep area or well below the bottom. Travel one at a time, loosen pack straps, remove ski pole straps, and fasten all layers of clothing. If an avalanche should occur, discard all equipment and make swimming motions toward the surface.

The survival rate is only 50% after a burial of 30 minutes. A sole survivor should not go for help unless it is only a few minutes away. Mark the last place the victim was seen and search directly downslope, probing the snow with ski poles or anything available. Each member of a party traveling in avalanche terrain should carry probe poles, a shovel, and avalanche transceivers.



GLACIER NATIONAL PARK IS WRAPPED in a blanket of snow for a good share of the year. Winter is a quiet time. The summer visitors have gone, temperatures plummet, and only the well-prepared cross-country skiers and snowshoers venture into Glacier's backcountry.

Some of the more popular ski and snowshoe trails are located in the Apgar and St. Mary areas, and along McDonald Creek. Less traveled routes are located in other sections of the park. Check with a park ranger for trail and weather conditions, before venturing out. Severe weather, lack of snow, rain, or melting conditions can quickly alter the difficulty of any winter trip. Ice is common on roads and on heavily skied trails. Skiing on frozen lakes is dangerous and not recommended. Skiers, snowshoers, and hikers are asked to maintain separate tracks.

Cross park trips may contain avalanche and terrain hazards and should be attempted only by experienced, well-equipped parties.

Most ski routes are not marked. Pay attention to descriptions and local landmarks. Climbers should complete the *Voluntary Climbers Registration* form, available at Park Headquarters, Apgar Visitor Center, and ranger stations. A backcountry camping permit (available at Park Headquarters, the Hudson Bay District Office, and the Apgar Visitor Center) is required for any overnight backcountry camping trip.

Survival during the long winter is difficult for Glacier's wildlife. Human contact adds unnecessary stress. Avoid approaching or startling any animals or birds. All animals are wild and should never be fed. Bears, asleep for most of the winter, sometimes awaken for short periods of time. In bear country, always exercise extreme caution, especially with food and garbage. If approached by a mountain lion, act aggressively. Do not run! Lions may be scared away by being struck with rocks or sticks, or by being kicked or hit.

Hypothermia

Hypothermia, the progressive physical collapse and reduced mental capacity resulting from the chilling of the inner core of the body, can occur even at temperatures above freezing. Sudden storms and temperature drops can change a pleasant ski trip into a bitterly cold and life-threatening experience.

Warning signs include uncontrolled shivering, memory lapses and incoherence, slow or slurred speech, lack of coordination, stumbling, a lurching gait, drowsiness, and exhaustion.

- Prevent hypothermia by drinking plenty of fluids and wearing water-resistant clothing or clothes that wick moisture away from the body.
- Minimize wind exposure.
- Get victim into dry clothes, build a fire for heat, keep victim awake, and give warm non-alcoholic drinks.
- In more serious cases, undress victim and yourself, and get into sleeping bag making skin-to-skin contact.
- Seek professional help immediately.



Throughout the winter the route of the Going-to-the-Sun Road lies buried under snow. Only the most intrepid skiers and snowshoers are treated to these spectacular winter vistas.



Dawn Mist Falls lies deep in the backcountry near the Belly River Ranger Station.

Winter Visitor Information

Visitor Center Hours

Apgar Visitor Center

Open weekends November 1 to April 30 from 9:00am to 4:30pm

Headquarters Building - West Glacier

Weekdays (closed holidays) 8:00am to 4:30pm

Entrance Fees

Entrance fees are collected throughout the winter. When the entrance gate is not staffed, instructions are posted to explain how to pay the fees. The rates are the same as those shown in the Fall section of the paper on page 2. Waterton Lakes National Park has separate entrance fees.

Winter Roads

The Going-to-the-Sun Road is usually plowed from West Glacier to Lake McDonald Lodge. U. S. Highway 89 provides access to the east side of the park. Blowing and drifting snow are common. The North Fork Road from Columbia Falls is open for winter travel to the North Fork area and the Polebridge Ranger Station. Before setting out, check local park conditions by calling 406-888-7800. For statewide road conditions call 1-800-226-ROAD (7623).

