

Baxter State Park

Winter Use Information



Park Headquarters:

64 Balsam Drive

Millinocket, ME 04462

Ph: 207-723-5140

Website: www.baxterstatepark.org

Facebook: <https://www.facebook.com/baxterstatepark>

Welcome Winter Visitors!

Dear Friend,

Thank you for your interest in visiting Baxter State Park during the winter season. For those willing to ski or snowshoe, winter in the Park offers a degree of solitude, challenge, and adventure absent during other seasons. **Please remember that you enter the winter backcountry of Baxter State Park at your own risk, and it is your responsibility to minimize hazards by using good judgment gained from experience and education.**

Baxter State Park is a gift to the people of the State of Maine, to be kept in a “natural wild state and as a sanctuary for wild birds and beasts.” Therefore, the mission of the Park is, first, to protect and preserve this “forever wild” area, and second, to provide opportunities for visitors to enjoy the Park. Baxter State Park is committed to the goals of protecting the wilderness, preserving a rustic visitor experience, and fostering an attitude of self-reliance and safe backcountry travel. As you visit this area in winter, we encourage you to share in the responsibility of protecting not only the wilderness and its natural inhabitants, but also your own safety and that of other winter visitors.

Enclosed are materials containing administrative procedures and information to assist winter visitors in planning trips, promoting safety, and preventing avoidable search and rescue efforts. Please read these materials before planning your trip.

You are encouraged to stop at Park Headquarters 8 A.M. to 4 P.M., Monday through Friday. Staff are available to assist in your trip planning and preparation, so please don't hesitate to write or call.

CONTENTS

General Information

Using the Park

Day Use

Overnight Use

Travel and Terrain

Park Facilities

Wildlife

Group Size and Composition

Mountain Guides

Getting to Baxter

Leave No Trace Ethics- An Overview

Winter Hazards

Avoiding Cold Injuries

Hypothermia

Frostbite

Carbon Monoxide Poisoning Water

Purification

Avalanches: Avalanche Red Flags

Search and Rescue

Equipment and Clothing

Winter Day Trip Checklist

Winter Checklist for Camping Trips

Mountaineers and Peak Baggers Considerations

Technical Climbers Considerations

Recommended Reading

GENERAL INFORMATION

First-time visitors are often stunned by the wild remoteness and beauty of Baxter State Park in winter. Percival P. Baxter, governor of Maine from 1921 to 1925, sought to protect Katahdin and the surrounding land for the people of Maine for all time. Beginning in 1930, Baxter purchased land and donated it to the state with the provision that it “forever be left in its natural wild state, forever be kept as a sanctuary for wild beasts and birds, and forever be used for public forest, public park, and public recreational purposes.” The Park now encompasses 209,644 acres and includes eighteen peaks over three thousand feet high.

Using the Park

DAY USE

Day users are encouraged to check in with Park Headquarters in Millinocket or online to find out the latest information on trails, access, weather, and avalanche conditions.

Below Treeline:

Individual day users should sign in and out at the self-registration boxes located at Park entrances.

Skiing and Snowshoeing: You can find excellent ski touring and snowshoeing on Park roads and trails, but it is very difficult to reach any of the summits in a single day.

Snowmobiling: Snowmobiling is permitted only on the Park Tote Road, which is not groomed. There are no warming huts, fuel sources, or other facilities along the route. The speed limit is 20 mph or less. Please use caution as the Park Tote Road is a multiple use trail in winter and you are likely to encounter skiers/snowshoers traveling throughout the Park.

Winter mountain hiking/climbing: Parties planning to winter mountain hike or climb (travel above treeline or off marked trails, including ice or snow climbing) in a single day are subject to the same registration process as winter campers. Permission for winter mountain hiking or climbing cannot be granted over the telephone. The Winter Hiking/Camping Application must be received by online submission or mail at least ten days prior to the date of the climb. Very fit skiers/ climbers traveling in ideal conditions may be able to ascend Katahdin via the Abol Trail in a single day.

Ice climbing: There are few if any ice climbs that can be approached and completed in one day. There are a few moderate ice climbs near the Park Tote Road, such as those on the southeast side of Doubletop Mountain, but these routes also require crossing Nesowadnehunk Stream.

Above Treeline:

Winter mountain hiking/climbing: Parties planning to winter mountain hike or climb (travel above treeline or off marked trails, including ice or snow climbing) in a single day are subject to the same registration process as winter campers. Permission for winter mountain hiking or climbing cannot be granted over the telephone. The Winter Hiking/Camping Application must be filled out online and submitted or printed out and mailed in at least ten days prior to the date of the climb. Very fit skiers/climbers traveling in ideal conditions may be able to ascend Katahdin via the Abol Trail in a single day.

Ice climbing: There are few if any ice climbs that can be approached and completed in one day. There are a few moderate ice climbs near the Park Tote Road, such as those on the southeast side of Doubletop Mountain, but these routes also require crossing Nesowadnehunk Stream.

