Welcome to Yellowstone

Winter in Yellowstone means fewer crowds, cold temperatures, and steaming geyser basins. Skis, snowshoes, snowcoaches, and snowmobiles become the main modes of transportation as roads close, rivers and lakes freeze, and winter storms blanket the park with snow.

Stay Alert in Thermal Areas
Hydrothermal features are evidence of an amazing fact: Yellowstone sits above a giant supervolcano. If you travel the 50 miles (80 km) between Mammoth Hot Springs and Old Faithful, you will see travertine terraces, acidic thermal features at Norris Geyser Basin, mudpots and fumaroles at Fountain Paint Pot, plus beautiful hot springs at Biscuit and Black Sand basins near Old Faithful.

Stay on boardwalks and designated trails. The ground is unstable in hydrothermal areas. Use caution, as boardwalks are often covered in snow and ice.

Keep hands out. Water in geysers and hot springs can severely burn you.

Keep litter out of the pools. Protect Yellowstone’s hydrothermal features by never throwing any objects into them.

Road Construction
Road construction will take place throughout the winter and spring on the road between the north entrance of the park (Gardiner, MT) and the northeast entrance (Silver Gate and Cooke City, MT). Check locally for updates and stay connected with Yellowstone National Park’s official website (www.nps.gov/yell) and app.

COVID-19 Precautions
In general, the National Park Service follows CDC guidance to reduce the spread of COVID-19. Check locally, on the park website, and in the NPS App for updates and changes in park operations. Thank you for helping to keep yourself and others safe and healthy.

Winter is a wonderful time to view wildlife. All the large mammals present when Yellowstone became a park in 1872 are here today: grizzly and black bears, wolves, mountain lions, elk, bison, pronghorn, moose, and bighorn sheep.

Wildlife are dangerous.

Do not approach, encircle, follow, or feed any animal.

Bison, bears, and elk injure and kill people.

Stay at least 100 yards (91 m) from bears and wolves.

Stay at least 25 yards (23 m) from all other animals, including bison and elk.

If an animal moves closer to you, move away to maintain a safe distance.

Do not stop on or block a road.

Use pullouts; stay in your car to watch animals.

Store food and trash securely. Backpacks and snowmobile gear bags are not secure.

Do not feed any animals, even birds and squirrels.
Facilities and Services

Medical Services
Yellowstone emergency response and ambulance service
Call 911
Text 911 is not available in Yellowstone.

Mammoth Clinic
Medical care from emergencies to minor needs.
307-344-7965

Winter Hours
Monday–Thursday 8:30am to 5pm
Friday 8:30am to 1pm
Weekends, holidays CLOSED

Old Faithful Winter Clinic
January 7–8 8am to 4pm
February 25–26 8am to 4pm

Accessibility
A printed guide with accessibility information is available at visitor centers and on the park website (go.nps.gov/YELLaccess).

Qualified service animals are welcome throughout the park and in all park facilities. However, they must be leashed and under your control at all times.

Heritage and Research Center
Located just beyond the North Entrance in Gardiner, Montana. This facility is home to Yellowstone’s museum collection, archives, and research library.

Open to Public
Monday–Friday 9am to 4pm
Appointments necessary for research.
YELL_Heritage_Center@nps.gov

Cell Service
Cell phone service is very limited in the park and surrounding areas. General cell coverage areas are marked on the newspaper park map (see back page).

Emergency 911 service by cell phone is only available in coverage areas. Text 911 is not available in Yellowstone.

During peak hours and periods of heavy visitation, the cellular network may be very slow. Your provider may or may not roam on networks in Yellowstone.

As a courtesy to others, silence your mobile device while enjoying Yellowstone.

Wi-Fi
Available for free:
• Horace M. Albright Visitor Center in Mammoth Hot Springs

Lodging, Dining, and Tours
As one of Yellowstone’s official concession companies, Yellowstone National Park Lodges offers lodging, dining, and a variety of tours and activities.