Weather

Winter weather in Glacier National Park is unpredictable. Expect numerous overcast or snowy days, especially on the west side of the park, with the possibility of extreme variations in temperature. While daytime temperatures average in the 20's and 30's, it may drop well below zero. Strong winds are typical on the east side of the park. Wind greatly accentuates the effects of temperature. This chill factor increases the danger of hypothermia and frostbite. Be prepared with proper winter clothing. Elevation, exposure, and wind patterns determine snow accumulation. Snow depths vary, with 2-3 feet common at lower elevations and 1-15 feet in the high country. The weather data shown in the chart on page 2 was collected over the last ten years at Park Headquarters in West Glacier.

Winter Activities

Skiing

Cross-country skiing is an excellent way to enjoy Glacier National Park. Ski trails and routes throughout the park provide a range of scenery, terrain, and difficulty. For detailed information on routes and winter safety, pick up the *Cross-country Skiing* brochure at Park Headquarters, Apgar Visitor Center, or ranger stations.

Mountain Climbing

Winter weather conditions make climbing very challenging. With the inherent dangers of snow and ice-covered slopes, avalanche danger increases. Register all climbs with a ranger, and ask for the latest information.

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Snowshoeing

Snowshoeing provides another means of getting off the beaten path. Routes detailed in the *Cross-country Skiing* brochure are available to snowshoers as well. However, as a courtesy to skiers, snowshoers should maintain a separate track where possible. Guided snowshoe and ski trips in Glacier may be available from private guide services located outside the park. Cross-country skis and snowshoes may be rented in many of the neighboring communities.

Snowmobiling is not permitted in Glacier National Park!

Winter Camping in Glacier

Frontcountry Camping

Although campgrounds are limited during this time of year, self-reliant visitors find a wondrous and peaceful setting in Glacier National Park. Primitive camping is allowed in the Apgar Picnic Area (until the Apgar Campground reopens in early May) and in the St. Mary Campground. Between November 30 and March 1, there is no fee for primitive camping. No drinking water is available for primitive camping. Instructions for registering your campsite are found on the bulletin board located at the entrance to the campground or camping area. There you will also find information on food storage regulations, water, firewood, and wildlife. Mountain lion sightings have increased in the last few years, and bears may be seen at any time of the year. Read and follow all wildlife precautions.

Backcountry Camping

A free permit is required for all overnight trips in the park's backcountry. Obtain permits at:

- **Park Headquarters** (closed Federal holidays)
Weekdays 8:00 am to 4:30 pm
- **Apgar Visitor Center**
Weekends 9:00 am to 4:30 pm
- **Polebridge** call 406-888-7842
- **St. Mary & Many Glacier**
call the Hudson Bay District Office in St. Mary at 406-732-7730, 406-732-7733, or 406-... 732-7737 to arrange a time to get a permit.
- **Two Medicine** call 406-226-4473 (East Glacier Ranger Station).

From November 20th to May 1st, special backcountry camping regulations are in effect.

- Permits may be obtained up to 7 days in advance of your trip.
- Wood fires are prohibited in all backcountry areas because dead and down fuel is covered by snow. Self-contained camp stoves are recommended.
- Party size is limited to 12 people with a two night limit for any one campsite.
- Camping is not allowed within 100 feet of roads, trail corridors, creeks, lakes, or on vegetation freshly emerging from snow cover.
- Use pit toilets where available; otherwise human waste should be disposed of at least 200 yards from lakes, streams, trails, roads, or developed areas. Do not leave or burn garbage (including toilet paper) in the backcountry. Pack it out!

Plowing Into Spring

ONE SURE SIGN OF SPRING IS THE START OF THE ANNUAL plowing of the Going-to-the-Sun Road. The first of April marks the target date for the start of plowing. Often plowing proceeds quickly on the lower stretches of road along McDonald Creek and St. Mary Lake. However, several avalanche paths cross these sections of roadway, and in the past, crews have discovered huge amounts of snow and rock and trees piled up on the road from winter slides.

Once cleared, and after the danger of avalanches has past, these lower stretches of road are opened to hikers and bikers, who enjoy the Going-to-the-Sun Road without cars. As the crews plow further up the road, additional sections are opened, first as hiking and biking routes, and later to cars.

