

# Yellowstone Today

A National Park Service publication for Yellowstone visitors

Winter 1995-96 \* Information \* Regulations and safety \* Park map



NPS file photo

## Caution, winter visitors

Yellowstone has many hidden and unmarked hazards. Freezing, thawing, and extreme temperatures can create dangerous conditions. Take proper precautions; use common sense and extreme caution near canyons, waterfalls, thermal areas, viewpoints, and wildlife. Watch your children. Your hand and your voice may be too far away once your child leaves your side.

As well, road conditions on the stretch of road open to automobiles—from Gardiner, Montana, to Cooke City, Montana—can be icy, snowpacked, and hazardous. Snowtires or chains are always recommended and may be required to drive this road in the winter.

Please drive, walk, snowmobile, and ski safely to protect your park and yourself.

Emergency—dial 911  
Park info—(307) 344-7381  
TDD (Telecommunications Device for the Deaf only)—(307) 344-2386

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## The winter use dilemma

Many of the staff who live in Yellowstone during the winter consider this our favorite season. The wildlife is more visible, the scenery is even more spectacular than in summer, and the thousands of thermal features are at their most dramatic, wreathed in delicate ice formations and billowing steam.

We hope your visit is safe and memorable, and that Yellowstone lives up to your expectations. But while you are here, we would like you to think over a vexing dilemma we all face. The focus of our concerns revolves around the extraordinary wonders we all enjoy and their need for special consideration in the winter.

For all its beauty, winter is a time of extreme hardship for many of Yellowstone's wild residents. Winter is the foremost control on many animal population sizes, and those populations have evolved to survive in an extreme environment.

But human use of the park has skyrocketed in the past 20 years, and though we humans try very hard to use the land lightly, we have many effects that we only now are beginning to understand. As well, we have effects on each other; the more people there are, the less each person can be assured of the quality experience for which Yellowstone is so famous.

In 1990, after much deliberation and extensive public involvement, we produced a Winter Use Plan, aimed at ensuring the protection of park resources and the quality of the visitors' experience. This plan's best estimates of winter use levels have already been exceeded; in 1992-93, visitation levels in Yellowstone and Grand Teton National Parks passed the levels predicted for the year 2000.

Scientific studies are beginning to reveal to us the extent of our impacts upon wildlife in winter. Budgetary realities are telling us that we no longer have staff or resources adequate to care for the growing winter crowds. Individuals and organizations are expressing concerns that the experience is slipping in quality. We in Yellowstone are actively seeking ways to address these problems.

In conjunction with Grand Teton National Park, and the six national forests surrounding the parks (Gallatin, Targhee, Bridger-Teton, Beaverhead, Custer, and Shoshone), Yellowstone has launched an initiative to determine how best to manage winter use in the long run.

Among other things, we have conducted winter use surveys, to learn more about your experiences here. We are continuing our research on recreational impacts on the park, and we are communicating

extensively with our neighbors, our concessioners, and a variety of user groups.

We all want the chance to enjoy Yellowstone at its best, and we all want Yellowstone to last in good shape, not only for our next visit but also for future visitors. We hope you will be able to assist us in achieving those goals.

If you would like to comment about your winter experience in the national parks or forests, please do so either at any of the warming huts or visitor centers in the parks, or when you return home by writing to: Winter Use, P.O. Box 168, Yellowstone National Park, WY 82190.

For information on other winter use concerns, see page 9.

## Snowmobilers need license

All snowmobile operators in Yellowstone National Park must possess a valid motor vehicle operator's license. In addition, persons possessing a learner's permit may operate a snowmobile in the park only when supervised within line of sight (but no further than 100 yards) by a licensed person 21 years of age or older.

For more information on the park's snowmobile regulations, please see page 5 or ask a park ranger.

## Spring plowing schedule

Throughout the park, groomed roads will close to oversnow vehicle (snowmobile and snowcoach) traffic for spring plowing as follows:

March 4 Mammoth to Norris  
March 11 All other park roads close to oversnow traffic.

Roads close at 8:00am on the days listed.

Printed on recycled paper with soy ink



Yellowstone Today, which is distributed to visitors at park entrances, is published by the staff of Yellowstone National Park. As a member of the Yellowstone Association, you have contributed to the production costs of this publication, which is a major source of information for the millions of park visitors each year. The Yellowstone Association operates book sales facilities in visitor centers and museums; YA staff provide information and assistance to park visitors. Ultimately, much of YA's revenue is returned to the park's educational, interpretive and research programs. As a YA member, you are a part of the team striving to preserve Yellowstone "For the Benefit and Enjoyment of Future Generations."

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# WARNING!

Some things all visitors must know...  
hazards in Yellowstone National Park

Emergency—dial 911

Park information—(307) 344-7381

## Temperatures

Daytime temperatures are usually in the 10° to 30°F range (-12° to -1°C) while nighttime temperatures often dip to between -12° and -40°F (-29° to -40°C). How cold can it get here? **The lowest temperature ever recorded in Yellowstone was -66°F in 1933.**

Yellowstone's weather often seems to defy predictability; conditions at any given time may vary drastically from those forecast or from long term averages. Wind chill compounds severe temperatures. Be prepared for storms that can quickly drop temperatures. Before starting a snowmobile trip or ski tour, check on local conditions and get a weather forecast.

## Drivers

The only roads plowed for the entire winter season—and not open to oversnow vehicles—are the 56 mile stretch between the North Entrance and Cooke City, Montana, via Mammoth Hot Springs and Tower Junction, and a 1-1/2 mile stretch from Mammoth Hot Springs to the parking area at the Upper Terraces. These roads are maintained only during daylight hours and may close during severe storms. **Expect snow packed roads, icy spots, and frost heaves. High winds cause blowing and drifting snow. Snow tires or tire chains may be required and are usually recommended.**

Park roads are designed for slower-than-interstate speeds—**45 mph maximum**, lower where posted. **Do not stop on the road and block traffic when viewing wildlife or scenery. PLEASE USE PULLOUTS.**

## Snowmobilers

**Prepare for extremely cold conditions. Sudden changes in weather are typical, and conditions can differ drastically from one location to another.**

Cold plus wind can be a deadly combination. For example, if you are travelling 40 miles per hour on a snowmobile and the thermometer reads 10°F, the wind chill factor is **37° below zero**, cold enough to freeze exposed flesh within one minute!

Dress warmly and stop often at warming huts to rehear. For regulations and information on planning a safe trip, see page 5.

## Skiers & Walkers

Trails may be icy, making footing dangerous. Heed trail closures; even open trails may be hazardous. Proceed with caution at all times. **Please watch your children very closely on all trails and overlooks.**

You face harsh conditions plus the effects of vigorous physical exertion. **Be prepared for equipment problems, injury, rapidly changing weather, and other unplanned events that may occur whether your outing lasts several days or only a few hours!** For more information on gear selection and ski trip safety, see page 6.