For reservations and information, ask at park hotels, or contact Yellowstone National Park Lodges:
Phone Same-Day Reservations Only
307-344-7961
Other Advance Reservations
307-344-7311, 866-439-7375
Online YellowstoneNationalParkLodges.com
Email Reserve-YNP@Xanterra.com
Mail PO Box 165 Yellowstone, WY 82190

Developed and Backcountry Camping
A variety of winter activities, including partial or full-day tours by heated snowcoach, snowmobile tours and rentals, and skiing and snowshoe adventures are available from a wide range of authorized guides. Learn more on page six or by visiting go.nps.gov/YELLtours.

Other facilities and services may be available depending on current conditions. Learn more by inquiring locally or visiting go.nps.gov/winterinyellowstone.

Mammoth Campground
Operating dates TBD due to damage to the wastewater facility caused by the June 2022 flood. Once repaired, the campground will open.
Check website or the NPS app for up-to-date information.

Overnight Backcountry Camping
A free permit is required to camp in the backcountry during winter.

For more information, contact the Central Backcountry Office:
Phone 307-344-2160
Online go.nps.gov/YELLLbackcountry
Email yell_backcountry_office@nps.gov
How Do Geysers Work?

The Upper Geyser Basin of Yellowstone National Park has the largest concentration of geysers in the world. Geysers are hot springs with narrow plumbing, usually near the surface. These constrictions prevent water from circulating freely to the surface where heat escapes into the air. The deepest circulating water can be even hotter than the surface boiling point of 199°F (93°C) at the elevation of Old Faithful Geyser (7,349 ft / 2,240 m), for example.

Pressure on hydrothermal waters increases with depth. Increased pressure exerted by the enormous weight of overlying rock and water prevents the deep water from boiling.

As hot water rises, the overlying pressure decreases, and the water can boil to steam. Bubbling upward, the steam expands as it nears the top of the water column until the bubbles can no longer pass freely through constrictions in the geyser’s plumbing. At a critical point, the confined bubbles actually lift water lying above and cause the geyser to splash or overflow. The loss of overlying water further decreases pressure on the hot water below, and violent boiling results. Tremendous amounts of steam force water out of the vent, and the eruption begins.

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

Pack Mentality

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 more than 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 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.

See page five for more information about driving the Northern Range in winter and tips for safely capturing stunning photographs.
Reachable by Road

Yellowstone in winter is wild and remote due to seasonal changes in road conditions and access.

Most park roads are closed to public vehicles. The only exception: the road between the North and Northeast entrances, which is open to public vehicles all year. (The road is closed beyond Cooke City, Montana.)

Other park roads are open only to limited snowmobile and snowcoach travel. The only way to visit Old Faithful, the Grand Canyon of the Yellowstone, and other popular destinations is by guided snowmobile or snowcoach (see pages two and six) or through the non-commercially guided snowmobile access program (see page six).

Experience Mammoth Hot Springs

Travertine Terraces

Winter is an amazing time to explore the terraces of Mammoth Hot Springs. Hot water steams in the cold winter air while ice and snow accentuate the beautiful shapes of these living sculptures.

Four factors come together to create the terraces:

- **Water**
  Rain and snow falling on the surrounding mountains seeps deep into the earth.

- **Heat**
  The water is then heated by underground volcanic heat. The exact source of the heat is unknown! Scientists have proposed two sources: the large magma chamber underlying the heart of the park or a smaller source closer to Mammoth.

- **Fractures and fissures**
  A network of fractures and fissures (cracks) acts like plumbing. The very hot underground water travels through the cracks to reach the surface.

- **Limestone**
  Limestone was deposited millions of years ago when a vast sea covered the area. The hot water travels up through the limestone via the fractures and fissures, carrying high amounts of dissolved carbonate minerals. At the surface, carbon dioxide is released, and carbonate minerals like calcite are deposited, forming travertine, the chalky white rock of the terraces.