OVERNIGHT USE

All overnight users between December 1 and March 31 are required to have campsite reservations. Please be familiar with group size, travel guidelines, and registration deadlines before you send in your request for reservations (see Baxter State Park's Winter Administrative Procedures). Reservations are issued on a first-come, first-serve basis. As the Park campsites, lean-tos, or bunkhouses have limited capacities, applications will be accepted October 15th until the end of the winter season. Processing of winter camping reservations and above treeline registrations, by mail and in person, begin on the first business day of November. Bunkhouse reservations fill quickly, especially those at Chimney Pond. (Lean-to reservations at Chimney Pond are usually available for those willing to endure the elements 24 hours a day; however, it is important to remember that no open fires are allowed at Chimney Pond at any time of year, and only the bunkhouse has a woodstove.)

Travel and Terrain

TRAVEL

- **Distance travelled within the Park in a single day shall not exceed fourteen (14) miles by any winter user. This rule does not apply to snowmobile use on the Park Tote Road.**
- **Travel to Chimney Pond or Russell Pond via the Abol Winter Parking Lot requires a mandatory first night stay at Roaring Brook Campground. This rule only applies to incoming users.**
- **Travel to Chimney Pond via the Abol and Hunt Trails is not permitted (“up and overs”).**
- **Travel to Russell Pond via Matagamom Gate requires a mandatory first night stay at South Branch Campground.**

The weather in Baxter State Park can be severe and often changes drastically. For example, you may experience a sixty-degree temperature shift and eighteen inches of new snow within a twenty-four-hour period--or rain may move in quickly and reduce the snowpack substantially. Such shifts can dramatically affect travel. Trails may rapidly become impassable due to heavy snow, or they may be flooded by high water. Wind above treeline can make travel impossible. The wind can also move large amounts of snow quickly, loading it onto leeward slopes to create dangerous avalanche conditions.

Simply put, winter travel will take longer than summer travel. A basic rule of thumb is to expect to travel approximately two miles per hour in a small group and add:

½ hour per thousand feet of elevation gain,

½ hour per mile for carrying a heavy pack or towing a sled, and

½ hour per mile for trail-breaking in deep snow.

TERRAIN

To Chimney Pond: Begin where the Golden Road crosses Abol Bridge and follow a well-marked ski trail along the Abol Stream to the Park Tote Road. The Tote Road is usually well packed due to snowmobile traffic. At the Togue Pond Gatehouse, begin an eight-mile uphill haul to Roaring Brook Campground

on the Roaring Brook Road. There is no public snowmobile use on this road, and while it is sometimes packed by Park staff in the course of their work, you should be prepared for backcountry conditions. Skiing to Roaring Brook with camping gear typically takes a full day. Most winter campers haul their gear on sled at least to Roaring Brook.

The 3.3-mile trail to Chimney Pond climbs 1400 feet and over the Bason Ponds. Many people use ski skins or snowshoes on this steeper section.

In the South Basin: Chimney Pond lies in the South Basin, which is framed by Pamola Peak, Chimney Peak, the Knife Edge, Baxter Peak and Hamlin Peak. If you wish to hike to the summit of Baxter Peak, you should carefully consider your starting time, the weather, your fitness, and the competency of your group as a whole in making decisions. We recommend that hikers have, and know how to use, an ice axe and crampons or microspikes. As in the summer, the Saddle Trail is the most common approach, but note that in winter this route is an avalanche-prone environment, and that there is an alternative winter route for the steepest section of trail.

A traverse across the Knife Edge to Pamola Peak and descent on the Dudley Trail make a full-day trip from Chimney Pond, but the decision to take this longer, exposed route should also be carefully considered. Some groups use a rope for the short steep section at Chimney Notch.

Climbers will find the greatest concentration of ice and snow climbs in New England in the South Basin. The Pamola ice cliffs offer several difficult ice climbs. Most are Grade II, NEI 4+ or harder. Rappelling the route is usually your best choice, although traversing off to the left is possible. Expect the ice to be hard and brittle. Classic couloirs (gullies) offer mountaineers several bottom-to-top routes of varying difficulty and intensity.

A straightforward climb up the snow slope behind Second Cathedral is one of the easier ascents leading to the Cathedral Trail. When the Chimney is free of avalanche conditions, experienced climbers sometimes use it as a fast approach to the Knife Edge. Dougal's Delight and Pamola's Fury are full-day intermediate routes; the longer Cilley-Barber and Waterfall Gully routes offer steeper ice and snow climbing. All climbers doing long gully climbs should start early and move quickly to avoid being benighted, and should be prepared for a nighttime descent, or for an emergency bivouac if necessary. Only expert backcountry skiers and snowboarders should attempt the steeper snow gullies. Other skiers and riders may find enjoyable and challenging terrain on the lower slopes of the South Basin.

In the Great Basin: The south face of Hamlin Peak in the Great Basin sports several 30- to 40-degree ski or snowboard descents. There is sometimes a hazardous cornice above this area. The best approach to the top is via the Hamlin Ridge Trail; from the bases of the chutes, you can ski the Saddle Brook drainage back to the Chimney Pond Trail. Intermediate skiers and riders can find appropriate terrain by ascending the drainage.

In the North Basin: The more remote North Basin is approached from Chimney Pond via the North Basin trail to Blueberry Knoll. Above the knoll, several rock and ice climbs ascend the North Basin headwall. These gullies are also attractive to skiers and climbers. For skiers, the best approach to the top gullies is via the Hamlin Ridge Trail. As in all gullies, be alert for possible avalanche hazards.

