

# Baxter State Park Winter Use Information



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# Welcome Winter Campers!

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. **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 resource, enhancing the 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 natural wilderness 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 unnecessary search and rescue efforts. Please read these materials before planning your trip.

You are encouraged to stop at Park Headquarters, off Route 157 in Millinocket (right next to McDonald's) for the latest Park and weather information. Winter hours are 8 A.M. to 4 P.M., Monday through Friday. If there is any further help we can give to assist in your trip planning and preparation, please don't hesitate to write or call.

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**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 (and possibly the skills of another party nearby) 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 getting back on their own. Prevention, not treatment, is the key. Only when all other options have been tried should you request additional assistance. 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 or technical demands warrant 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 contact. The use of two-way radios within your group is permitted in the Park during the winter camping season.

## **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 209,501 acres and includes eighteen peaks over three thousand feet high.

### **Using the Park**

#### **DAY USE**

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

#### **Below Treeline:**

Individual day users should sign in and out at Park Headquarters (by phone if more convenient) or at the self-registration boxes located at Park entrances.

**Skiing and snowshoeing:** You can find excellent ski touring and snowshoeing near the major trailheads, 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. Please use caution as the Park Tote Road is multiple use and there may be skiers/snowshoers traveling throughout the Park.

### **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. Please read the Park's Winter Administrative Procedures for more information. Permission for winter mountain hiking or climbing cannot be granted over the telephone. Very fit skiers traveling in ideal conditions may be able to ascend Katahdin via the Abol Trail in a single day. If you are planning a day hike above treeline, we require day users expecting to travel above treeline to register with the Park seven working days prior to the date of their climb.

**Ice climbing:** There are few if any ice climbs that can conveniently be done on a day-use basis, although there are a few moderate ice climbs near the Park Tote Road, such as those on the southeast side of Doubletop Mountain. (However, 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 Handout). Reservations are issued on a first-come, first-serve basis. As the Park campsites, lean-tos, or bunkhouses have maximum capacities, applying well in advance is recommended. 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**

The weather in Baxter State Park can be severe and often changes drastically. It is possible to have a sixty-degree temperature shift and eighteen inches of new snow within a twenty-four hour period--or for rain to move in

and reduce the snow pack 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, plus:

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 Abol Stream to the Park Tote Road. The Tote Road is usually well packed due to the frequent snowmobile traffic. At the Togue Pond Gatehouse, you begin an eight-mile uphill haul to Roaring Brook Campground on the Roaring Brook Road. Do not expect the Roaring Brook Road to be packed, as no public snowmobile traffic is allowed. Skiing to Roaring Brook with camping gear takes a full day. Most parties haul their gear on sleds at least to Roaring Brook.

The 3.3-mile trail to Chimney Pond climbs 1400 feet along moraine deposits and over the Basin 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. It is advisable that those wishing to hike to the summit of Baxter Peak carefully consider starting time, weather, fitness, and the competency of the group as a whole in making decisions. It is recommended that hikers have, and know how to use, an ice axe and crampons. As in the summer, the Saddle Trail is the most common approach, but it should be noted that this route is exposed to avalanche hazard from the steep slopes to the south and west as one approaches the Saddle.

The traverse across the Knife Edge to Pamola Peak and descent of the Dudley Trail make a superb, full-day trip, but the decision to take this longer, exposed route should also be carefully considered. Some groups use a rope for the short but 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 snow 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 fine 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 night time 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, adjacent to the South Basin, sports several 30- to 40-degree ski or snowboard descents. The best approach to the top is via the Hamlin Ridge Trail; from the bases of the chutes, you can ski the drainage back to the Chimney Pond Trail. Intermediate skiers and riders can find appropriate terrain by ascending the drainage. There is sometimes a hazardous cornice above this area.

**In the North Basin:** The more remote North Basin is approached from Chimney Pond via the North Basin trail to Blueberry Knoll. Above, 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 allow better access to the south side of Katahdin. Most parties prefer the Abol Trail because it ascends directly to the summit. Trail conditions vary greatly from deep snow to ice. The trail, which is on the leeward side of the mountain, follows a landslide path. There is significant avalanche danger on this trail. Day use parties or camping parties are required to register with the Park seven working days prior to climbing above treeline or camping in the Park.

Although Katahdin draws the majority of winter users, other areas in the Park are also attractive:

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

**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 into the Park. Hikes in this area will offer solitude and a chance to see a wide assortment of animal signs.

**At South Branch Pond:** This campground makes a nice 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 a dramatic 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 winter camping without being too far from the beaten path. Destinations from this campground include Matagamom Lake and a number of small peaks, including Trout Brook Mountain with its 360 degree views. Campers also often camp at Trout Brook on their way to South Branch Pond if their plans call for a late arrival at the Park on the first day of their 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 (4 cabins with a total capacity of 16) 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.

### **CRITTERS**

Wildlife remains very 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 carefully.

### **GROUP SIZE AND COMPOSITION**

There is no minimum group size and to protect resources and minimize impacts upon other visitors, the maximum group size allowed is twelve people. Those wishing to camp and/or climb solo (alone) must submit a completed **Solo Camping and Climbing Form**. 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 people who have not done so make a weaker team. Each member should have good equipment and solid winter camping and traveling skills; each member should be in good condition and have the mental fortitude to deal with demanding arctic conditions; and each member should be familiar with the physical conditions, limitations, and the experience of other team members.