The steep, upper sections of road, on either side of Logan Pass, provide the most challenges for the crews. This section traverses 70 avalanche paths, making the work difficult and very dangerous. Avalanche spotters constantly monitor the slopes and radio any signs of moving snow to the plow operators at once. Some days crews encounter new slides blocking their way home, as slides continue to release behind them over areas already plowed.

It has been many decades since any fatalities have occurred plowing the road, but it is a constant threat. If the weather is overcast or rainy, and the spotters can't see the slopes above the road, crews do not work. Safety of the equipment operators is of paramount concern.

Park road crews always find different challenges from one year to the next, as they continue up the road. This past year, when the plows reached the area called "Big Bend," an enormous mountain of snow covered a vast stretch of the road. Sometime earlier in the winter, a series of unseen avalanches released at the same time creating a snow drift that was upwards of 60 feet deep in places. This year, it took almost two weeks to plow through a section of road that took less than a day the year before.



Avalanche spotters constantly monitor the slopes for any signs of moving snow.



Dramatic plumes of snow fly from the rotary plow as crews work their way to Logan Pass.



Just like the first visitors of 1933, on the newly opened Going-to-the-Sun Road, today's early summer visitors experience towering walls of snow near Logan Pass.

The final obstacle in opening the road is the Big Drift. This wind-blown snowdrift, just east of Logan Pass, can be 60-70 feet deep or more. Plumes of snow shooting up from the rotary plows make an impressive sight, as the crews nibble at the drift from both sides. After several days of exacting work, the plows reach the roadbed and the crews from both sides of the park meet. After a few more days of installing removable guard rails and final cleanup, the road can be opened for the summer season once again.

Depending on the weather and what the crews find, opening the Going-to-the-Sun Road can take two months or more. Generally, the road opens for the season in late May or early June. It's sometimes hard for people in the valleys, where the snow melted weeks earlier, to understand the magnitude of the task the road crew undertakes or the snow conditions that still remain in the high country. The original construction of the road was a major engineering feat. Maintaining the road and opening it each spring remains a continual challenge for park crews today.



Upper McDonald Creek is the main Montana nesting area for harlequin ducks. As the name implies, the male harlequin sports a snazzy pattern of black, white, slate blue, and chestnut. In contrast, the female is dark brown with distinct whitish head spots. Since these uncommon ducks are shy and easily disturbed, please watch and photograph them from a good distance.

Spring Birding Tips

Welcome to Springtime in Glacier National Park! One of the bonuses available to visitors this time of year is the abundance of birdlife. You may spot dozens of species migrating through and others who have newly arrived at their park nesting grounds.

Take time to stop and listen. You may hear geese honking, loons wailing, varied thrushes whistling, woodpeckers tapping, ruffed grouse drumming, winter wrens trilling, ravens croaking, belted kingfishers rattling, McGillivray warblers warbling, and all manner of other pleasing, or at least intriguing, calls, songs, and sounds.

Westside forests, eastside meadows, higher elevation tundra, and brushy or wetland areas parkwide provide habitat for a fascinating variety of birdlife. If you're interested in what's been spotted here over the years, pick up a free bird checklist from one of the park's visitor centers or ranger stations.



A yellow warbler brings back food for the young in the nest.

Spring Visitor Information

Visitor Center Hours

Apgar Visitor Center

Open weekends until April 30: 9:00am-4:30pm
Open daily starting May 1: 9:00am-5:00pm

Headquarters Building - West Glacier

Weekdays (closed holidays): 8:00am to 4:30pm

Entrance Fees

When the entrance gate is not staffed, instructions are posted to explain how to pay the fees. The rates are the same as those shown in the Fall section of the paper on page 2. Waterton Lakes National Park has separate entrance fees.

Visitor Services

Park lodges, restaurants, tours, gift shops, and other services typically begin operation in mid-May. Spring visitors should come prepared to be self-sufficient. Full services are available year-round in neighboring communities.