The large fires in Yellowstone during the summer of 1988 burned near or across many trails. These fires burned the tree trunks and root systems, creating hazardous standing snags which can fall with little warning. Be alert for this possibility. There is no guarantee of your safety. **While in burned areas, stay on established trails.**



## Scalding water can ruin your trip

**Stay on boardwalks and designated trails.** Scalding water underlies most of the thin, breakable crusts; pools are near or above boiling temperatures.

Yellowstone's thermal features, rare among the earth's wonders, are extremely fragile. Boardwalks and trails protect you and preserve delicate formations.

**Pets are prohibited in thermal areas.**

**Swimming or bathing in thermal pools or streams** whose waters flow entirely from a thermal spring or pool is prohibited. Thermal waters may contain organisms known to cause infections and/or amoebic meningitis which can be quickly fatal. Swim at your own risk; for more information, ask at any ranger station or visitor center.

## Avoid these situations

Law enforcement rangers strictly enforce park regulations to protect you and the park. We do not want to have a negative contact with you. Please give special attention to park regulations and avoid these common problems:  
--speeding (radar enforced)  
--driving or snowmobiling while intoxicated

--sidehilling or off-road snowmobiling  
--chasing or molesting wildlife  
--feeding wildlife  
--camping in undesignated locations  
--pets off leash or on trails  
--littering  
--swimming in thermal pools  
--removal of natural or cultural features  
--approaching wildlife too closely



## Watch your children

Your hand and your voice may be too far away once your child leaves your side...  
**Please—protect your park and yourself.**

## Unpredictable wildlife; keep your distance

**Do not approach any wildlife. View from the safety of your vehicle.** If an animal reacts to your presence, you are too close.

**BISON** may appear tame and slow but are unpredictable and dangerous. See page 5 for tips on passing bison or other wildlife on a snowmobile.

**COYOTES** can quickly learn bad habits like roadside begging. This may lead to aggressive behavior toward humans.

**BEARS** may be seen in early and late winter. Be alert for tracks and signs. Never approach animal carcasses. Report all bear sightings to a ranger.

**Snowmobilers:** Stop and allow wildlife to move off roads before continuing. If you must pass them, stay toward one side of the road and pass carefully. **Skiers:** Give all animals plenty of room. Do not ski through herds.

Seeing animals in the wild inspires the photographer in all of us. However, wild animals, especially females with young, are unpredictable. Keep a safe distance from all wildlife. Each year, a number of park visitors are injured by wildlife when approaching too closely. **Approaching on foot within 100 yards of bears or within 25 yards of bison, elk, bighorn mountain sheep, deer, moose or coyotes is prohibited.**

If your camera is not equipped with telephoto lenses, do not attempt closeup photography.

You will see more of an animal's natural behavior and activity if you are sensitive to its need for space. That need is most critical in winter. Cold and deep snow make it difficult to find food, and every movement costs precious energy. **If you pursue an animal for a photograph, you may jeopardize its survival.**



# Planning crucial for winter visit

Winter in Yellowstone is a time of extremes: boiling versus frozen water, the suspended animation of hibernating animals versus the struggle of others to find food, days of blizzard whiteout versus days of pure sparkling colors. Transformed by cold, water assumes endlessly variable forms and shapes: waterfalls freeze into giant icicles, geyser spray falls as crystal beads or grows into fantastic ice sculptures, Yellowstone Lake freezes from shore to shore. Wildlife and people adapt to harsh conditions in ways both obvious and subtle. In the vast wildness of Yellowstone, snow and cold combined with natural wonders create an incomparable winter experience.

Yellowstone's season of winter operations runs from mid-December to early-March. First, decide how you will get around the park. Heavy accumulations of snow limit driving; **the only road open for year-round automobile travel is the Gardiner-Cooke City road (North Entrance to seven miles east of the Northeast Entrance).** All other park roads are closed to wheeled vehicles but groomed for snowmobile or snowcoach travel. Snowmobiles, rented or privately owned, and snowcoaches are permitted on groomed roadways; **sidehilling and off-road travel are illegal.**

Snowcoaches—winter busses on skis and caterpillar tread—depart from Old Faithful, Mammoth Hot Springs, West Yellowstone (at the West Entrance) and Flagg Ranch (near the South Entrance). Reservations are strongly recommended. Call TW Recreational Services, Inc. at (307) 344-7311 for information and reservations.

Snowmobiles may be rented from a variety of outfitters in nearby communities or from TW Recreational Services, Inc. Privately owned and operated snowmobiles must be registered according to the laws of the operator's state of residence and have a muffler in good working order (see page 5). Operators must have a valid motor vehicle driver's license. Before beginning your trip, get an up-to-date road and weather report. The key to enjoying your winter visit is **preparation.** Now you are ready to discover Yellowstone's winter wonders.

**THERMAL BASINS** Geysers, hot springs, mud pots and fumaroles are fascinating any time of year. In winter, the clash of extreme heat and cold creates extraordinary beauty—ghost trees, ice cones, eruptions seemingly amplified in the frigid air to several times summer height. Warm ground, steam and hot water runoff create microclimates; in places, plants grow in summer-like

lushness. Animals are drawn to thermal areas because food is easier to find.

Most of the park's major thermal basins lie along the 50 mile road between Mammoth Hot Springs and Old Faithful. These areas include the Mammoth Hot Spring Terraces, Norris Geyser Basin, Fountain Paint Pots, Midway Geyser Basin, Biscuit Basin, Black Sand Basin, and Old Faithful. West Thumb Geyser Basin, located on the shore of Yellowstone Lake, is 22 miles north of the South Entrance. Six miles north of Fishing Bridge junction, in Hayden Valley, is Mud Volcano. Boardwalk trails may be snowpacked and icy, so walk carefully. Old Faithful and Mammoth Hot Springs offer a full range of services and facilities: lodging, meals, snowmobile fuel, snowcoach service. A warming hut at Madison Junction offers snacks and hot drinks; at West Thumb warming hut, a more limited selection of snacks is offered.

You may be surprised to see puffs of steam at random locations. Countless tiny thermal features elude detection by summer visitors, but winter reveals and highlights their presence. Other clues to thermal influence include patches of bare ground, ice-free streams or ponds, and frozen spray where no waterfall exists, evidence of geyser activity. Yellowstone's volcanic past (and future?), expressed in thermal activity, is more obvious now than at any other time of year.

**GRAND CANYON OF THE YELLOWSTONE** The Yellowstone River has carved a great canyon through rocks altered by thermal activity. Snow clings to canyon walls in patterns determined by pinnacles, ridges, gullies and slopes. Deep in the canyon, steam plumes mark locations of hot springs, geysers and fumaroles.

By mid-winter the roar of the Upper and Lower Falls is muffled behind massive sheets of ice. Water seems frozen in motion, as though instantly transformed from towering falls to icicle. At the base of the 308 foot Lower Falls, spray freezes and grows into an ice cone that sometimes reaches half the height of the falls.

Overlooks along the North and South Rims offer views of different portions of the canyon and of the Upper and Lower Falls. Facilities at Canyon Junction include a warming hut, snacks and hot drinks, and snowmobile fuel.

