Visiting Yellowstone in Winter

National Park Service U.S. Department of the Interior



ellowstone is a special place, very different from your home. Like any grand adventure, your Yellowstone journey will take you to impressive new locations and introduce you to new experiences. There are different risks here than you may have faced before. You are responsible for your own safety.

On the road to adventure

- Most roads are closed to regular vehicles from early Nov. to mid-April. The only road open yearround is from the North Entrance at Gardiner, MT, through the park to Cooke City, MT.
- Drive cautiously. The park speed limit is 45 mph (72 kph), unless posted otherwise. Icy and wet road conditions require extra attention.
- Watch out for wildlife on or near roadways.
- Keep the road clear at all times; even when watching wildlife. Don't stop, stand, or walk in the road. Use a pullout if you need to stop for any reason.

Investigate the volcano

Hydrothermal features are evidence of ongoing volcanic activity. If you travel the 50 miles between Mammoth Hot Springs and Old Faithful, you will see travertine terraces, acidic thermal features at Norris Geyser Basin, mudpots and fumeroles at Fountain Paint Pot, plus beautiful hot springs at Biscuit and Black Sand basins near Old Faithful.

Thermal area hazards

- Stay on boardwalks and designated trails. The ground is unstable in hydrothermal areas.
- Water in geysers and hot springs can severely burn you. Keep hands out.
- Keep litter out of the pools. Do not throw any objects into hydrothermal features.



Norris Geyser Basin Overlook.

Observe wildlife

Winter is a wonderful time to view wildlife. All the large mammals present when Yellowstone became a park are here today: grizzly and black bears, wolves, mountain lions, elk, bison, pronghorn, moose, and bighorn sheep. You'll likely see several species of birds, possibly bald eagles.

Keep wildlife wild

- Animals in Yellowstone are wild and dangerous.
- Bison, bears, and elk have injured and killed people. For your own safety, keep back and give them space to be wild.
- Stay 100 yards (91 m) away from wolves and bears.
- Stay 25 yards (23 m) away from all other animals. If the animal moves closer, you must back away.
- Store food securely. Backpacks and snowmobile gear bags are not secure.
- Do not feed any animals, even birds and squirrels.



A cow moose forages on willow twigs.

Explore history

The park was established in 1872 but people have visited the Yellowstone area for thousands of years. Visit Mammoth Hot Springs to walk the self-guiding trail around Fort Yellowstone. It chronicles the U.S. Army's role in protecting the park. Other historic sites include the Norris Geyser Basin Museum, and the Old Faithful Historic District.

Marvel at the Canyon

The Grand Canyon of the Yellowstone River extends from south of Canyon Village north to Tower Junction. The most famous and spectacular section, including the Upper and Lower Falls can be seen from the overlooks and trails of the Canyon area.

Pack your patience

Traveling can be very stressful and it is easy to get overwhelmed. Please use good manners and good sense.

- Be prepared for a potential change in plans. Allow time for delays due to weather or road conditions.
- Keep children close.
- Observe safe distances and settings for selfies.
- Stay behind fencing, guard rails, and ledges.
- Text 82190 to 888-777 to receive important messages about park roads.



Lower Falls of the Yellowstone.