Spring Driving

Starting in April, additional miles of roadway in Glacier start to open, as weather permits. The Going-to-the-Sun Road is generally not fully open until late May or June. Check at visitor centers or ranger stations for local road conditions. Late season snows can cause temporary road closures. Icy roads are common, especially early in the morning.

Spring Activities

Bicycling

Bicycles are allowed on roadways, bike routes, and in parking areas. They are not allowed on trails. Observe all traffic regulations. Keep to the right side of the road and ride in single file. Pull over if four or more vehicles stack up behind you. During periods of low visibility, a white light or reflector, visible from a distance of at least 500 feet to the front, and a red light or reflector, visible from at least 200 feet to the rear, are required. Be visible! Attach a bright flag on a pole and wear light-colored clothing. Watch for falling rocks, drainage grates and culverts, and ice on roads.

Bicycling cont...

Once plowing of the Going-to-the-Sun Road begins, sections of the road between Lake McDonald Lodge and the Loop and along St. Mary Lake are opened to bicycle traffic before they are opened to vehicles. This provides an opportunity for bicyclists to enjoy the lower portions of the road without traffic. Watch for ice in shaded areas and animals that may be near roadsides.

Camping

Most campgrounds in Glacier open in late May and June. The Apgar Campground is usually the first to open in early May. Until open for the season, primitive camping is permitted at the Apgar Picnic area and St. Mary Campground. Some additional campgrounds may allow primitive camping before the regularly scheduled opening date. Between November 30 and March 1, there is no fee for primitive camping. After March 1 primitive camping is \$6.00 per night. Check at a visitor center or ranger station for details.

Campsites are limited to 8 people and 2 vehicles per site. Campfires are permitted only in designated campgrounds and picnic areas where grates are provided. Collecting firewood is prohibited except along the inside North Fork Road from one mile north of Fish Creek Campground to Kintla Lake, and along the Bowman Lake Road.

Backcountry

Winter backcountry camping regulations remain in effect until May 1. After May 1, the regulations are the same as those listed in the Fall section of this guide. Starting April 1, mail-in reservation requests are accepted for trips starting between June 15 and October 31.

Fishing

The general park fishing season is from the third Saturday in May, through November 30. Lake fishing is open all year. No fee or license is required to fish within the park, but fishermen must stop at a ranger station or visitor center to obtain current regulations.



Grizzly bear

Hiking in Bear Country

Don't Surprise Bears!

Bears will usually move out of the way if they hear people approaching, so make noise. Most bells are not enough. Calling out and clapping hands loudly at regular intervals are better ways to make your presence known. Hiking quietly endangers you, the bear, and other hikers.

A bear constantly surprised by quiet hikers may become habituated to close human contact and less likely to avoid people. This sets up a dangerous situation for both visitors and bears.

Don't Make Assumptions!

You can't predict when and where bears might be encountered along a trail. People often assume they don't have to make noise while hiking on a well-used trail. Some of the most frequently used trails in the park are surrounded by excellent bear habitat. People have been charged and injured by bears fleeing from silent hikers who unwittingly surprised them along the trail. Even if other hikers haven't seen

bears along a trail section recently, don't assume that bears aren't there.

Don't assume a bear's hearing is any better than your own. Some trail conditions make it hard for bears to see, hear, or smell approaching hikers. Be particularly careful by streams, against the wind, or in dense vegetation. A blind corner or a rise in the trail also requires special attention.

Don't Approach Bears!

Bears spend a lot of time eating, so avoid hiking in obvious feeding areas like berry patches, cow parsnip thickets, or fields of glacier lilies. Keep children close by. Hike in groups and avoid hiking early in the morning, late in the day, or after dark.

Never intentionally get close to a bear. Individual bears have their own personal space requirements which vary depending on their mood. Each will react differently and its behavior can't be predicted. All bears are dangerous and should be respected equally.

Camping & Bears

Odors attract bears. Our campground and developed areas can remain "unattractive" to bears if each visitor manages food and trash properly. Regulations require that all edibles (including pet food), food containers (empty or not), and cookware (clean or not) be stored in a hard-sided vehicle or food locker when not in use, day or night.