**YELLOWSTONE LAKE** At an elevation of 7,733 feet, Yellowstone Lake is North America's largest body of water at a relatively high elevation. During winter, its 139 square miles of surface freeze solid from shore to shore (except for isolated spots of thermal activity). Freeze-up is a gradual process in such a large body of water, starting as early as August. Water temperature gradually drops, cold water sinks as warm water rises, and the process continues until the water is uniformly cold enough to freeze.

Although shallow lagoons or bays may freeze earlier, widespread freeze-up takes place after an intensely cold subzero night. On average, the lake is ice-locked by December 25. In the few days between freeze-up and the accumulation of insulating snow, solar radiation causes heating and expansion of the vast sheet. Ice noisily shifts—creaking, popping, and groaning in the stillness; "the lake sings" in the local parlance.

Yellowstone Lake is snowbound roughly half the year. Break-up occurs quickly, usually in late May or June. This vast body of water is a complex system influencing climate, plants and animals over a far greater area than its shoreline

boundaries. Set amidst the Absaroka Mountains, it defines the essence of winter—an untouched wilderness snowscape, harshly beautiful. Warming huts are located near Fishing Bridge Junction and at West Thumb.

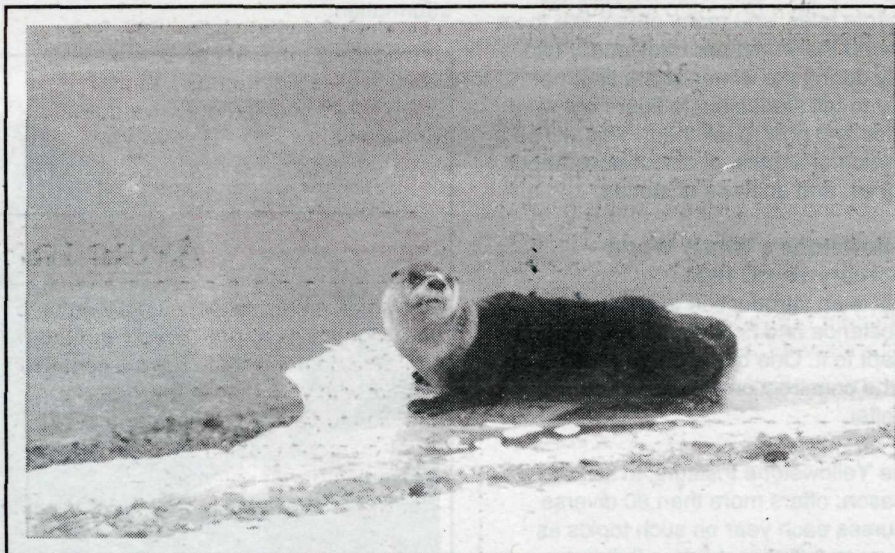
**WILDLIFE** Winter is the season of greatest stress to all living things. For many animals, it is the time of dying. The very old, very young, and those weakened by injury or illness are at a disadvantage when it is extremely difficult to find food. Even animals in good condition cannot endure repeated stress without depleting energy reserves; soon, survival is at stake. Now more than ever, you must avoid unnecessarily disturbing wildlife. Never approach animals closely—you may cause an animal to move, and exertion through deep snow consumes great quantities of energy. Animals have adapted to cold and snow in a variety of ways. Ground squirrels, marmots and bears disappear underground or into dens, entering that mysterious state of suspended animation known as hibernation. Others, including many birds, leave for more moderate climates.

For those who remain, adaptations include thicker winter coats, a change to protective coloration, or migration to lower elevations or to thermal basins where winter is slightly less severe and food easier to find. Of the large mammals inhabiting Yellowstone, only the moose can survive in the forest. Its long legs are well suited to striding through deep snow to reach fir needles.

Elk and bison are most commonly seen, partly because their winter ranges overlap areas of human occupation, and partly due to numbers. Look for them in the Lamar, Pelican and Hayden Valleys, and along the Firehole River.

Winter in northern Yellowstone, along the 56 miles of road between Gardiner and Cooke City, Montana, is significantly different from the rest of the Yellowstone plateau. Three river valleys—the Yellowstone, Lamar and Gardner—combine with the lowest elevations in the park to create ideal winter habitat for a variety of wildlife. Typically, less snow falls here and temperatures are a few degrees warmer than elsewhere in the park. Few other places in North America feature the diversity of wildlife found here.

Often, a visit is most remembered and enjoyed for the discoveries made on your own. Though winter logistics encourage haste, patience and alertness may bring you moments of extraordinary beauty or reveal the story of a jumble of tracks in the snow. May your visit be safe, rewarding and special.



Photo—Pam Gontz

# Self-guiding trails

**Take time to stretch your legs and linger in the beauty of the snowscape. Adapt your pace to winter conditions; trails may be icy and snowpacked so walk with caution. For safety and courtesy to skiers, please do not walk in ski tracks.**

**Mammoth Hot Springs Terraces.** Paths wind over a hillside of active and inactive hot springs. These springs are noted for their rapid mineral deposition; up to two tons of limestone is added to the hillside daily. Formations are fragile and unstable. For their protection and your own, stay on designated boardwalks and trails. Trail guide leaflets are available for 25¢ at the visitor center or parking lot trailheads.

**Norris Geyser Basin.** Explore the hottest, most active thermal basin in the park. Trails begin at the museum. Thermal features are fragile and easily damaged by objects tossed into them or

by off trail travel. Thin crusts give away to boiling water. Stay on designated trails and boardwalks to preserve features and protect yourself.

**Fountain Paint Pot Nature Trail.** Located 8 miles south of Madison Junction (and 8 miles north of Old Faithful). Mud pots boil and churn, changing shape with each burst; minerals are the "paint" of the pots. Active geysers and varicolored pools are also found along this short trail. Preserve delicate features and protect yourself from serious burns by staying on boardwalks and trails. Avoid disturbing wintering wildlife.

**Upper Geyser Basin.** The world's largest array of geysers is found here, including Old Faithful Geyser. Several miles of trail begin at the Old Faithful Visitor Center. Ski trail guide leaflets are available at the visitor center and at the Old Faithful Snow

Lodge. Check on trail conditions and weather forecasts before starting out; hazards may cause restrictions or closures. Help preserve fragile formations and protect yourself from severe burns by staying on designated trails. Avoid disturbing wintering wildlife.

**West Thumb Geyser Basin.** Thermal features boil and steam on the shore of ice-locked Yellowstone Lake. Otters are occasionally spotted fishing in ice holes. Avoid damaging or destroying delicate features and protect yourself by staying on trails. Lake ice is thin and hazardous; do not venture out on it.

**Mud Volcano Trail.** Located approximately 6 miles north of Fishing Bridge Junction (10 miles south of Canyon Junction). The names of thermal features—Dragon's Mouth, Mud Volcano, Black Dragon's Caldron—hint at the unusual

colors and activity found here. Thin crust overlies boiling water; stay on trails to protect yourself and fragile formations. Avoid disturbing wintering wildlife.