Katahdin, south side: The winter trailhead at Abol Bridge and the increasing use of snowmobiles provide access to the south side of Katahdin. Many people enjoy the Abol Trail because it ascends relatively directly to the Tableland, but there is also significant avalanche danger here in winter. Trail conditions vary greatly from deep snow to ice. In winter, hikers ascend the leeward side of the mountain, by either following the summer trail or taking the path of a landslide for its length (also known as the winter route).

At Russell Pond: A trip to Russell Pond is ideal for skiers and snowshoers seeking greater solitude than found on Katahdin and gentle terrain. You can make a multi-day trip by staying at Trout Brook or South Branch the first night, then heading into Russell Pond via the Pogy Notch Trail for an overnight or two, then heading back out the same way.

At Nesowadnehunk Field: This mid-Park location is an ideal spot from which to hike the Brothers or Doubletop. Winter visitors to this area usually access the campground from the west, driving up the Golden Road to Telos Road, parking cars at mile marker 35, and skiing the 5.2 miles on Williams Pond Road to the Park. Hikes in this area usually offer solitude and a chance to see a wide assortment of animal signs.

At South Branch Pond: This campground makes a convenient base to explore the north end of Baxter State Park. There are several nice mountain winter hikes from the campground, including South Branch Mountain and the Traveler, as well as valley skiing opportunities and abundant wildlife. The road into the campground from the Park Tote Road features long incline followed by a downhill run with extensive views south down through the valley toward

Katahdin. The cliffs overlooking Upper South Branch Pond offer some ice climbing.

At Trout Brook Farm: The first campground encountered after the Park's northern entrance; Trout Brook Farm has a cozy 4-person bunkhouse as well as campsites in the field. It is in an ideal location for first-time winter campers to enjoy without being too far from the beaten path. Destinations from this campground include Matagamon Lake and several small peaks, including Trout Brook Mountain with its 360-degree views. Staying at Trout Brook Farm can break up a trip to South Branch Pond (and is convenient if you have a late arrival at the Park on the first day of your trip).

Park Facilities

Bunkhouses are located at Chimney Pond (capacity 10), Roaring Brook (cap.10), Russell Pond (cap.8), South Branch Pond (cap.8), Trout Brook Farm (cap.4), Togue Pond (cap.4), and Nesowadnehunk Field (cap.8). These buildings are equipped with propane lights and woodstoves and are stocked with firewood but have no mattresses. The use of stoves and gas lanterns is permitted inside bunkhouses and cabins during the winter. Candles must be totally enclosed in a candle lantern. Cabins at Daicey Pond (5 cabins with a total capacity of 18) and Kidney Pond (4 cabins with a total capacity of 16) are outfitted with wood stoves, firewood, propane lights, and mattresses.

Winter camping is permitted, by reservation only, in any designated campsite or picnic area that has a fire pit and outhouse.

WILDLIFE: Many animals remain active during the winter months. Along the trail you are very likely to cross the tracks of deer, moose, coyote, red fox, fisher, otter, marten, mink, weasel, snowshoe hare, red squirrel, mice, voles and shrews. Squirrels, mice and the elusive pine marten look for every opportunity for an easy meal so put your food away from their reach.

GROUP SIZE AND COMPOSITION

To protect resources and minimize impacts upon other visitors, the maximum group size allowed is twelve people. Those wishing to camp and/or climb alone ("solo") must submit a **Winter Hiking/ Camping Application**.

This also applies to day users who wish to climb above treeline. See Winter Administrative Procedures for more information.

It is recommended that people who sign up for winter activities in the Park have previously camped or climbed together, as this makes for a stronger team. Each member should have good equipment and strong winter camping and traveling skills; each member should be in good physical and mental condition and be able to deal with demanding arctic conditions; and each member should be familiar with the physical conditions, limitations, and the experience of their team members.

We strongly recommend that anyone seeking to climb peaks in Baxter State Park have mountaineering skills and avalanche knowledge appropriate to the intended route. Some of the routes are highly technical and demand a high level of performance.

Experience has shown that even these qualifications do not guarantee safety or success. Winter camping and mountaineering require skills which can only be gained through education, mentoring, and experience. These skills, combined with the application of good judgment through a conservative itinerary and a willingness to change plans, are at the heart of a successful journey into the backcountry.

Remember -- “success” does not only mean reaching your personal goal, it also means coming back with your whole party in one piece!

MOUNTAIN GUIDES

Some groups hire mountain guides to help them achieve their goals; if you decide to do so, seek a properly qualified guide that is registered with the Park. A number of guide services currently have permits to offer winter trips in the Park.

GETTING TO BAXTER

Baxter State Park is accessible from Interstate 95. Those entering from the south side, including those going to the Togue Pond or Abol areas, should follow public highway Route 157 to Millinocket Lake, where the plowed public road ends. Take the adjacent private logging road, called the Golden Road, 10 miles to a parking area located on the left just before Abol Bridge, being careful to yield to logging trucks. Follow the road across from the parking area to the

right and into the gravel pit. Exiting the gravel pit to the back right, skiers and snowshoers will find a marked trail to Abol Beach and the Park Tote Road. Snowmobilers should follow the abandoned public road back to the junction with the Togue Pond Road.

Route 159, which leads from Patten to the north entrance of the Park, is plowed as far as the Matagamon parking lot. The lot is about one-quarter mile beyond the bridge over the East Branch of the Penobscot River, and approximately 2.5 miles before the Matagamon gate.