- Keep a clean camp! Improperly stored or unattended food will likely result in confiscation of items and/or issuance of a Violation Notice.
- Inspect campsites for bear sign and for careless campers nearby. Please notify a park ranger of any potential problems that you may notice.
- Place all trash in bearproof containers.
- Pets, especially dogs, must be kept under physical restraint.
- Report all bear sightings to the nearest ranger or warden immediately.

Roadside Bears

IT'S EXCITING TO SEE BEARS UP CLOSE but we must act responsibly to keep them wild and alive. If you see a bear from your car, stay inside. Leaving your vehicle endangers your safety and the bear's, and exposes you to traffic hazards. If traffic is heavy, keep your eyes on the road and don't stop. Accept the fact that, while your passengers may get a quick look, you may not. If traffic is light, slow down and pull over when it is safe to do so. Don't stop in the middle of the road, or on a hill or curve where other drivers may not see you in time to avoid a collision.

Exercising some common sense during the excitement of sighting a bear is important to you, the bear, and other visitors.



Grizzly sow with a cub

For Your Safety

Rivers and Lakes

Use extreme caution near water. Swift, cold glacial streams and rivers, moss-covered rocks, and slippery logs all present dangers. People have fallen victim to these rapid, frigid streams and deep glacial lakes. Avoid wading in or fording swift streams. Never walk, play, or climb on slippery rocks and logs, especially around waterfalls.

When boating, don't stand up or lean over the side, and always wear a lifejacket.

Giardia

Giardiasis is caused by a parasite (*Giardia lamblia*) found in lakes and streams. Persistent, severe diarrhea, abdominal cramps, and nausea are the symptoms of this disease. If you experience any symptoms, contact a physician. When hiking, carry water from one of the park's treated water systems. If you plan to camp in the backcountry, follow recommendations received with your permit. Bring water to a boil or use an approved filter.

Drowning

Sudden immersion in cold water (below 80° F, 27° C) may trigger the "mammalian diving reflex." This reflex restricts blood from outlying areas of the body and routes it to vital organs like the heart, lungs, and brain. The colder the water, the younger the victim, and the quicker the rescue, the better the chance for survival. Some cold-water drowning victims have survived with no brain damage after being submerged for over 30 minutes.

Revival Procedure:

- Retrieve victim from water without endangering yourself.
- Prevent further body heat loss, but do not rewarm.
- Near-drowning victims may look dead. Don't let this stop you from trying to revive them! If there is no pulse, start CPR regardless of the duration of submersion.
- Delayed symptoms may occur within 24 hours. Victims must be evaluated by a physician.



Use caution when crossing snowfields and ice.

Watch Your Step

Mountainous Terrain

Many accidents occur when people fall after stepping off trails or roadsides, or by venturing onto very steep slopes. Stay on designated trails and don't go beyond protective fencing or guard rails. Supervise children closely in such areas. At upper elevations, trails should be followed carefully, noting directions given by trail signs and markers.

Snow and Ice

Snowfields and glaciers present serious hazards. Snowbridges may conceal deep crevasses on glaciers or large hidden cavities under snowfields, and collapse under the weight of an unsuspecting hiker. Don't slide on snowbanks. People often lose control and slide into rocks or trees. Exercise caution around any snowfield.

If You Encounter a Bear

A COMMONLY ASKED QUESTION IS “What do I do if I run into a bear?” There is no easy answer. Like people, bears react differently to each situation. The best thing you can do is to make sure you have read all the suggestions for hiking and camping in bear country and follow them. Avoid encounters by being alert and making noise.

Bears may appear tolerant of people and then attack without warning. A bear’s body language can help determine its mood. In general, bears show agitation by swaying their heads, huffing, and clacking their teeth. Lowered head and laid-back ears also indicate aggression. Bears may stand on their hind legs or approach to get a better view, but these actions are not necessarily signs of aggression. The bear may not have identified you as a person and is unable to smell or hear you from a distance.

Bear Attacks

The vast majority of bear attacks have occurred because people have surprised a bear. In this type of situation the bear may attack as a defensive maneuver.

In rare cases bears may attack at night or after stalking people. This kind of attack is rare. It can be very serious because it often means the bear is looking for food and preying on you.