**Grand Canyon of the Yellowstone.** The Canyon and Upper and Lower Falls of the Yellowstone River are seen from overlooks along the North and South Rim roads. Stop at the Canyon Warming Hut for a map of the area. Trails and overlooks are snowpacked—use caution. Note: the road is closed to snowmobiling 4 miles north of Canyon Junction.

Yellowstone Today is published by the Division of Interpretation, Yellowstone National Park, WY 82190, (307) 344-2258, in cooperation with the Yellowstone Association.



# Information and activities

## Visitor centers

### Mammoth Hot Springs, Albright Visitor Center.

Open year round. Winter hours 9:00 am-5:00pm daily.

Information, publications, and exhibits of the early history, exploration and establishment of Yellowstone National Park. A one-hour video on winter in Yellowstone is shown at 9:00am and 3:30pm daily; a 25-minute film on the National Park idea is shown on request during the remainder of the day. Check at the visitor center for more information or call (307) 344-2263.

### Old Faithful Visitor Center.

Open through March 10. Winter hours 9:00am-5:00pm daily.

Information, publications, geyser eruption predictions. A 10-minute movie on geysers is shown throughout the day. Check at the visitor center for more information or call (307) 545-2750.

## Warming huts

**Old Faithful Warming Hut.** Open through March 10, daytime only.

Vending machine snacks are available.

**Madison Junction Warming Hut.** Open through March 10, 24 hours daily.

TW Recreational Services, Inc. sells light snacks and hot drinks during the day; vending machine snacks available any time.

**Indian Creek Warming Hut.** Open through March 3, 24 hours daily.

**Fishing Bridge Warming Hut.** Open through March 10, 24 hours daily.

Vending machine snacks and cold drinks available.

**Canyon Warming Hut.** Open through March 10, 24 hours daily.

TW Recreational Services, Inc. sells light meals and hot drinks during the day, and vending machine snacks are available anytime.

**West Thumb Warming Hut.** Open through March 10, 24 hours daily.

Snacks are available from vending machines.

## Ranger-naturalist activities

### Old Faithful

Evening programs are offered Sunday, Monday, Tuesday, and Wednesday nights (beginning Dec. 17) at 7:00pm in the Old Faithful Visitor Center Auditorium. For more information on ranger-naturalist activities, check at the visitor center.

### Mammoth Hot Springs

Evening programs are offered Thursday, Friday and Saturday nights (Dec. 21-March 2) at 8:30pm in the Mammoth Hotel Map Room. For more information on ranger-naturalist activities, check at the visitor center.

## Roving ranger-naturalists

Look for ranger-naturalists at Yellowstone warming huts or near major park features. They are intermittently available to assist you, to answer your questions, and to tell you more about the winter wonderland of Yellowstone.

## Yellowstone Institute courses

As seasons change and winter moves in, Yellowstone country is transformed into a beautiful snowscape, offering visitors to the park rewarding experiences available to relatively few people. Yellowstone Institute winter courses provide an opportunity to learn about this special place in a stimulating, fun, and safe environment, full of the camaraderie that comes so easily at this time of year. Field courses offered this winter are:

### Winter Wildlife and Nature

#### Photography—January 12-15, 1996

Explore the startling, diverse moods nature has to offer as you photograph, ski, and hike to several locations in the northern part of the park.

### Backcountry by Ski—

#### January 12-15, 1996

This is a two-night trip into the intense and beautiful backcountry of Yellowstone. A wide range of winter skills will be taught, including travel over snow, food preparation, snow shelter construction, cold weather clothing, and the hazards of cold environments.

### How Mammals Survive Winter—

#### January 27-28, 1996

For mammals, winter is a time of harsh reality with scarce food, deep snow, and raging blizzards. In this class, you will learn through lectures and field exercises how mammals survive these harsh realities of winter.

### The Winter Experience: Enjoying its Comforts—Jan. 30-Feb. 1, 1996

This course for newcomers to the winter landscape will introduce you to tools and techniques to thoroughly prepare you for enjoyable winter outings. Classroom discussions of equipment and natural history topics will be interspersed with skiing and field demonstrations.

### The Tradition of Winter Storytelling—February 2-4, 1996

Winter is the season for storytelling. Coyote tales, and many others like them around the world, are traditionally told only during the winter. It is a time not only to tell stories but to figure out what to tell and how to tell them. This will be a session of stories, of discussions about stories, and analysis of stories.

### Yellowstone's Winter World—

#### February 16-19, 1996

This is an introduction to snow as a substance and how plants and animals adapt to it. One of the course highlights is the construction of a quinzee snow shelter.

The Yellowstone Institute, in its 20th season, offers more than 80 diverse courses each year on such topics as geysers, grizzlies, birds, wildflowers, and park history. For more details about these learning experiences, call (307) 344-2294 or write P.O. Box 117, Yellowstone National Park, WY 82190.

## Concessioner interpretive activities

TW Recreational Services, Inc. operates lodging and provides other services in Yellowstone, including interpretive activities, some of which are free and some of which have fees. For reservations or for more information regarding any of the activities listed below, call (307) 344-7311.

## Evening Programs

Evening programs are offered Monday and Tuesday nights (December 25-February 27) at 8:30pm in the Mammoth Hotel Map Room.

## Snowcoach tours

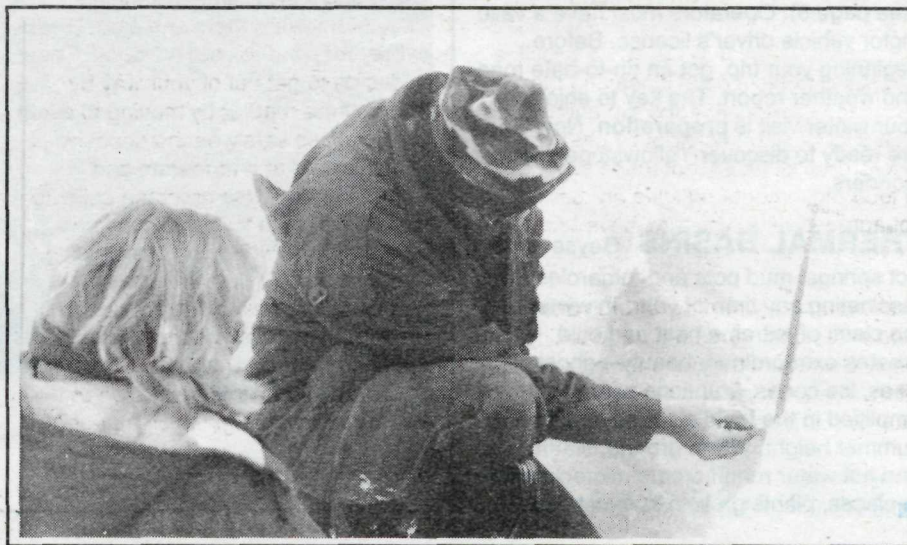
Full and half day interpretive tours are offered in heated snowcoaches departing from Mammoth, Old Faithful, and West Yellowstone. These trips provide excellent opportunities to view winter wildlife and to explore other points of interest. Fares, routes, days, and times vary; call the number listed above for more information.