All visitors are encouraged to stop at Baxter State Park Headquarters, off route 157 in Millinocket. Winter hours are 8:00 AM to 4:00 PM, Monday through Friday.

LEAVE NO TRACE - AN OVERVIEW

Because of Baxter State Park's preservation mission, it is imperative that each person have as little impact as possible. Please become familiar with and practice the following Leave No Trace principles.

1. Plan Ahead and Prepare: Before you go, familiarize yourself with the area. Set up and keep to a schedule, planning travel times so that you can reach each destination on your itinerary; you have a greater impact when you make an unplanned camp especially in an unauthorized site without facilities. Smaller groups limit damage to the environment and disturbance to wildlife and other users; planning, camping and decision-making are also easier in a smaller group. For maximum solitude, plan your journey at an off-peak time; school holidays tend to be more crowded.

2. Travel and Camp on Durable Surfaces: Use existing trails when possible. Particularly during thaws and above treeline, choose the most durable surfaces available, such as rock or frozen snow; avoid vegetation and gravel. If you are traveling off trail, use a map and compass. Do not build cairns, leave flagging, or scar trees to mark your routes.

3. Dispose of Waste Properly: When you leave the Park, pack out everything--extra food (cooked or uncooked), trash, all your gear (even if something has broken). Do not cache food.

Human waste: There are outhouses in every campground; please use them, even if there's a blizzard going on -- human feces and urine next to the trail or

cabin is unsightly, and dangerous because it can contaminate drinking water supplies causing serious illness. Along the trail, carry a poop bucket with a few shavings that can be emptied at the next outhouse. There are several products on the market now making carrying out human waste easier and more sanitary. Don't leave toilet paper along the trail - carry it to the next outhouse or put it in your carry out bag.

Wash water: If you must use soap, use a biodegradable soap in small amounts. Wash at least 200 feet from your water source and from camp. As you cook, collect food scraps in a plastic bag; when you have finished washing dishes and pots, strain the wash water through a piece cloth or night netting and put the remaining small scraps with the other food scraps to be carried out.

4. Leave What You Find: Take pictures of interesting plants or rocks, leaving them in place. Climbers should use nuts or cams where possible, rather than placing pitons for rock protection.

5. Minimize Camp Fire Impacts: Backpacking stoves are recommended for cooking, as they provide a quick, clean, lightweight source of heat. The heat from a wood stove is generally not adequate for cooking meals. Fires may provide a psychological boost but are more difficult to cook over and require more effort to maintain and clean up.

Cabins and bunkhouses are equipped with wood stoves (with firewood supplied by the Park). Be conservative with firewood use, as the firewood supply must last all winter.

All campsites (other than those at Chimney Pond, where open fires are not allowed) have existing fire rings. Open fires are allowed only in existing fire rings. If you choose to build a fire, clean up and pack out any debris such as aluminum foil, paper plates, etc. Unless you are using firewood supplied by the Park, collect only dead and down wood.

6. Respect Wildlife: Observe wildlife from a distance so you do not disturb animals or force them to flee, as winter is a particularly stressful time for wildlife. Never feed wild animals. To prevent disturbance to wild animals, pets are not allowed in the Park.

7. Be Considerate of Other Visitors: When sharing a bunkhouse with another party, keep gear organized and out of the way. Travel and camp quietly.

WINTER HAZARDS

Winters in northern Maine present long periods of below freezing (or sometimes even sub-zero) temperatures and periodic heavy snowfalls. Strong winds can also add significantly to the challenge, particularly above treeline. Fatigue and dehydration are often precursors to accidents and exacerbate all forms of injury. In this setting, seemingly insignificant problems may quickly grow into full-blown emergencies. By dealing with low-level problems and constantly anticipating potential difficulties, you can prevent many cold-related medical emergencies. Each member of a group should carry adequate food, water, and clothing, and should be prepared to manage an emergency.

Avoiding Cold Injuries

HYPOTHERMIA:

Hypothermia, which is often called “exposure,” occurs when the cold overwhelms the body’s ability to produce and maintain heat. Hypothermia causes a progressive deterioration of body functions and may lead to death.

The cold challenge may consist of extreme cold, high winds, or cold water--or, more commonly, a combination of all three. Secondary hypothermia may develop following an injury that renders an individual unable to move enough to generate heat.

To prevent hypothermia, maintain heat production through adequate food, fluids, and activity. You must feed your body’s furnace if you want it to keep burning. Equally important, you must preserve heat by wearing clothing that both insulates and shields the body from the outside forces of cold, wind, and water.

Shivering, an early warning of cold stress, is a compensatory response to help maintain body temperature. You should recognize and act upon it immediately to curtail subsequent problems.

Mild hypothermia is indicated by violent shivering, a core temperature between 90 and 95-degrees Fahrenheit, impaired fine motor function, and (sometimes) confusion and inability to care for oneself. Treatment should be aggressive and focus on improving heat production and decreasing the cold challenge. Give a mildly hypothermic person warm liquids, if possible, and high-energy, easy-to-digest foods such as a candy bar. (Contrary to popular opinion, alcohol will not “warm you” and actually hastens the cooling process

through vasodilation.) If possible, replace wet clothing with dry, warm, windproof clothing. Urge the hypothermic person to exercise--jog in place, jump up and down, run in a circle--to increase the production of body heat. You can increase heat externally by giving the person a water bottle of warm water to place near their trunk.