If you are attacked at night or if you feel you have been stalked and attacked as prey, try to escape. If you cannot escape, or if the bear follows, use pepper spray, or shout and try to intimidate the bear with a branch or rock. Do whatever it takes to let the bear know you are not easy prey.

If you surprise a bear, here are a few guidelines to follow that may help:

- Talk quietly or not at all; the time to make loud noise is before you encounter a bear. Try to detour around the bear if possible.
- Do not run! Back away slowly, but stop if it seems to agitate the bear.
- Assume a nonthreatening posture. Turn sideways, or bend at the knees to appear smaller.
- Use peripheral vision. Bears may interpret direct eye contact as threatening.
- Drop something (not food) to distract the bear. Keep your pack on for protection in case of an attack.
- If a bear attacks and you have pepper spray, use it!
- If the bear makes contact, protect your chest and abdomen by falling to the ground on your stomach, or assuming a fetal position to reduce the severity of an attack. Cover the back of your neck with your hands. Do not move until you are certain the bear has left.



Black bear

What Kind of Bear is That?

Grizzly Bear Color

Range from blond to nearly black, sometimes have silver-tipped guard hairs that give them a “grizzled” appearance.

Physical Features

Grizzly bears often have a dishd-in face and a large hump of heavy muscle above the shoulders. Their claws are around four inches (10 cm) long.



Black Bear Color

Color is not a reliable indicator of species. Contrary to their name black bears also come in brown, cinnamon, and blond.

Physical Features

Facial profile is straighter from tip of nose to ears, without the dishd-in look. Lack the hump of a grizzly and have shorter claws, generally around one and a half inches (4 cm) long.



A fed bear is a dead bear! Bears that obtain human food may have to be destroyed. Don't leave any food, packs, or garbage unattended, even for a few minutes.

Pepper Spray

THIS AEROSOL PEPPER DERIVATIVE triggers temporarily incapacitating discomfort in bears. It is a non-toxic and non-lethal means of deterring bears.

There have been cases where pepper spray apparently repelled aggressive or attacking bears and accounts where it has not worked as well as expected. Factors influencing effectiveness include distance, wind, rainy weather, temperature extremes, and product shelf life.

If you decide to carry spray, use it only in situations where aggressive bear behavior justifies its use. Pepper spray is intended to be sprayed into the face of an oncoming

bear. It is not intended to act as a repellent. Do not spray gear or around camp with pepper spray.

Under no circumstances should pepper spray create a false sense of security or serve as a substitute for standard safety precautions in bear country.

Be aware that you may not be able to cross the U.S./Canada border with some brands of pepper spray. Canadian Customs will allow the importations of USEPA -approved bear spray into Canada. Specifications state that the bear spray must have USEPA on the label.

For Your Safety

Wildlife Hazards

Glacier provides a wonderful opportunity to view animals in their natural setting. Along with this opportunity comes a special obligation for park visitors. With just a little planning and forethought, visitors can help ensure the survival of a threatened or endangered species.

Always enjoy wildlife from the safety of your car or from a safe distance. Feeding, harassing, or molesting wildlife is strictly prohibited and subject to fine.

Bears, mountain lions, goats, deer, or any other species of wildlife can present a real and painful threat, especially females with young.

Mountain Lions

A glimpse of one of these magnificent cats would be a vacation highlight, but you need to take precautions to protect you and your children from an accidental encounter. Don't hike alone. Make noise to avoid surprising a lion and keep children close to you at all times. If you do encounter a lion, do not run. Talk calmly, avert your gaze, stand tall, and back away. **Unlike with bears, if attack seems imminent, act aggressively. Do not crouch and do not turn away.** Lions may be scared away by being struck with rocks or sticks, or by being kicked or hit.

Lions are primarily nocturnal, but they have attacked in broad daylight. They rarely prey on humans, but such behavior occasionally does occur. Children and small adults are particularly vulnerable. Report all mountain lion encounters immediately!

Ticks

Ticks are most active in spring and early summer. Several serious diseases, like Rocky Mountain Spotted Fever, can be transmitted. Completely remove attached ticks and disinfect the site. If rashes or lesions form around the bite, or if unexplained symptoms occur, consult a physician.