Availability of Facilities and Services

Services	Canyon Village	Fishing Bridge	West Thumb	Mammoth Hot Springs	Old Faithful	Madison
Medical clinic				Year-round, except weekends and some holidays. Mon–Thu 8:30 ам–5 рм Fri 8:30 ам–1 рм 307-344-7965	CLOSED	
Warming hut Warming huts provide shelter for skiers, snowshoers, and snowmobilers.	Canyon Visitor Education Center Lobby 12/15/18–3/10/19 9 AM–3 PM Vending machine snacks, cold drinks. Restrooms open 24 hours.	12/15/18–3/15/19 No food or water available.	12/15/18–3/15/19 No food or water available	Mammoth Terraces 12/16/18–3/3/19 9 AM–5 PM Vending machine snacks, cold drinks, snowmobile fuel. Indian Creek 12/15/18–3/3/19 Not staffed, no food or water	12/15/18–3/15/19 Daytime only. Water and restrooms available nearby at the Old Faithful Visitor Education Center. No vending.	12/15/18–3/15/19 Light snacks and hot drinks sold during day. Vending machine, snacks available anytime.
Fuel Call 406-848-7548 for assistance	12/15/18–3/15/19 Credit card fueling	12/15/18–3/15/19 Credit card fueling	Grant Village 12/15/18–3/15/19 Credit card fueling	Mammoth Year-round Credit card fueling Tower Junction Credit card fueling	12/15/18–3/15/19 Credit card fueling	
Supplies and gifts				General Store Year-round, 9 AM-6 PM Gift Shop 12/16/18-3/3/19	Bear Den Gift Shop 12/15/18–3/15/19	
Hotel				Mammoth Hot Springs Hotel Closed for rennovations Winter 2018–2019	Old Faithful Snow Lodge 12/16/18–3/3/19	
Dining				Terrace Grill: Closed Hotel: Buffet; Map Room Barista/Bar (limited food & drink) 12/16/18– 3/3/19 General Store Lunch available late fall through early spring	Old Faithful Snow Lodge 12/16/18–3/3/19 Geyser Grill 12/15/18–3/15/19	
Campground				All year	With backcountry permit, primitive only 12/15/18–3/15/19	



Cellular and data coverage are extremely limited within the park.

Cell phone service



Cell phone service is very limited in the park and surrounding areas. General cell coverage areas are marked on the park map

(back cover). *Emergency* 911 service by cell phone is only available in coverage areas. During peak hours or seasons of heavy visitation, the cellular network may be slow or completely unavailable. As a courtesy to others, please silence your mobile device while enjoying Yellowstone's natural features.

Wi-Fi



Wi-Fi is available to visitors in Mammoth Hot Springs at the Horace M. Albright Visitor Center for free. Wi-Fi is available at the Old Faithful Snow Lodge, for a fee but connectivity is very limited and may not be available at all times.

Prohibited activities

These activities are dangerous or destructive and carry legal penalties, including fines.

- Remaining near or approaching wildlife within any distance that disturbs or displaces the animal.
- Swimming in hot springs.
- Removing or possessing natural or cultural resources (such as wildflowers, antlers, rocks, and arrowheads).
- · Leaving detachable side mirrors attached when not pulling trailers.
- Camping outside of designated campsites.
- Spotlighting wildlife (viewing with lights).
- Imitating elk calls or using buglers. Imitating wolf howls.
- Tracking wildlife with electronic equipment.

Accessibility

A printed Accessibility Guide to Yellowstone is available at visitor centers, entrance stations, and on the park website. To arrange for an ASL interpreter for NPS ranger-led programs, call 307-344-2251 at least three weeks in advance.

Service animals are allowed in all facilities and on all trails unless an area has been closed by the superintendent to protect park resources. Service animals must always be leashed or harnessed, under control, and attended at all times.



• Launching, landing, or operating unmanned aircraft (drones) on lands and waters administered by the National Park Service.



Smoking in geyser basins, on trails, in buildings, or within 25 feet of building entrances.

This is only a partial list of regulations. For more information, consult 36 Code of Federal Regulations and the Superintendent's Compendium.



Park Tip Line • To report a crime or criminal activity please call 307-344-2132. Leave as much detail as you can.

Remain anonymous, or leave a name and number.

Firearms

Know your responsibilities.

Firearms are allowed in national parks pursuant to state and federal regulation.

They are prohibited in facilities where signs are posted, such as visitor centers, government offices, and some concession operations. Discharge of firearms is prohibited. Possession and use of weapons, such as air guns, bows and arrows, spears and slingshots, is also prohibited. Details are available at http://go.nps.gov/yell-laws.

In-park reservations: lodging, dining, tours

Yellowstone National Park Lodges

As one of Yellowstone's official concession companies, Yellowstone National Park Lodges offers lodging, dining, and a variety of tours and activities. In winter, there are partial or full-day tours by heated snowcoach, skiing, and snowshoe adventures. Reservations and information are available at park hotels and at: 307-344-7311

Toll free: 866-439-7375 TDD: 307-344-5395 YellowstoneNationalParkLodges.com Reserve_YNP@Xanterra.com P.O. Box 165, Yellowstone WY 82190





Ski and snowshoe trails



Yellowstone offers a variety of enjoyable and challenging trails for skiing and snowshoeing. Track is set on a few trails, others may be groomed, and all unplowed roads and trails are open to skiing and snowshoeing.