## Guided ski tours

Full and half day guided ski tours are offered from both Old Faithful and Mammoth. Transportation to the trailhead is provided by either snowcoach or van. A guide will assist you with your ski technique and explain the area features. Tour fees and destinations vary; call for more information.

**Guided snowmobile tours** are available roundtrip from Mammoth to Norris Geyser Basin, Canyon, and Old Faithful; call for more information.

**Wildlife bus tours** depart from Mammoth Hotel and travel through the northern range of Yellowstone to look for wildlife. Tour fees, days and times vary; call for more information.



A Yellowstone Institute class examines a snow profile.

Photo—Pam Gontz

## The Yellowstone Association

The Yellowstone Association was founded in 1933 to assist with educational, historical, and scientific programs for the benefit of Yellowstone National Park and its visitors. Among the Association's past and present projects are:

**Operation of bookstores in all park visitor centers** with proceeds funding interpretive programs and exhibits for visitors, as well as research projects and equipment in Yellowstone.

**Sponsorship of the Yellowstone Institute** which offers a variety of in-depth classes on various aspects of Yellowstone.

**Sponsorship of scientific conferences** relating to Yellowstone resource management issues.

**Publication of books and pamphlets about Yellowstone** for the visitor.

**Maintenance of park research library.**

**You are invited to become a member of the Yellowstone Association.**

Membership benefits include:

- A way for visitors to support educational, historic and scientific programs in Yellowstone.
- An informative newsletter and a subscription to *Yellowstone Today*, the park newspaper.
- A 15% discount on books sold by the Yellowstone Association in all visitor centers; discounts at many association bookstores in other national parks.
- Discounts on Yellowstone Institute class tuition.
- Memberships are tax-deductible to the extent allowable by law.

**For more information about the Yellowstone Association**, write P.O. Box 117, Yellowstone National Park, WY 82190 or call (307) 344-2296.

☒ **YES!** I want to help educate people about the natural wonders of Yellowstone.

To receive all the benefits of membership, complete and mail this form with your dues to: The Yellowstone Association, P.O. Box 117, Yellowstone National Park, WY 82190 (or leave at any Visitor Center sales desk).

Name Mr. Mrs. Ms. \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_ Phone \_\_\_\_\_

Annual Dues:	Associate . . . \$25	<input type="checkbox"/>	Patron . . . . \$250	<input type="checkbox"/>
	Contributing . . \$50	<input type="checkbox"/>	Sponsor . . . \$500	<input type="checkbox"/>
	Sustaining . . . \$100	<input type="checkbox"/>	Benefactor . . \$1000	<input type="checkbox"/>

Make checks payable to "The Yellowstone Association"

Charge to Visa ☐ Mastercard ☐ Discover ☐ # \_\_\_\_\_

Expiration date \_\_\_\_\_ Signature \_\_\_\_\_ PNP



# Snowmobiling and other information

## ACCIDENTS

Report all accidents or injuries to park rangers at visitor centers or ranger stations.

## WINTER CAMPING

**Wheeled vehicles:** winter camping is available only at Mammoth Campground (accessible via the North Entrance). Heated restrooms and water are available. Overnight camping or stopping outside of this designated campground are not permitted.

## BACKCOUNTRY PERMITS

Permits are required for **overnight backcountry use** and may be obtained in person up to 48 hours in advance from any ranger station. Rangers will provide information on weather, trails and snow conditions, and alert you to any special winter hazards. **Wood fires are only allowed in Mammoth Campground**

so skiers must carry stoves and fuel for cooking or melting snow.

**PACK IT IN—PACK IT OUT** All refuse must be carried out of the backcountry.

**SANITATION** Latrine areas must be a minimum of 100 feet from all water sources and out of sight from trails and camp areas. Burn toilet paper on top of the snow.

## DEFACING PARK FEATURES

Collecting natural or archeological objects, or removing, defacing or destroying any plant, animal, or mineral is prohibited. Travel into fragile thermal areas may result in serious injury or damage to the area.

**FIREARMS** Firearms are not allowed in Yellowstone. However, unloaded firearms may be transported in a vehicle when the weapon is cased, broken down or

rendered inoperable, and kept out of sight. Ammunition must be placed in a separate compartment of the vehicle.

**LOST AND FOUND** Report lost and found items at any visitor center or ranger station. A report will be filed and the article returned when possible. For more assistance write: Yellowstone National Park, Visitor Services Office, P.O. Box 168, Yellowstone National Park, WY 82190.

**PETS** Pets must be leashed. They are prohibited on ski trails, in the backcountry, and in thermal basins. Leaving a pet unattended and/or tied to an object is prohibited.

## SHOULD YOU DRINK THE WATER?

Intestinal infections from drinking untreated water are increasingly common. Water may be polluted by animal and/or

human wastes. When possible, carry a supply of water from a domestic source. If you drink water from lakes and streams, boil it a minimum of two minutes to reduce the chance of infection.

## BEWARE OF HYPOTHERMIA AND FROSTBITE

Yellowstone's weather is unpredictable; a calm, clear day may turn fiercely stormy. Without adequate clothing and gear an easy ski tour or snowmobile trip can turn into a battle for survival. Exposure to wind and cold can result in **hypothermia**. This rapid loss of body heat can cause death if not treated. Early warning signs include shivering, slurred speech, memory lapses, drowsiness, and exhaustion. Exposure to cold and wind can also result in **frostbite**. Frostbite can permanently damage tissue and affect functional use of fingers, toes, nose, ears or other body extremities. Protect yourself with warm, layered clothing and frequent stops to warm up.

## Snowmobile regulations

Snowmobiling is one way to discover Yellowstone's winter wonders. Snowmobile regulations are designed to protect park resources and you, and are strictly enforced.

**\*\*Snowmobile operators must possess a valid state motor vehicle driver's license (see article below).**

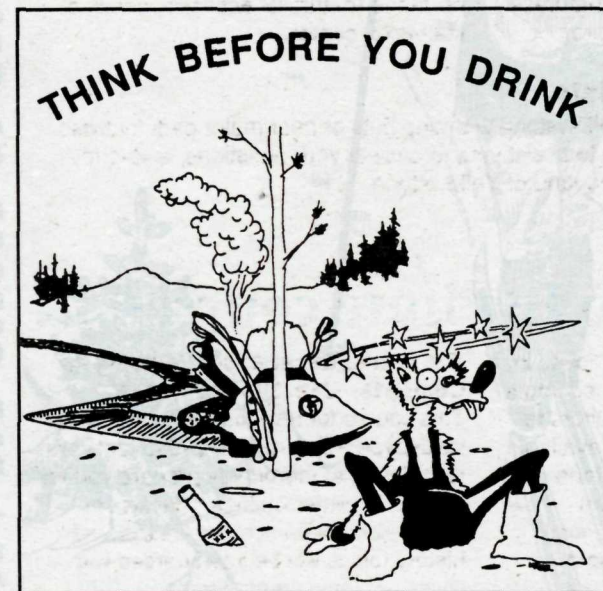
**\*\*Maximum speed limit is 45 mph or less when posted.**

**\*\*Snowmobiles may be driven on designated roads only.** Sidehilling is prohibited and carries a fine of up to \$500.00. Stay on roads to avoid injuring yourself, damaging your machine or harming the environment.