It is also recommended 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 turn back, are at the heart of a successful journey into the backcountry.

***Remember -- “success” does not just mean reaching your objective, 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. A number of guide services currently 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, to a parking area located on the left just before Abol Bridge, being careful to avoid logging trucks. Follow the road across from the parking area to the right and the gravel pit. Behind the gravel pit, 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.

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

# PLEASE...LEAVE NO TRACE - AN OVERVIEW

Because so many people use Baxter State Park, it is imperative that each person have as little impact as possible. Please become familiar with and practice the following Leave No Trace practices.

- 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 and camping are also easier. To reduce uneaten food, pack meals that people will enjoy, and plan for appropriate amounts. For maximum solitude, plan your journey at an off-peak time; school holidays tend to be 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; avoid leaving cairns, flagging, or tree scars.
- 3. Dispose of Waste Properly (Pack it in, pack it out and properly dispose of waste you can't carry out):** 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 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 bandanna or piece of netting and put remaining debris 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 Campfire 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 all non-burnable debris such as aluminum foil. 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. 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 sub-zero temperature 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 the 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 the 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 F, impaired fine motor function, and (sometimes) confusion and the 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 F. Rapid cooling is likely if no intervention occurs.

Unlike mild hypothermia, the most important treatment plan for severe hypothermia is gentle horizontal handling. Keep the patient flat and place him or her 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 belly, 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 known 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); and
- \* 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, hope for 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 small winter shelters. Two researchers on Denali, for example, documented toxic levels of CO near the stove in tents, snow caves, and igloos. 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; mouth to mouth breathing may be required for comatose victims.

### Water Purification

Because *Giardia* cysts persist in cold stream or pond water, it is necessary to treat all drinking water. 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 effectiveness; however, iodine does not kill *Cryptosporidium*, a protozoan. If you use a water filter or purifier, be careful to protect it from freezing.

## SEARCH AND RESCUE

The following are actual incidents that have taken place in Baxter State Park:

**Lost control:** Winter hiker slides several hundred feet on snow on Abol Trail; hits rocks and trees, resulting in serious head injury.

**Avalanche:** Climber triggers avalanche at base of Chimney, breaks leg.

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

**Whiteout:** Hiking party lost on plateau, spends night out.

**Stranded:** Six accomplished mountaineers bivouac above treeline on Pamola in storm; five extricate themselves, one dies.

**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 (and possibly the skills of another party nearby) 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 getting back on their own. Prevention, not treatment, is the key. Only when all other options have been tried should you request additional assistance. 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 or technical demands warrant 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 contact. The use of two-way radios within your group is permitted in the Park during the winter camping season.

## **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 rangers can often provide information on current weather, recent snowfall, and reported avalanche activity.

For safety, it is recommended 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 a bad situation after the fact.

It adds a measure of safety if all winter users learn about snow safety through field courses; it is also important 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 rimed snow crystals



- \_\_\_ Steady winds that transport snow onto leeward slopes
- \_\_\_ Rapid temperature changes
- \_\_\_ Snowpack temperatures around 0 degrees C and warming
- \_\_\_ Temperature gradient greater than 1 degree C 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)

## EQUIPMENT AND CLOTHING

**Please Note: BSP recommends certain equipment to be carried by campers, and day users who will be winter mountain hiking and climbing. For a list of recommended equipment, please read BSP’s Winter Administrative Procedures.**

**Footwear:** Temperatures often exceed -20 degrees F (-29 degrees C) 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 removable 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 what may be widely fluctuating temperatures. A moisture transport 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, wool or synthetic balaclavas or a hat and neck warmer are recommended. Hats should fit under climbing helmets. Face and eye protection against sunlight, wind,

and snow is essential for above treeline travel; goggles are recommended.

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.

Cotton clothing is not recommended 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 F (-29 degrees C). 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 F (-17 degrees C) to 10 degrees F (-12 degrees C) should suffice.

In either situation, 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 protein, which is 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:** It is recommended 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 and sled before arriving at the Park. A telemark or alpine touring set-up works well for those seeking a pure ski experience. Climbing skins and extendable trekking poles 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 gear in a sled or drag bag. Providing that your harness system works properly, you can easily haul a load of 30 to 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, we recommend 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 challenge, put your mittens on and stand in a cold shower and try it!) White gas is recommended 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:** It is recommended that tents be of four-season quality 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 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 the summit, it is highly recommended each person in your group have an ice axe and crampons. 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 to 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 upon descent.

**Eye Protection:** Eye protection is essential above treeline. It is recommended 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 the contents of the medical kit. However, a first aid kit is only a supplement to knowledge and skill. Those planning to visit the Park in the winter would be wise to 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 and crampon parts. Ski parties should carry spare binding parts suitable to the particular equipment used.

**Avalanche Transceiver (Beacon):** It is recommended that all individuals venturing into possible avalanche terrain wear avalanche beacons. The standard world-wide frequency is 457 kHz. People with older 2275 kHz beacons should make sure that someone in their party has a dual frequency beacon that can pick up their signal. 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.

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

- Heavy-duty day pack
- Pack boots with wool liners such as moccasin 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 comfort
- 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
- 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 general guides for recommended reading. It is a good idea to 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

\*Sold at Park Headquarters