Equipment rental is available in several communities around the park; and ski shop servicesincluding lessons, rentals, and repairs-are available at the Bear Den ski shops at Mammoth Hot Springs and Old Faithful.

Brochures with general trail maps and trail descriptions can be obtained at visitor centers, ranger stations, and ski shops. One-way or round-trip skier shuttles may be offered to specific trails in the park for a fee.

Ranger book to earn an official Junior Ranger patch.

Tours and shuttles are available on snowcoaches

Children ages 4 and older can

become a Yellowstone Junior Ranger. Get the Junior Ranger

activity book for \$3 at a visitor

supplement. Hike, ski or snow-

shoe a trail, attend a ranger-led

center and ask for the free winter

outfitted for Yellowstone's winter road conditions.

Dress for success

Even in Yellowstone's severe winter temperatures, you can be comfortable and safe if you dress properly to prevent chilling and overheating.

- Wear clothes in several adjustable layers including wind protection and insulated undergarments.
- Avoid clothes that fit too tightly as they restrict circulation and increase the possibility of frostbite.
- Do not wear cotton clothes of any kind, including jeans, sweatshirts, underwear, or socks. They retain moisture and put you at risk for hypothermia.

Etiquette

- Do not walk on snowshoe or ski trails.
- Snowshoe parallel to the ski track.
- Yield to faster skiers or those going downhill.
- Detour around wildlife—do not approach.

For detailed information on winter trails, routes, and winter safety, contact the Central Backcountry Office or request a Winter Backcountry Trip Planner (available online or from any visitor center).

Ranger-led programs



Join a Yellowstone Park Ranger for a snowshoe walk, a special talk, or an evening slide presentation about the wildlife or geologic wonders of Yellowstone. More info locally at visitor centers.

Albright Visitor Center

Located at Mammoth Hot Springs and open year-round. Open daily 9 AM-5 PM. Ph: 307-344-2263

Old Faithful Visitor Education Center Geyser eruption predictions: 307-344-2751 Open daily 9 AM-5 PM. Ph: 307-344-2750

West Yellowstone Visitor Info. Center

The West Yellowstone Chamber of Commerce is open weekdays 8 ам-5 рм. Ph: 406-646-7701

NPS Desk (inside the Chamber of Commerce) Open daily 8 AM-4 PM. Ph: 307-344-2876

Authorized guides



Many authorized guides and outfitters are ready to show you Yellowstone's wonders, and each has a unique approach. Find authorized guides, tour companies, or other commercial services at http://go.nps.gov/yelltours. Please report unauthorized operators to a park ranger, or contact Concessions Management at 307-344-2271.

YELLOWSTONE FOREVER

Yellowstone Forever Institute

Programs about wildlife, plants, geology, and history are perfect for curious adults and families who want to spend a day or more exploring the park with a knowledgeable guide. To find out more, call 406-848-2400 or visit Yellowstone.org.

Yellowstone National Park is assisted in fulfilling our mission by our official non-profit partner, Yellowstone Forever. Proceeds from Yellowstone Forever educational bookstores, Institute, and philanthropic efforts support priority park projects and visitor education. Find more information at Yellowstone.org or call (406) 848-2400.





Climate change challenges



The elusive wolverine (*Gulo gulo*) requires deep snow to build a den for breeding. Decreased snowpack may cause declines in the already sparse population.

The National Park Service anticipates that climate change will create significant challenges to the preservation of park resources, infrastructure, and visitor experience.

Within Yellowstone specifically, scientists expect ecosystem changes due to increased temperatures and changing rain and snow patterns. Some observed and expected effects of climate change are:

- Average temperatures in the park are higher now than they were 50 years ago, especially during springtime.
- In the last 50 years, the growing season has increased by roughly 30 days in some areas of the park.
- Snowpack throughout the area is decreasing and snow is melting faster in the spring. The change in snowpack levels could impact agriculture and municipal water supplies downstream.
- The alpine zone, which currently begins at 9,500 feet, may shift higher, decreasing or eliminating species that live in this important habitat.
- Increases in insect or disease infestations in trees are likely. Currently, five types of insect pest and one nonnative fungus are attacking regional forests.
- Declining wetlands will decrease essential habitat for frogs, salamanders, and many birds and insects.
- Grassland animals should be able to find suitable habitat. However, migration patterns may change as vegetation growth begins earlier in spring.
- Grizzly bears may have less of some of their most nutritious foods such as whitebark pine nuts and army cutworm moths.
- Native plants may be lost and replaced with nonnative invasive exotic plants more adapted to earlier, wetter springs, and dryer late-season conditions.