**\*\*Operating a snowmobile while intoxicated is illegal.** Possession of open containers of alcoholic beverages, including bota bags, is illegal while operating a snowmobile or riding as a passenger.

**\*\*Wildlife have the right of way!** Chasing, molesting, approaching or feeding any animal is prohibited (see article below).

**\*\*Snowmobiles must be registered according to the laws of the operator's state of residence, Wyoming or Montana, and have a muffler in good working order.**



**ATTENTION ANGLERS:** Yellowstone National Park's fishing season closed on the first Sunday in November and will not reopen until Saturday of Memorial Day weekend.

**ALCOHOL AND SNOWMOBILES DON'T MIX. ENJOY THE YELLOWSTONE AREA SAFELY.**

## Tips for passing bison and other wildlife on park roads

**If bison or other wildlife are slowly walking toward you on the road:** Pull your machine over to the side of the road opposite the animal(s), as far as possible, and stand to the side of it, leaving the machine between you and the animal(s). Wait until they are completely past you before driving on. Do not make any quick or loud movements. Wildlife are generally not aggressive unless they have been provoked or surprised.

**If animals are standing in the road:** Stop at least 25 yards before reaching them. Give them the opportunity to move off the road. If they don't move, and you want to pass them, assess their behavior.

If the animals do not appear to be agitated and if they remain standing calmly, inch toward them and stop. Watch how they respond to your advance. They may decide to get out of your way by walking off the road or by moving to avoid you. If so, pass safely on the opposite side of the road at a moderate and consistent speed. Use groomed pullouts whenever possible to give the animals maximum space when you are passing.

If the animals remain calm, but do not move as you inch toward them, stop, pause, and then try again. Give them the right of way. If they feel pressured or pushed, they may begin to stampede.

If an animal raises its tail, paws the ground, or throws its head and body around, do not attempt to pass. Wait for the animal to leave the road on its own. Any advance may be perceived as a threat and the animal(s) could charge.

### If animals are running toward you:

It is likely that oncoming snowmobile traffic is pushing them your way. If you have enough time and space, turn your machine around and move down the road until the animals have moved off the road or until you find a safe place, such as a pullout. Remember that it is difficult to turn a snowmobile around quickly. If your machine does not have reverse, remem-

ber that you will need the space of both lanes to turn your vehicle around.

If you do not have time to turn around, pull your machine as far as possible to the side of the road opposite the animal(s), and stand to the side of it, leaving the machine between you and the animal(s).

Be aware of the urgency of this situation. Anticipate it as you come around a curve and be prepared to act quickly. Also, make an effort to avoid running wildlife down the road, pushing them toward oncoming snowmobilers. **And remember, there is no guarantee of your safety.**

## License needed to snowmobile — Keep your trip safe

All snowmobile operators in Yellowstone National Park are required to possess a valid motor vehicle operator's license. In addition, persons possessing a learner's permit may operate a snowmobile in the park when supervised within line of sight (but not further than 100 yards) by a licensed person 21 years of age or older. The policy change was implemented because of the park's concern about the number of snowmobile accidents involving young operators.

Snowmobile use has increased dramatically in the park over the past decade, and it is now common to have over 1,600 snowmachines a day, including track-conversion vehicles and snow coaches, operating on the park road system. Modern snowmobiles weigh 400-500 pounds and are capable of quick acceleration to over 70 mph. Between 1987 and 1992, youthful operators accounted for an average of 16 percent of the snowmobile accidents in the park, while composing an estimated 5 percent or less of the total number of snowmobile operators.

Park officials believe that winter traffic conditions are more similar to a highway driving situation than to the snowmobile and off-road vehicle trails found elsewhere. Under the high speed highway conditions found in the park, most young snowmobilers are at a distinct disadvantage in terms of their judgment, experience, and physical capabilities compared to a licensed driver. This rationale is reflected by the fact that the vast majority of states require persons operating motor vehicles on state road systems to be licensed and at least 16 years old.

The driver's license requirement being implemented for snowmobiling in Yellowstone is not unprecedented. A number of states require the possession of a valid driver's license to operate a snowmobile on public lands or on public roads.

Options for young people visiting the park during the winter include doubling up on a snowmobile operated by a licensed driver or using any of the authorized commercial snowcoach services that provide transportation in the park.

**\*\*Travel in groups;** emergencies are more easily handled.

**\*\*Dress for extreme cold.** Items essential for snowmobilers include: helmet, face mask, heavily insulated gloves or mittens, felt lined boots, and a heavily insulated snowmobile suit. Avoid tight-fitting garments; they restrict circulation and increase the possibility of frostbite.

**\*\*Carry extra food for 12 hours beyond your planned trip,** extra fuel, drive belt, spark plugs and appropriate tools, plus extra parts which frequently break down or wear out on your machine. Always include matches and a First Aid kit. **Repair services are not available in the park** except for minor repairs and parts at Old Faithful.

**\*\*Before starting your trip, check on road and weather conditions.** Blowing and drifting snow can be especially hazardous in Hayden Valley (between Canyon and Fishing Bridge Junctions) and on Swan Lake Flats (approximately 4 miles south of Mammoth Hot Springs).