Stay On Boardwalks

and designated trails. Do not touch any thermal features and keep all objects out of springs. To avoid slips and falls, use caution on ice and snow.

EXPLORE BY FOOT

Boardwalks provide access to the lower area of Mammoth Hot Springs.

EXPLORE BY SKIS OR SNOWSHOES

The Upper Terrace Loop Ski Trail can be reached by personal vehicle via the Upper Terrace parking area. This groomed 1.5 mile (2.4 km) loop ranges from easy to more difficult due to a steep downhill section if traveled to the right (counterclockwise) from the trailhead.

It is easiest if skied beginning to the left (clockwise). A moderate climb leads to views of hot springs, terraces, the Mammoth Hot Springs Historic District, and the surrounding mountains. At the top of the climb, a trail veers off to the southwest, which connects with the Snow Pass Trail. The Terrace Loop Trail descends past more hot springs before completing the circuit. Since snow is less deep than in the mountains above, wintering elk and deer are occasionally seen.

Become a Junior Ranger

Children ages 4 and older can become a Yellowstone Junior Ranger by completing the Junior Ranger activity book. Hike, ski or snowshoe a trail, attend a ranger-led program, and complete the fun activities in the book to earn an official Junior Ranger badge!

Ranger-led Programs

Join a park ranger for a snowshoe walk, a talk, or an evening presentation about one of the many wonders of Yellowstone National Park. Find more info locally at visitor centers.

Fort Yellowstone

The United States established Yellowstone National Park in 1872. For the next decade, the park was under threat. Poachers killed animals. Souvenir hunters broke large pieces off of the geysers and hot springs. Developers set up camps for tourists. The park turned to the US Army for help.

In 1886, men from Company M, First US 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.

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. Most buildings constructed during the Army era are still standing and are currently used by the National Park Service as park headquarters and employee housing.
Photograph Wildlife

Yellowstone is one of the best places in the world to view—and photograph—wildlife in their natural habitat. Professional photographers share these tips for capturing the best shots while respecting and protecting park wildlife.

The Name of the Game is Patience
To get the best shot, you will spend more time waiting and observing than taking photos. Look for patterns in animal behavior that can help you get a great shot. You may have to wait a while, so be ready.

Know Your Camera’s Limits
A cell phone camera will not be able to capture the same resolution and detail as a more advanced stand-alone camera with large lenses. Good photography isn’t about getting close to the animal for a close-up. It’s about having the right equipment for the job.

Widen Your Perspective
Try to capture the character of the environment around wildlife, too. Habitat says a lot and will increase your chances of capturing interactions between a variety of animals.

Work the “Golden Hours”
Animals are most active in the early morning and late afternoon or evening. Luckily, these are also the hours of the day with the most dramatic light.

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.
**Ski and Snowshoe**

Yellowstone offers a variety of enjoyable, challenging skiing and snowshoeing trails. 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 nearby communities. **Ski shop services**, including lessons, rentals, and repairs, are available at the Bear Den Ski Shops at Mammoth Hot Springs and Old Faithful Snow Lodge.

**Brochures** with general trail maps and descriptions are at warming huts and ski shops. **One-way or round-trip skier shuttles** may be offered to specific trails in the park for a fee.

**Authorized Guides**

**Special use permits are required for certain activities**

including organized gatherings like weddings, public assemblies, demonstrations, and some types of filming and photography. All commercial activities require authorization. For more information, call 307-344-2722.

**Dress for Success**

Even in Yellowstone’s severe winter temperatures, you can be comfortable and safe if you prevent chilling and overheating by wearing the right clothes.