Climate change will probably impact wildlife migration patterns.

How to photograph wildlife

Have reasonable expectations of your camera. A cell phone camera will not be able to capture the same resolutions and detail as a more advanced camera with large lenses.

Arm yourself with patience. To get the best shot, you will spend more time waiting and observing than photographing. Look for patterns in animal behavior that can help you get a great shot. You may have to wait a while—so be ready.

Clean your lenses. Spray from hydrothermal features can leave silica deposits on glass that are impossible to remove once dry.



How do geysers work?



Clepsydra Geyser.

The Upper Geyser Basin of Yellowstone National Park has the largest concentration of geysers in the world. Geysers are hot springs with narrow spaces in their plumbing, usually near the surface. These constrictions prevent water from circulating freely to the surface where heat would escape. The deepest circulating water can be even hotter than the surface boiling point of 199° F (93° C).

Surrounding pressure also increases with depth, similar to the ocean. Increased pressure exerted



Stay safe behind and in front of the camera.

An unusual vantage point can add drama to your image, but you don't want to add the drama of a hospital visit to your trip. Never sacrifice safety for a photograph.

- Be aware of your surroundings. Stay behind fences and guard rails. Never turn your back on wild animals.
- Keep children close to you at all times. Never try to pose them with wildlife.
- **Stay out of the road.** Do not stop your vehicle in the road, or stand in the roadway. Do not block any portion of the road with tripods, chairs, or other objects. Do not block the free flow of traffic.

by the enormous weight of the overlying rock and water prevents the water from boiling.

As the hot water rises, steam forms. Bubbling upward, steam expands as it nears the top of the water column until the bubbles are too large and numerous to pass freely through the constrictions. At a critical point, the confined bubbles actually lift the water above, causing the geyser to splash or overflow. This decreases pressure on the system, and violent boiling results. Tremendous amounts of steam force water out of the vent, and the eruption begins.

Water is expelled faster than it can enter the geyser's plumbing system, and the heat and pressure gradually decrease. The eruption stops when the water reservoir is exhausted or when the system cools.

Fountain-type geysers, like Clepsydra (*left*), shoot water out in various directions from a pool of water. Cone-type geysers, like Old Faithful, erupt in a concentrated jet of water from inside a rock formation.

Will the Yellowstone Volcano erupt soon? Another caldera-forming eruption is not likely in the next 10,000 years, though it is theoretically possible. According to 30 years of data, even a small lava flow is not likely in the next few hundred years.

4

Surviving winter's edge



To conserve energy, bison often travel on plowed or groomed park roads in the winter.

Bison are iconic animals of the American West. With adult males weighing up to 2,000 pounds (907 kg), the bison is the largest land mammal in North America and is the National Mammal of the United States.

The herd is comprised of cows, calves, and some younger bulls. Mature bulls spend most of the year

Keep your distance



Do not approach wildlife

- Federal regulations require you to stay at least **100 yards (91m)** away from bears and wolves, and at least **25 yards (23 m)** away from all other wild animals, such as bison, elk, bighorn sheep, deer, moose, and coyotes.
- If an animal moves closer to you, you must move to maintain the appropriate distance.
- Do not surround, crowd, or disrupt an animal's path of movement.
- If other visitors put you or wildlife in danger, leave the scene and notify a park ranger.
- If bison or other wildlife are on the road, pull as far as possible to the shoulder and give them a chance to move off the road.
- Do not follow animals too closely or cause them to run—this wastes energy they need to survive winter.

25 YARDS (23 METERS) 100 YARDS (91 METERS)

Pack mentality

alone or with other bulls-except during the rut, or

Bison are well-adapted to survive the challenges of Yellowstone winters. Their thick fur and layers of fat keep them insulated in average low temperatures of -30° F (-34° C). A bison's massive hump is comprised of muscles supported by long vertebrae; this allows a bison to use its head as a snowplow in winter, swinging side to side to sweep aside the snow and uncover grasses and sedges underneath.