Rodents and Hantavirus

Deer mice and other rodents are possible carriers of Hantavirus. The most likely source of infection is from rodent urine and droppings inhaled as aerosols or dust. Initial symptoms are almost identical to the onset of flu. If you have potentially been exposed and exhibit flu-like symptoms, you should seek medical care immediately.

Avoid rodent infested areas. Camp away from possible rodent burrows or shelters (garbage dumps and woodpiles), and keep food in rodent-proof containers. To prevent the spread of dust in the air, spray affected areas.

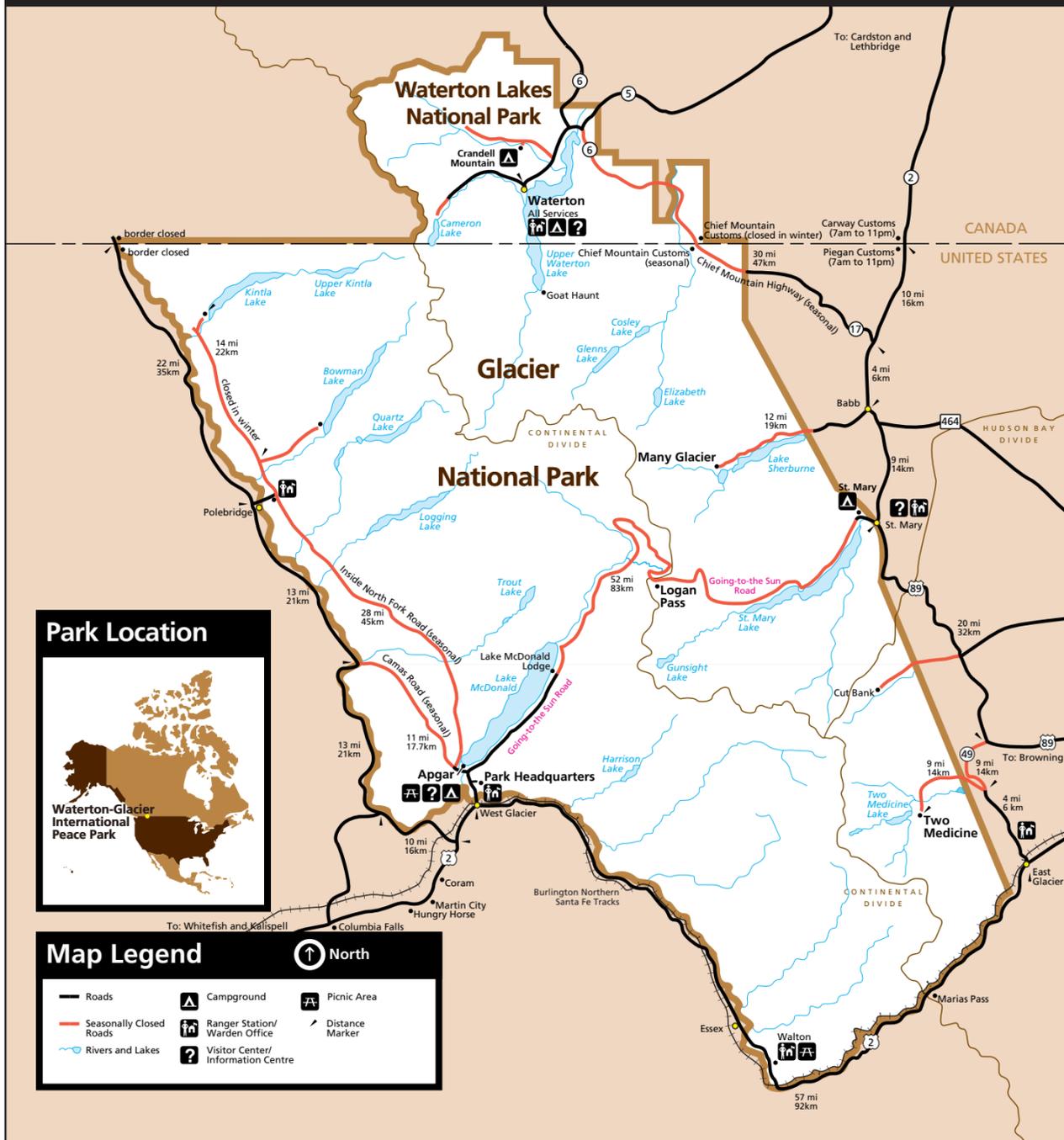
Medical Services

If you are injured or suddenly become ill while visiting the parks, please contact a warden or ranger for information and assistance. To ensure adequate staffing on your arrival at a hospital, call before setting out.