With severe hypothermia, people stop shivering, as the body has used up its energy. They are not alert and may not even be awake; they may respond to your voice, or they may be completely unresponsive. The core body temperature drops lower than 90 degrees Fahrenheit. Rapid cooling is likely if no intervention occurs.

Unlike mild hypothermia, severe hypothermia treatment requires gentle horizontal handling. Keep the patient flat and place them in dry clothing and a sleeping bag as gently as possible. A vapor barrier such as a bivouac sack is very useful in most circumstances; it is critical if conditions mandate the retention of any wet or frozen clothing. You may apply warm bottles or heat packs to the core of the body to minimize further cooling. Then, initiate a plan for a gentle evacuation. With an evacuation of less than 24 hours, further rewarming should be done in a clinical setting, where medical personnel can deal with possibly life-threatening changes in body chemistry.

FROSTBITE:

Frostbite is the localized freezing of tissue. Ice crystals form within and between the cells and grow by extracting water from the cells. Physical damage is often permanent, and long-term treatment for severe frostbite may require amputation and extended hospitalization. Although extreme cold exposure alone can cause frostbite, the injury more typically results from decreased circulation due to cold-induced vasoconstriction, restrictive clothing, and/or dehydration in combination with severe cold and wind. The areas most often affected are the hands, feet, and face. In the field, frostbite may be identified as superficial, moderate (partial thickness) or deep (full thickness).

Superficial frostbite is characterized by a sensation of numbness and sometimes pain. The skin is blanched and soft to touch. Immediate recognition and rewarming will prevent further freezing. Treatment focuses on sheltering the exposed tissue in an armpit or a partner's abdomen, adding or changing protective layers, or warming through added external heat or increasing heat production through physical activity such as skiing or wind-milling the affected extremity.

In deep frostbite, the skin is white and hard to the touch. The exact severity of damage cannot be assessed until rewarming has occurred. The preferred treatment for deep frostbite is rapid rewarming in a warm water bath, but this treatment should be attempted only when:

- * Further freezing of tissue can be prevented; greater tissue damage occurs when frostbitten tissues are thawed and then refrozen;
- * Water temperature can be maintained at 100 to 105 degrees F until the frozen tissues are soft and pliable (this may take up to an hour);
- * The rewarmed area can be adequately protected and will not be traumatized (for example, by walking out on it).

If you cannot meet all three conditions, do not purposefully rewarm; instead, evacuate immediately. The frostbitten area may, however, spontaneously rewarm due to physical activity, a night in the sleeping bag, or changed environmental conditions.

Once thawed, the area should be protected and treatment directed toward preventing infection. Small amounts of dry, thin, clean cotton may be placed between fingers or toes to avoid skin separation; this dressing should not cause further constriction inside of a mitten. Preventing infection is extremely important. Immerse the damaged area every six to eight hours in warm water to which an antibacterial agent such as iodine has been added.

After rewarming, the extent of injury can be determined. In superficial frostbite, the skin is normal to reddish in color and slightly painful. In deep frostbite, the best case is the appearance of clear, fluid-filled blisters indicating that the underlying tissue is still alive and likely to recover. Blood-filled blisters signify underlying dead tissue. The most severe frostbite injuries retain a deep purple color and are not followed by any blisters.

Carbon Monoxide Poisoning

Carbon monoxide (CO) poisoning is a surprisingly common threat in a variety of small winter shelters. It is important, therefore, to cook only in properly ventilated areas, even when in a building. In a tent, ventilation is a function of the wind and the size of the vent opening; it is usually best to cook in the vestibule. In a snow shelter, the two- to three-inch diameter vent should be located directly above the stove; to save heat, you can close the vent when you are not cooking. When staying in a bunkhouse with propane lanterns and using gas stoves for cooking, it is advisable to crack open a window for ventilation.

Another factor in producing CO is the damping effect on the flame of having the pot too close to the flame and from condensation on the pot. Keeping the pot warm and adding snow slowly to warm water thus produces much less CO than filling a pot with snow. Those cooking in shelters should try to minimize condensation on the pot.

The symptoms of CO poisoning are grogginess, confusion, and loss of consciousness. These symptoms can be masked by--or misdiagnosed as--fatigue or hypothermia. To treat, immediately remove the victim from the confined area and instruct him or her to hyperventilate in fresh air; rescue breathing may be required for comatose victims.

Water Purification

Because *Giardia* cysts persist in cold stream or pond water, you should treat all drinking water in the Park. Boiling is the most effective treatment; it will kill all bacteria, viruses, and protozoans (including *Giardia*). Iodine is an acceptable treatment, although the water should be warmed to sixty degrees to increase its effectiveness; however, iodine does not kill *Cryptosporidium*, which is a protozoan. If you use a water filter or purifier, be careful to protect it from freezing.