Look for bison near hydrothermal features where

What is the difference between

"buffalo" refer to the American bison (Bison

"bison" is preferred for formal or scientific

purposes. Early European explorers called

believe that the term "buffalo" grew from the

French word for beef, *boeuf*. African buffalo

(Bubalus arnee) are not closely related to each

(Syncerus caffer) and Asian water buffalo

other or to American bison.

this animal by many names. Historians

bison). Generally, "buffalo" is used informally;

In North America, both "bison" and

tion green well into winter.

bison and buffalo?

underground heat melts the snow and keeps vegeta-

mating season.



Wapiti Lake pack on a bison kill.

Yellowstone National Park is the site of one of the most ambitious and controversial wildlife restoration projects in the world. The Yellowstone Wolf Project has yielded two decades of discoveries on wolf behavior, predator–prey relationships, wildlife disease management, and ecological complexity.

The stark white backdrop of snow and the general absence of leaf cover make winter an ideal time for visitors and researchers alike to observe wildlife. From the popular overlooks of Lamar Valley, it is possible to get a glimpse of wolf society. You may even witness the dangerous dance of predators and prey as each struggles to survive.



Keep food secure

Do not feed any wildlife, including small mammals and birds. Consuming human food is unhealthy and encourages aggressive behavior that may require animals to be destroyed.



All food, trash, and scented items must be kept bear-proof at all times. Tents, truck beds, and picnic tables are not secure. In some areas, ravens have learned how to unzip packs and scatter the contents.

None of these items, even if clean and empty, may be left unattended at any time:

- Water and beverage containers
- Cooking or eating utensils
- Stoves and grillsCoolers and ice
- Coolers and ice chests
- Trash, bagged or not
- Food, including condiments, even if in containers
- Cosmetics and toiletries
- Pet food and bowls
- Pails, buckets, and wash basins



The travertine terraces of Mammoth Hot Springs are like living sculptures, shaped by the volume of water, the slope of the ground, and objects in the water's path. Travertine builds up rapidly here and causes the features to change quickly and constantly.

Limestone, deposited millions of years ago when a vast sea covered this area, provides the first ingredient. A network of fractures and fissures form the "plumbing system" that allows hot water from underground to reach the surface. Hot water with dissolved carbon dioxide makes a solution of weak carbonic acid. As the solution rises through the limestone, it dissolves calcium carbonate. At the surface, the calcium carbonate is deposited in the form of travertine, which forms the intricate pools and sweeping terraces of Mammoth Hot Springs.

Are the hot springs drying up?

No. These terraces change constantly—sometimes overnight—but the overall activity of the entire area remains relatively constant. Rangers have heard this question since the late 1890s, when visitors began making their second and third trips to Yellowstone. Travelers remember the active, colorful springs shown in their photos and postcards. They usually don't remember the expanses of bare sinter, which are as common here as in the geyser basins.

The water which drives the transformation at Mammoth comes from rain and snow falling on the surrounding mountains and seeping deep into the earth. Some vents will clog completely, new vents may form, and old vents may reopen. Sometimes the water is concentrated in a few springs while at other times it may spread across many outlets. Scientists estimate that, at any given time, only 10 percent of the water in the Mammoth Hot Springs system is on the surface; the other 90 percent is underground.

The features are always changing, but the overall activity of the entire area and the volume of water discharge remain relatively constant. Here, as in few other places on earth, rock is born before your eyes.

Stay on boardwalks and designated trails. Do not touch any thermal features and keep foreign objects out of springs.

Follow @YellowstoneNPS





Fort Yellowstone

The United States established Yellowstone National Park in 1872 and for the next decade, the park was under serious threat from those who would exploit, rather than protect, its resources. Poachers killed animals. Souvenir hunters broke large pieces off the geysers and hot springs. Developers set up camps for tourists, along with bath and laundry facilities at hot springs. Yellowstone National Park turned to the U.S. Army for help.

In 1886, men from Company M, First United States Cavalry, Fort Custer, Montana Territory came to Yellowstone under the command of Captain Moses Harris. They began what would be 32 years of military presence in the park.