**\*\*Know the locations of warming huts, visitor centers and public phones** (see the back page of this newspaper.)

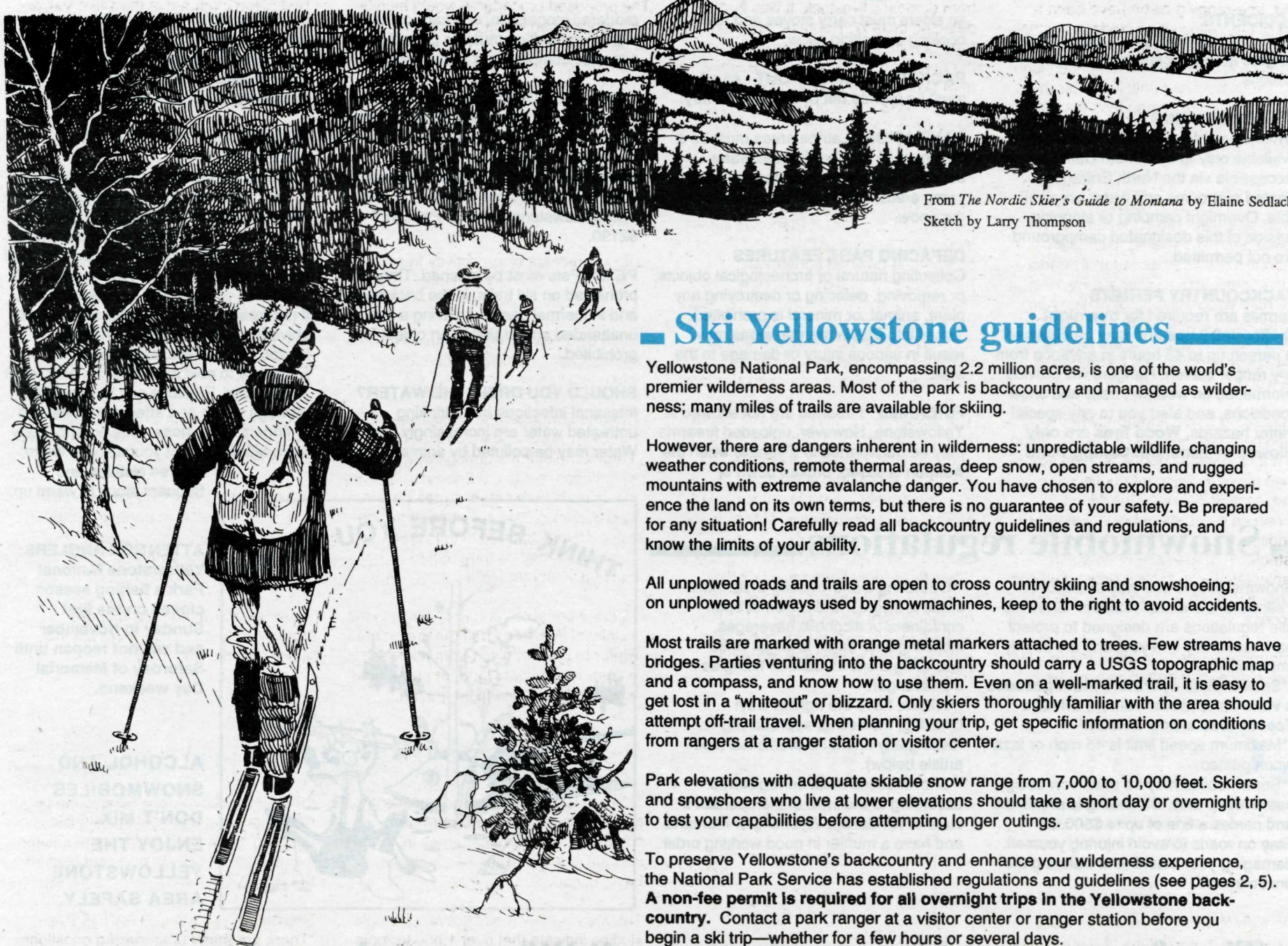
**\*\*Avalanches** may occur on steep hills or canyons. When travelling through such areas, do not bunch up—spread out. Avalanches are more likely to occur during or after heavy fresh snowfall, high winds, or extreme temperature changes.

Hazardous conditions may temporarily close Sylvan Pass (between the East Entrance and Fishing Bridge Junction). The road from Tower Junction to the Washburn Hot Springs Overlook four miles north of Canyon Junction is closed to snowmobiling due to avalanche danger.

**\*\*Bison** often stand, lie, or walk on roads during winter; see article above for some tips to assist you in passing them.



# Cross country skiing information



From *The Nordic Skier's Guide to Montana* by Elaine Sedlack  
Sketch by Larry Thompson

## Ski Yellowstone guidelines

Yellowstone National Park, encompassing 2.2 million acres, is one of the world's premier wilderness areas. Most of the park is backcountry and managed as wilderness; many miles of trails are available for skiing.

However, there are dangers inherent in wilderness: unpredictable wildlife, changing weather conditions, remote thermal areas, deep snow, open streams, and rugged mountains with extreme avalanche danger. You have chosen to explore and experience the land on its own terms, but there is no guarantee of your safety. Be prepared for any situation! Carefully read all backcountry guidelines and regulations, and know the limits of your ability.

All unplowed roads and trails are open to cross country skiing and snowshoeing; on unplowed roadways used by snowmachines, keep to the right to avoid accidents.

Most trails are marked with orange metal markers attached to trees. Few streams have bridges. Parties venturing into the backcountry should carry a USGS topographic map and a compass, and know how to use them. Even on a well-marked trail, it is easy to get lost in a "whiteout" or blizzard. Only skiers thoroughly familiar with the area should attempt off-trail travel. When planning your trip, get specific information on conditions from rangers at a ranger station or visitor center.

Park elevations with adequate skiable snow range from 7,000 to 10,000 feet. Skiers and snowshoers who live at lower elevations should take a short day or overnight trip to test your capabilities before attempting longer outings.

To preserve Yellowstone's backcountry and enhance your wilderness experience, the National Park Service has established regulations and guidelines (see pages 2, 5). **A non-fee permit is required for all overnight trips in the Yellowstone backcountry.** Contact a park ranger at a visitor center or ranger station before you begin a ski trip—whether for a few hours or several days.

## Ski gear guide— equipment and clothing

Choose skis and boots made for touring or mountaineering. Narrow racing skis won't give you enough surface area to break trail. Low shoes won't give you enough ankle support, and track is set only on a few Yellowstone trails. Before you rent or borrow equipment, check for fit and suitability for wilderness use. Equipment that fits both you and park conditions can make or break your trip.

Winter temperatures are severe in Yellowstone but you can be comfortable and confident if you are properly dressed. Prepare for changing conditions by wearing clothes in several adjustable layers. It is as important to prevent overheating as it is to prevent chilling.

Be sure your clothing includes a wind-proof hooded outer layer with wool or other insulated garments underneath. Wool or synthetic trousers and long underwear will help keep your legs warm and dry in deep snow. Wind or rainpants are lightweight and provide extra warmth on windy days. Avoid cotton jeans and sweatshirts. Thick wool socks and gaiters or overboots help keep your feet warm and dry. Wear gloves or wool mittens with shells that breathe to allow moisture to escape from sweaty hands.

Since you lose more heat from your head than from any other part of your body, wear a facemask-style stocking cap or parka hood when you need maximum protection. Dark sunglasses are a must for sunny days. High altitude sunlight reflected from snow is much more intense than at lower elevations; snowblindness may occur if sunglasses are not worn. Apply sunscreen lotion to exposed skin to avoid painful sunburn.

Each ski trip will teach you what works best for you. Discuss your plans with rangers at visitor centers and ranger stations. Staff at the Old Faithful and Mammoth Ski Shops can help you choose gear to match your ability and the conditions.

Trip planning should include allowances for limited daylight, snow conditions, temperature extremes, and the number of people in the group and their experience and physical condition. Overnight ski and snowshoe trips during December and January are difficult due to short days (8:30am-5:00pm), temperature extremes and soft snow.