- Wear several adjustable layers including wind protection and insulated undergarments.
- Avoid clothes that are too tight. They restrict circulation and increase the chance of frostbite.
- Do not wear cotton clothes of any kind, including jeans, sweatshirts, underwear, or socks. They retain moisture and put you at risk of 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 safety, contact the Central Backcountry Office (307-344-2160) or request a Winter Backcountry Trip Planner (available online or at visitor centers).

**Self-Guided Snowmobiling**

**Visitors interested in guiding a small, one-to-three day, private (not commercial) snowmobile trip** through Yellowstone in winter can find details and apply online at recreation.gov.

Permit holders are considered non-commercial guides and may lead groups of up to five snowmobiles. All snowmobile operators must be licensed (including the permit holders) and must complete the free, online Yellowstone Snowmobile Education Certification course.

Beginning October 1, unclaimed or canceled permits can be obtained with a first-come, first-served reservation through recreation.gov.

For more information, visit go.nps.gov/ncgsap.

**Yellowstone Forever**

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:

- Visit Yellowstone.org
- Call 406-848-2400

The Yellowstone Forever Institute introduces thousands of students to the park’s natural wonders. Programs range from one day to three weeks and highlight the park’s amazing wildlife, hydrothermal areas, rich history, and awe-inspiring wilderness.

Programs are perfect for curious adults and families who want to explore the park with a knowledgeable guide.

Visit Yellowstone.org to view the course catalog and register.

N-CGSAP stands for Non-Commercially Guided Snowmobile Access Program.
Wild in Winter

As remarkable as Yellowstone is during the rest of the year, in winter the park is a magical place: steam and boiling water erupt from natural cauldrons in the park’s ice-covered surface, snow-dusted bison exhale vaporous breaths as they lumber through drifts of white, foxes and coyotes paw and pounce in their search for prey in the deep snow, and gray wolves bay beneath the frozen moon.

Winter Adaptations

Yellowstone in winter is also a place of vulnerability. Wildlife endure extremes of cold, wind, and the absence of ready food. Park conditions in this most severe of seasons become a matter of life and death. To survive, plants and animals are forced to adapt.

Here are some adaptations you can mimic to more comfortably and safely enjoy your winter visit:

• Deer, elk, and bison sometimes follow each other through deep snow to save energy. When skiing and snowshoeing through fresh snow, take turns breaking trail.
• Mammals molt their fur in late spring to early summer. Incoming guard hairs are longer and protect their underfur. Additional underfur grows each fall and is made of short, thick, often wavy hairs designed to trap air. A sebaceous (oil) gland, adjacent to each hair canal, secretes oil to waterproof the fur. Mammals have muscular control of their fur, fluffing it up to trap air when they are cold and sleeking it down to remove air when they are warm. Wear multiple layers, including wind and waterproof outerwear, to adjust to changing conditions.
• Snowshoe hares have large feet to spread their weight over the snow. Martens and lynx grow additional fur between their toes to give them effectively larger feet. Increase the surface area of your feet with skis or snowshoes.

Winter Soundscapes

Yellowstone’s soundscape is the total of all the sounds within the park, including those that can’t be heard by human ears. Some sounds are critical for animals to locate a mate or food or to avoid predators. Others, such as those produced by weather, water, and hydrothermal activity, may be a result rather than a cause of ecological processes.

Human-caused sounds can mask the natural soundscape. The National Park Service’s goal is to protect or restore natural soundscapes wherever possible and to minimize human-caused sounds while recognizing that they are generally more appropriate in and near developed areas.

Human-caused sounds that mask the natural soundscape are, to some extent, unavoidable in and near developed areas. However, the potential for frequent and pervasive high-decibel noise from oversnow vehicles has made the winter soundscape an issue of particular concern in Yellowstone.

Every now and then, turn off any engines or music. Listen to the sounds of winter. What do you hear? How do the sounds around you impact your experience?