The buildings of Fort Yellowstone are a testament to the long history of our first national park and of the important role the Army played. They remind us that the resources we find within Yellowstone's boundaries are not only natural ones, but cultural as well. Most of the buildings constructed during the Army era are still standing and used by the National Park Service as park headquarters. Our interactions with this wilderness continue to shape our idea of what a national park should be, just as they did during the days of Fort Yellowstone.

Partners in Sustainability

The National Park Service mission

The National Park Service preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations.

Our commitment to environmental stewardship extends to sustainable operations and facilities. Yellowstone National Park, park concessioners, and partners work together to reduce the park's ecological footprint from our operations and the services we provide, preserving natural resources through sustainable practices and extending the benefits of resource conservation and outdoor recreation throughout this country and the world.

During your time in Yellowstone and beyond, we encourage you to do your part by practicing the following:

Minimize waste and properly dispose of all waste items. Recycling bins are located throughout the park for plastic, glass, metal, paper, cardboard, propane canisters, bear spray, batteries, and more.



We encourage you to stay hydrated during your visit. We also ask visitors to please use a reusable water bottle and fill it up for free at our many water

filling locations. All Yellowstone tap water is clean and ready to drink. Water in cans or boxes is sold in some stores as an alternative to single-use plastic containers.



In an effort to reduce harmful emissions from idling, turn your vehicle off while you are parked or stopped for more than 30 seconds. Emissions can

also be reduced by carpooling and utilizing transportation services to tour the park.



Reduce energy use by turning off lights, heat, and electrical devices when you leave your rooms.

Help reduce water consumption by being •• aware of your water use. Turn water off while brushing your teeth, shorten showers, and participate in towel and linen reuse programs if you are staying in park lodging.

This sustainability message is brought to you by the Yellowstone Environmental Coordinating Committee (YECC), a team of National Park Service employees, park concessioners, and non-profit partners combining efforts to realize sustainability achievements in Yellowstone National Park. The YECC is comprised of representatives from Delaware North Companies, Medcor Inc., National Park Service, Xanterra Parks & Resorts, Yellowstone Forever, and Yellowstone Park Service Stations.

Plan ahead for self-guided tours

Visitors interested in guiding a small, 1–3 day, private (not commercial) snowmobile trip through Yellowstone in winter can apply for permits at recreation.gov. Please check that website for specific dates when to apply. Applicants must be 18 years or older with a valid driver's license.

Permit holders are considered non-commercial guides and may lead groups of up to five snowmobiles. All snowmobile operators must be licensed drivers at least 16 years old and all group members, including the permit holder, must complete the free, online Yellowstone Snowmobile Education Certification course.

Beginning in mid-October, unclaimed or canceled permits can be obtained with a first-come, firstserved reservation through recreation.gov.

Visit the official park website for more information. nps.gov/yell/planyourvisit/ncgsap.htm.



Free NPS Yellowstone App



NPS Yellowstone National Park

Enrich your visit to Yellowstone with the official app. Digitally explore the

park's stories and find the information you need. Learn about historic places and natural features. Find visitor centers, places to stay and eat, and shopping and services throughout the park.

Features

- Interactive map is easy to use. Use "Locate me" to always know where you are.
- Discover rich natural and cultural resources with self-guided walking **tours**.
- Get information about special events and programs, including links to geyser predictions and road construction.
- Share a digital **postcard** with friends and family.
- Accessibility information for facilities and some trails in the park, audio-described sites, and alternative text for images.

Download the app media before you arrive. Cell service and Wi-Fi are limited in Yellowstone.

Interagency Annual Pass



America the Beautiful: National Parks and Federal Recreational Lands Pass

The Interagency Annual Pass is valid at federal recreation sites, including national parks and wildlife refuges, where entrance fees are charged. You can purchase it at Yellowstone's entrance stations, at Yellowstone Forever stores, or visit http://store.usgs.gov/pass

The pass is not good for camping or for some other fees such as concessionaire parking fees at Mount Rushmore, or cave tours at various parks. Inquire locally.

Already paid?

Apply the cost of your Yellowstone entrance fee to the purchase of this pass at Yellowstone Forever stores located in visitor centers, at the Bozeman Yellowstone International Airport, and Gardiner.

Your Fee Dollars at Work This guide is printed using your fee dollars.

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Park Roads and Services