Avalanches

Avalanches are common in Baxter State Park. Many that cause serious injury or death are triggered by the very people that they trap. Depending on conditions, all slopes and gullies on Katahdin are avalanche prone. Parties that want to travel on or near steep slopes must be able to evaluate snow stability and avalanche hazard and be able to initiate a search if an avalanche does occur. Avalanche knowledge, good judgment, and a careful approach to route-finding are the key elements in avoiding avalanches; stay away from situations that you can't handle confidently and competently. Although some avalanche victims describe themselves as experienced mountaineers whose only mistake was bad timing, lack of assessment and poor judgment are more often the cause. Baxter State Park staff can often provide information on current weather, recent snowfall, and reported avalanche activity. We recommend that each team member carry (and be thoroughly trained in the use of) an avalanche transceiver, shovel, and probe

poles. Carrying this equipment does not protect you from an avalanche. These tools simply help deal with the consequences of an avalanche. To add a measure of safety, consider learning about snow safety through field courses and make sure to choose your partners carefully. By taking precautions, you will reduce the risk of accidents that are often the result of missed or ignored clues.

Avalanche Red Flags

- Slope of 25 to 45 degrees (otherwise recognizable as the best ski/snowboard terrain)
- Evidence of other avalanches (debris piles, broken trees, obvious slide paths)
- Snow accumulation of greater than 1 inch (2.5 centimeters) per hour
- Snowfall consisting of heavily rimmed snow crystals
- Steady winds that transport snow onto leeward slopes or crossroad gullies
- Rapid temperature changes
- Snowpack temperatures around 0 degrees Celsius and warming
- Temperature gradient greater than 1 degree Celsius per 10 centimeters
- Rain that adds weight to and weakens a snowpack
- Buried layers of crust
- Persistent cold temperatures that delay snow bonding and strengthening ---Gullies that have huge accumulation zones (e.g., the Chimney, Waterfall Gully, gullies under Cathedral Trail)
- Cornice formation at tops of gullies (often visible from below -- check before ascending)

SEARCH AND RESCUE

The following are examples of incidents that have happened in Baxter State Park:

Lost control: Winter hiker slid several hundred feet on snow on Abol Trail; hit rocks and trees, sustained a serious head injury.

Avalanche: Climber triggered avalanche at base of Chimney, broke leg.

Avalanche: Mountaineering party triggered avalanche at base of the Cathedral Trail; three injured, two killed.

Whiteout: Hiking party got lost on plateau, spent the night out.

Stranded: Six accomplished mountaineers bivouacked above treeline on Pamola in a storm; five extricated themselves, one died.

Snowmobile collision: Head trauma, one person killed.

You enter the winter backcountry of Baxter State Park at your own risk, and it is your responsibility to minimize hazards by using good judgment gained from experience and education. Be prepared for self-rescue and draw on the skills of your group when confronted with an emergency situation.

All backcountry users have a personal responsibility for their safety in the wilderness and should always base their decisions on completing the trip without assistance. Prevention, not treatment, is key. You should only request additional assistance as a last resort. Park staff may be hampered by the very elements (such as bad weather) that caused your emergency. Staff must evaluate the situation, determine the level and urgency of the response, and initiate a rescue when it is within the technical ability of available personnel.

You enter the winter backcountry of Baxter State Park at your own risk, and it is your responsibility to minimize hazards by using good judgment gained from experience and education. Be prepared for self-rescue and draw on the skills of your group when confronted with an emergency situation.

All backcountry users have a personal responsibility for their safety in the wilderness and should always base their decisions on completing the trip without assistance. Prevention, not treatment, is key. You should only request additional assistance as a last resort. Park staff may be hampered by the very elements (such as bad weather) that caused your emergency. Staff must evaluate the situation, determine the level and urgency of the response, and initiate a rescue when it is within the technical ability of available personnel.

A helicopter rescue is rare; this type of rescue, which is both risky and expensive, will be used only when medical conditions warrant it and technical conditions allow it. Pursuant to Baxter State Park Rules

and Regulations 2.2, "...The Baxter State Park Authority may request reimbursement of search and rescue costs in cases of reckless hikers."

It is unwise to rely on cellular phones in Baxter State Park. Due to the remoteness of the area, it is frequently impossible to make cellular or internet contact with the outside. The use of two-way radios within your group is permitted in the Park during the winter camping season.

EQUIPMENT AND CLOTHING

Please Note: We recommend that all campers and day users who will be winter mountain hiking/climbing carry certain equipment. For a list of recommended equipment, see the pages at the end of this booklet.

Footwear: Temperatures often exceed -20 degrees Fahrenheit (-29 degrees Celsius) for extended periods of time, so whether you are skiing, snowshoeing, or climbing, take footwear that is designed for expedition use and that offers the warmest possible rating. Backcountry travelers should use military vapor barrier ("mouse") boots or waterproof boots with removeable insulating inner boots. Skiers and climbers should wear high-quality double plastic boots. Insulated single leather boots may be adequate on warm day trips, but should be avoided for extended trips. Boots should be fitted with sock layers and broken in prior to journeying in the Park. Using an inner vapor barrier sock and outer gaiter or super gaiter will help keep the boot's insulation dry and provide additional insulation. At night, dry your feet and place boot liners in your sleeping bag to dry and prevent freezing.