Montana Hospitals & Clinics

- Northern Rockies Medical Center
802-2nd St. E., Cut Bank, MT
406-873-2251
- Kalispell Regional Hospital
310 Sunny View Lane, Kalispell, MT
406-752-5111
- North Valley Hospital
Highway 93 South, Whitefish, MT
406-863-3500
- Teton Medical Center
915 4 NW, Choteau, MT
406-466-5763

Waterton-Glacier International Peace Park



Printed on Recycled Paper



Glacier is not just for summer visitors. People seeking fall foliage, winter snows, or spring wildflowers can find the "off-season" a great time to visit.

Park Partners

Glacier Natural History Association

BOOKSTORES IN GLACIER NATIONAL PARK VISITOR centers are operated by the Glacier Natural History Association (GNHA). This nonprofit organization works with the National Park Service to assist Glacier's educational and interpretive activities, cultural preservation, and special projects. The Waterton-Glacier Guide is one of just many free publications and information handouts that are funded annually through the generosity of GNHA. Glacier's website, backcountry permit operation, Native Plant Nursery, naturalist guided activities, and a host of other behind the scenes projects have all benefited from donations by GNHA.

Throughout the winter the West Glacier Depot Bookstore is open Monday through Friday and the Apgar Visitor Center Bookstore is open on weekends. Both locations have an extensive selection of books, videos and posters. GNHA members receive a 15% discount on items purchased at any of their stores, through their mail-order business, and at many other national parks.

Glacier Natural History Association
Box 310, West Glacier, MT 59936
406-888-5756



GNHA is located at the Historic Belton Depot in West Glacier, MT. Visit them in person, online at: <http://www.glacierassociation.org>, or email for information at: gnha@glacierassociation.org

The Glacier Institute

The non-profit Glacier Institute presents seminars, workshops, college-credit courses, school programs, and youth camps in Glacier and the surrounding ecosystem. The Institute provides high quality, well-balanced educational experiences for children and adults, emphasizing a hands-on, field-oriented approach to learning.

The Glacier Institute
P.O. Box 1887, Kalispell, MT 59903
406-755-1211 - <http://www.glacierinstitute.org>

The Glacier Fund

The Glacier Fund is the new nonprofit fundraising partner for Glacier National Park. Through generation of funds from the private sector, The Glacier Fund works to preserve Glacier's world-renowned natural and cultural history for the use and enjoyment of future generations. For more information contact:

The Glacier Fund
c/o Glacier National Park, West Glacier, MT, 59936
406-888-7910 - <http://www.glacierfund.org>

Glacier National Park Associates

The Associates is an all-volunteer, nonprofit group that assists with trail work, historic log structure preservation, and other projects in the park. Volunteers complete at least one major project yearly, involving three to five days in the backcountry. Donations and volunteers are welcome.

Glacier National Park Associates
Box 91, Kalispell, MT 59903
406-387-4299 - <http://www.nps.gov/glac/partners/gnpa.htm>

Border Crossing

Travelers should have government issued identification and proof of age. A birth certificate may be needed for children. Restrictions exist on crossing the border with pets, firearms, defensive sprays, certain bear sprays, alcohol, firewood, and purchases. Citizens of countries other than the United States or Canada may need a passport or visa.

Questions about crossing the border?

- From the United States into Canada call 800-320-0063.
- From Canada into the United States call 206-553-4676.

There are three border crossing stations adjacent to the park.

- **Roosville** - open 24 hours
- **Piegan/Carway** - 7 a.m. to 11 p.m.
- **Chief Mountain**
Closed until mid-May of 2005.

Waterton Lakes National Park

Visit Glacier's sister park just across the International Border.



<http://www.parkscanada.ca>
403-859-2224