Climate Change

In Yellowstone, scientists expect ecosystems to change due to increased temperatures and changing rain and snow patterns. Some observed and expected effects of climate change include:
• Average temperatures are higher now than they were 50 years ago, especially during spring.
• Snowpack throughout the area is decreasing and snow is melting faster in the spring. This could impact agriculture and municipal water supplies downstream.
• The alpine zone may shift higher, decreasing or eliminating species that live in this important habitat.

How might warmer temperatures affect the winter scenes that surround you?

Surviving Winter's Edge

Bison are iconic animals of the American West and, with adult males weighing up to 2,000 pounds (900 kg), the largest land mammal in North America. The herd is made up of cows, calves, and some younger bulls. Mature bulls spend most of the year alone or with other bulls, except during the rut (mating season).

Bison are well-adapted to Yellowstone winters. Their thick fur and layers of fat keep them insulated in average low temperatures of -30°F (-34°C). Their massive humps are made of muscles supported by long vertebrae and are used like snowplows, swinging side to side to sweep away the snow and uncover grasses and sedges underneath.

Despite these adaptations, bison (and other wildlife) in winter have limited energy reserves. Help protect bison and yourself by always staying at least 25 yards (23 m) away.

Bison or Buffalo?

In North America, both “bison” and “buffalo” refer to the American bison (Bison bison). Generally, “buffalo” is used informally, while “bison” is preferred for formal or scientific purposes.

Early European explorers called this animal by many names. Historians believe that the term “buffalo” grew from the French word for beef, boeuf.

American bison are a different genus than other buffalo in the world.
Rules and Regulations

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

**Camping**
Camping is allowed only in designated camp sites. No overnight camping is allowed in pullouts, parking areas, picnic grounds, or any place other than a designated campground. Additional camping may be available in neighboring communities. Overnight backcountry camping is allowed in designated sites and requires a permit.

**Swimming**
Swimming in hot springs is always illegal and allowed in designated sites and requires a permit.

**Leave No Trace**
Take only pictures. It is illegal to remove or possess natural or cultural resources such as wildflowers, antlers, rocks, and arrowheads.

**Side Mirrors**
Detachable side mirrors must be removed when not pulling a trailer.

**Firearms**
Firearms are allowed in national parks pursuant to state and federal regulations. 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 go.nps.gov/yell-laws.

**Wildlife**
For the safety of wildlife and yourself, the following are prohibited and carry legal penalties, including fines:
- Remaining near or approaching wildlife within any distance that disturbs or displaces the animal
- Spotting wildlife (viewing with lights)
- Imitating elk calls or using buglers
- Imitating wolf howls
- Tracking wildlife with electronic equipment

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

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

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

**Store Food Securely**

**Road Status Updates**
Online go.nps.gov/YELLroads
Mobile alerts text 82190 to 888-777

**Road Status Updates**
Hotline 307-344-2117
Online go.nps.gov/YELLroads
Mobile alerts text 82190 to 888-777

**Drive Cautiously**
The park speed limit is 45 mph (72 kph) unless posted slower. Icy and wet roads require extra attention.

**Oversnow Travel End Dates**
March 5, 9pm  Mammoth to Norris Junction
March 7, 9pm  Madison to Norris to Canyon
March 12, 9pm  Canyon to Fishing Bridge
March 15, 9pm  East Entrance to Lake Butte

**Spring Road Opening 2023**
Year-Round North Entrance to Northeast Entrance
April 21, 8am Mammoth to Old Faithful; Madison to West Entrance; Norris to Canyon
May 5, 8am Canyon to Lake; Lake to East Entrance (Sylvan Pass)
May 12, 8am West Thumb to Old Faithful; Lake to S Entrance; Tower Jct to Tower Fall
May 26, 8am Tower Fall to Canyon; Beartooth Highway

**Map**
- Plowed roads allowed vehicle only
- Groomed oversnow routes allow snowmobiles only
- Distance indicator in miles
- Hydrothermal feature
- Approximate cell coverage (Verizon, AT&T (select areas), T mobile (select areas))