Clothing: Clothing must be adequate for the most severe conditions: follow the general principles of layering to accommodate potentially fluctuating temperatures. A moisture wicking and insulating layer should be worn next to the skin. Insulating layers of synthetic fleece or wool should follow. An outer layer offering head-to-toe protection against wind and rain completes the system. This layer should be breathable to allow sweat to evaporate. A large expedition- weight down or synthetic parka with a good hood is essential for evenings in camp and helpful for chilly belay ledges, and insulated booties will make camp life more pleasant.

As a great deal of heat can be lost through the head and neck, it is strongly recommended to have wool or synthetic balaclavas or a hat and neck

warmer. Hats should fit under climbing helmets. Face and eye protection against sunlight, wind, and snow is essential for above treeline travel. It is recommended to have goggles.

Mittens are warmer than gloves: windproof and waterproof shells provide added protection. Spare pairs are always useful as are some wool gloves for using around the stove.

Avoid cotton clothing as it loses its insulating capacity when wet and takes a long time to dry out.

Sleeping Gear: A good sleep hinges upon being warm and dry. For those staying in tents, lean-tos or snow shelters, an expedition-quality sleeping bag is essential. Down or synthetic fiber filled bags should be rated to at least -20 degrees Fahrenheit (-29 degrees Celsius). Allow extra room in the sleeping bag for clothing, inner boots, and a water bottle.

For those staying in a bunkhouse, a sleeping bag rated from 0 degrees Fahrenheit (-17 degrees Celsius) to 10 degrees Fahrenheit (-12 degrees Celsius) should suffice.

You can prevent significant heat loss by using closed cell foam pads. A combination of a closed cell foam pad with a separate inflatable foam pad is comfortable and commonly used.

Food: Food is your source of heat. Your diet should include carbohydrates, which provide quick energy; fats, which provide more than twice the number of calories per ounce or gram than carbohydrates or proteins; and proteins which are used to rebuild muscles. Dry foods such as pasta, rice, powdered potatoes, nuts, dried fruit, and cheese are popular choices. Prepackaged freeze-dried meals are very light in weight. Minimize liquids and canned goods which can freeze, but bring plenty of drink mix and instant soup mixes to encourage rehydration after you return to camp. GORP-Good Ole Raisins and Peanuts- is a high energy trail food that requires no cooking. (However, GORP made with ingredients such as granola can be difficult to handle on the trail and often winds up on the ground, feeding not you but the wildlife)

Snowshoes or Skis: We recommend that each person have a pair of snowshoes or skis plus tools and repair materials. Snowshoes should be sturdy with cleats or crampons for steeper sections and side-hill traversing. Skiing in backcountry conditions is easier for the experienced: it is wise to practice skiing with a heavy pack or sled before arriving at the Park. A telemark or alpine touring set-up works well for those seeking an alpine ski experience. Climbing skins

and extendable trekking pole will be very useful. An extra pole in each group often comes in handy.

Sleds and Haul Sacks: Many people prefer to carry some of their winter gear in a sled or drag bag. Providing that your harness system works properly, you can easily haul a load of 30-40 pounds (13 to 18 kilograms). Lightweight plastic sleds such as those found in department stores are adequate and may be equipped with a simple rope as a haul line: rigid traces made of PVC pipe or aluminum conduit offer more control when going down hills.

Stoves: With no open fires allowed at Chimney Pond and the difficulty of finding dry, dead and down wood, it is recommended a group carry at least two stoves of proven efficiency that work in extreme cold, along with spare parts. If you are using large pots for a group, use a stove with a very stable base to prevent accidental spills and burns. Before leaving home, take your stove apart and put it back together. (For added fun and a challenge, put your mittens on and stand in a cold shower and try it!) We recommend white gas because disposable gas cartridges are less environmentally friendly, sometimes difficult to obtain near the Park, and may not be pressurized enough for the extreme cold. Plan on 8 ounces (.30 liters) of white gas per person per day if you are staying outside. All fuel containers must be packed out.

Snow Shovels: A sturdy shovel is extremely useful to clear out lean-tos, remove snow from around tents, pile and hollow out snow shelters, maintain the trail to the outhouse, and sculpt snow kitchens. It is recommended that those traveling in avalanche terrain carry several shovels per group.

Tents: We recommend that tents be rated for four-season use and capable of withstanding wind and heavy snow. A three-person dome tent with a rain fly provides room for two people plus gear and allows extra room for passing time if you become snowbound. A vestibule adds a welcome measure of convenience and comfort and offers the safest place to cook. The tent should have cords on each guy point (and the tent should have lots of guy points); for maximum stability, stake out each point with snow stakes or "Deadmen" (which can be improvised -- for example, by filling stuff sacks with snow). An extra pole section or pole splint and repair materials are important. In case of tent failure, be prepared with a strategy to build a snow shelter.

Ice Axes, Crampons, and Trekking Poles: If you plan to attempt reaching a summit, We highly recommend that each person in your group have a shovel, an ice axe, crampons or microspikes and trekking poles. An ice axe that is 70

cm or taller is practical for non-technical climbs such as the Saddle, Abol, or Cathedral Trails. Consider using duct tape and closed cell foam to modify the grip area on the head of the ice axe to reduce cold conduction. It is critical that you know how to use an ice axe to climb, descend, anchor, and self-arrest. Crampons should be adjusted to the boot and gaiter prior to leaving home. If you are on an extended trip, take spare parts. A trekking pole is not a substitute for an axe but is extremely useful for ascending snow-covered trails; it also takes some pressure off the knees during descents.

Eye Protection: Eye protection is essential above treeline. It is recommended that each person have goggles that will provide full protection against sunlight and blowing snow, as well as carrying an extra pair for the unexpected. Glacier glasses may also be carried, but do not afford complete protection.

Medical Kits: It is strongly recommended that each group have a medical kit and that all members of the group be familiar with its contents. However, a first aid kit is only a supplement to knowledge and skill. We recommend that all who are planning to visit the Park in the winter participate in at least basic wilderness first aid training.

Repair Kits: Some recommended items for a basic repair kit would include a pair of pliers, a small screwdriver, a knife, 50 feet of parachute cord, some duct tape, a spare ski tip, patch material, and a few bolts and nuts, as well as extra stove, snowshoe and crampon parts. Ski parties should carry spare binding parts suitable to the particular equipment they are using.

Avalanche Transceiver (Beacon:) We recommend that all individuals venturing into possible avalanche terrain wear avalanche beacons.

A beacon must be worn close to the chest and turned on. A beacon is useless if it is in your pack or if party members are not familiar with search strategies. A beacon is no substitute for avalanche knowledge and cannot prevent a disaster.

**Recommended Winter Checklist for Day Trips
below Timberline in Forests and on Trails:**

- ___ Heavy-duty day pack
- ___ Pack boots with wool liners such as mouse boots, climbing or touring
double boots appropriate to mode of travel
- ___ Gaiters (knee high)
- ___ Snowshoes or heavy-duty touring skis
- ___ Insulating mittens
- ___ Insulating gloves
- ___ Mitten shells
- ___ Thin wicking sock liners
- ___ Insulating socks
- ___ Insulating balaclava that covers entire head
- ___ Wicking innerwear top and bottom
- ___ Insulating jacket or sweater
- ___ Insulating pants
- ___ Light wind/rain shell
- ___ Wide-mouthed vacuum bottle or insulated water bottle
- ___ Extra food
- ___ Sunscreen and lip balm
- ___ Trekking poles
- ___ Snow goggles
- ___ Personal first aid kit
- ___ Headlamp
- ___ Fire-starting material, including waterproof matches
(butane lighters can fail in extreme cold)
- ___ Axe/folding bow saw
- ___ Map and compass
- ___ Shovel
- ___ Avalanche transceiver and probe pole if entering avalanche terrain

Recommended Winter Checklist for Camping Trips:

- ___ Large, sturdy internal or external frame pack
- ___ -20-degree F (-29 degrees C) sleeping bag
- ___ Insulating full-length ground pad made of cold-resistant material;
second half pad adds a great deal of
- ___ Pack boots with wool liners, such as mouse boots, or climbing or
touring double boot appropriate to mode of travel
- ___ High gaiters or supergaiters
- ___ Snowshoes or heavy-duty touring skis
- ___ Insulating mittens and gloves
- ___ Mitten shells
- ___ Thin wicking sock liners
- ___ Vapor barrier sock
- ___ 2 or 3 pairs insulating socks
- ___ Balaclava that covers entire head (with spare)
- ___ Heavyweight insulated jacket or sweater
- ___ Midweight insulated jacket or sweater
- ___ Sunglasses with side protection
- ___ Snow goggles
- ___ Wicking innerwear top and bottom
- ___ Insulating pants with side zips
- ___ Light wind shell shirt
- ___ Waterproof/breathable jacket and pants with side zips
- ___ Unbreakable bowl, insulated cup & spoon
- ___ Water bottles and thermos - insulated and wide mouthed
- ___ Headlamp with extra batteries
- ___ Sunscreen and lip balm
- ___ Food for an extra day or more
- ___ Trekking poles
- ___ Personal first aid kit
- ___ Fire-starting material, including waterproof matches
(butane lighters can fail in extreme cold)
- ___ Axe/folding bow saw
- ___ Map and compass
- ___ Winter expedition tent per 2 -3 people
- ___ Haul sled or drag bag
- ___ Large contractor grade plastic bags

Mountaineers and Peak Baggers should also consider:

- ___ Avalanche transceiver and probe pole
- ___ Heavy duty snow/avalanche shovel
- ___ Snow study kit
- ___ Ice axe
- ___ Climbing rope
- ___ Crampons
- ___ Microspikes
- ___ Helmet
- ___ Bivouac sack
- ___ Expedition weight down or synthetic jacket
- ___ Extra mittens and hat

Technical Climbers should also consider:

- ___ Harness
- ___ Two ice tools and a third tool
- ___ A dry rope and second retreat rope
- ___ Anchors and protection appropriate to intended routes

RECOMMENDED READING

The following are examples of recommended reading. We suggest you research up-to-date guides and resources for winter camping, mountaineering and climbing.

-*AMC Maine Mountain Guide* – Compiled and Edited by Peg Nation and Brenda Cummings

-*An Ice Climber's Guide to Northern New England* – the most up-to-date version – by Rick Wilcox

-*AMC Guide to Winter Hiking and Camping: Everything You Need to Plan Your Next Cold- Weather Adventure* – by Lucas St. Clair and Yemaya Mauer

-*Outward Bound Wilderness First Aid Handbook* – by Jeff Isaac

-Ice Climbing Guides

-Avalanche Safety Guides

BSP-43 Rev. 9/25