**On day trips consider taking some or all of these items to increase your margin of safety:**

extra clothing	compass
matches or lighter	snack food
water	ski tip

**Skiers who are planning extensive backcountry trips involving overnight camping should carry all of the above and the items below:**

- Backpack
- Sleeping bag (7 in. thick min.)
- First Aid kit
- Avalanche cord
- Compass
- Knife
- Tent or bivouac bag
- Closed cell sleeping pad
- Stove and pots
- Easily prepared food
- Shovel
- Maps
- Repair parts and tools for skis, stove and pack

## Skiing safety

**1. Evaluate your party's capabilities.** Plan your outing to allow the weakest member of your group to enjoy and survive it.

**2. Learn about your equipment's capabilities and weaknesses** and be prepared to repair it.

**3. Never closely approach geysers, hot springs or mud pots.** You may fall through overhanging snow ledges or thin crust. Do not leave designated trails in geothermal areas.

Beware of icy conditions on downhill grades leading into thermal areas. Side-step or walk down the hill rather than risk skiing out of control into a boiling pool.

**4. Avalanches** are possible on hillsides or in canyons with slopes of 25-85%. Slides occur most frequently after heavy snowstorms or during warm periods.

Avalanche hazard can be high on roads between the East Entrance and Fishing Bridge Junction, on Dunraven Pass, on trails in the Cooke City vicinity, and in many areas of the backcountry. Learn about avalanche mechanics, safe travel methods, and rescue procedures.

**5. When crossing frozen lakes, use extreme caution** and check ice thickness by prodding with a ski pole. Ice, snow covered or not, may be thin, especially near inlets, outlets, and waters warmed by thermal activity. Crossing rivers may be dangerous; some have bridges and some do not. Ask a ranger about local crossings.

**6. Do not approach wildlife.** All wild animals are unpredictable; if they charge, you can't outrun them in deep snow. If they run, you are forcing them to use energy they need to survive.

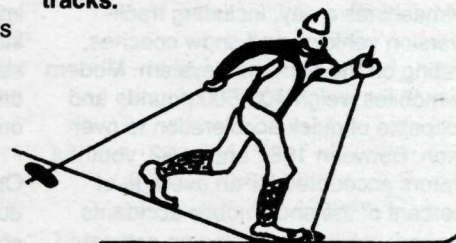
**7. Fires during the summer of 1988** burned near or across many ski trails and destroyed the trunks and root systems of many trees, creating **hazardous standing snags which could fall with little warning.** Skiers—be alert for this possibility, and, while in burned areas, stay on established trails.

**8. Exertion in dry mountain air can dehydrate you.** Carry and drink two quarts of water a day. Carry gear to melt water from snow or dip it out of a stream from a safe distance with a ski pole. Boil water from lakes or streams to reduce the chance of infection.

**9. Learn as much as you can about winter survival.** Talk with park rangers before you leave on any trip. Many good books are also available on this topic.

**10. Basic ski etiquette: yield to those going downhill when skiing uphill on trails.**

**11. Hikers: please do not walk in ski tracks.**





## Bison in the Yellowstone ecosystem

Wild, free-ranging bison have been a part of the Yellowstone landscape since prehistoric times. Primarily because of poaching and market hunting, the bison population declined until just after the turn of the century when less than 50 bison were known to exist in Yellowstone National Park.

In this century, bison populations have made a remarkable recovery, now numbering over 150,000 animals in private and public herds nationwide. Bison are *not* listed as federally endangered or threatened species. By 1995, the Yellowstone bison population had increased to about 4,000 animals. The Yellowstone herd is the largest free-ranging (unfenced) bison herd in the world.

Maintaining a wild, inherently nomadic bison herd can present problems. Bison do not recognize boundaries and sometimes move to adjacent public and private land, especially during the winter. Increased numbers of bison, weather conditions, and human activities all affect distribution of animals; attempts to manipulate bison movements by hazing or herding have met with very limited success.

Unfortunately, early in this century, bison were exposed to brucellosis, probably

from domestic livestock. It was first detected in 1917. Representatives of the livestock industry have concerns about the possibility of brucellosis transmission from bison to cattle. While no documented case exists of wild, free-ranging bison from Yellowstone transmitting brucellosis to domestic cattle, the risk of transmission is of concern.

In November 1995, the National Park Service (NPS), Animal Plant and Health Inspection Service (APHIS) and the State of Montana reached agreement on proposed Interim Bison Management Procedures and a schedule for completing a longterm bison management plan and environmental impact statement (EIS) for bison that move between Yellowstone National Park and Montana.

The agreement settles a lawsuit filed by Montana against the NPS and APHIS in January 1995. The suit was based on concerns about brucellosis transmission to cattle and the possible revocation of Montana's brucellosis-free status. In the settlement agreement, APHIS has agreed that it will not change Montana's brucellosis-free status based on the presence of brucellosis-exposed bison migrating from Yellowstone to Montana as long as the proposed procedures outlined in the agreement are implemented.

The proposed procedures would modify an Interim Bison Management Plan in use since 1992 where bison that left the park were shot by agency personnel and most carcasses were made available to Native American tribes. The NPS and Montana are preparing an environmental assessment on the proposed procedures, which call for the NPS, Montana Department of Livestock, Montana Department of Fish, Wildlife and Parks and APHIS to work together to:

- Closely monitor bison activity from December 1-March 1 and throughout the year as necessary.
- Haze bison found in some areas outside the park back inside park boundaries, when feasible.
- Operate portable capture facilities in the Reese Creek boundary area near Gardiner, Montana, during the winter when bison move to the area, to prevent the animals from entering onto private land adjoining the park where there are cattle. Bison captured in the Reese Creek area may be transported to certified slaughter facilities.
- Operate portable capture facilities in the vicinity of West Yellowstone during the winter to prevent bison from migrating onto or near private land, or public land where livestock would be grazed.

• Test bison captured in the West Yellowstone area for brucellosis. Bison that pose a low risk of transmitting the disease will be released and allowed to occupy public lands adjacent to the park during designated times of the year. Higher risk animals will be transported to certified slaughter facilities. The released animals will be marked and monitored.

• Allow bison to remain on specific public lands where there is not livestock use as long as they do not go beyond specific boundaries.

• Work cooperatively and expeditiously with the USDA Forest Service toward completing a longterm Bison Management Plan and EIS. As part of the settlement agreement, Montana and the NPS plan to issue a draft EIS for public review and comment by November 1996 and a final EIS by May 1997.

• Agree that the court would maintain jurisdiction over the changes in the interim operating procedures and completion of the longterm bison management plan and EIS.

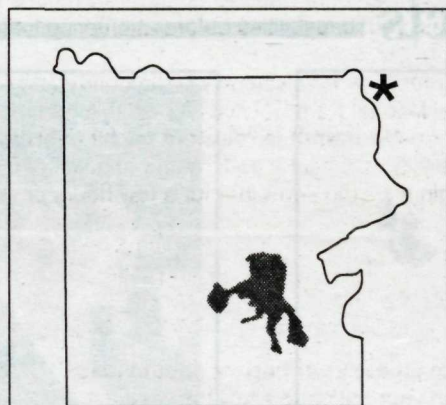
For more information, contact the Superintendent's Office, Yellowstone National Park, WY 82190.

## Controversial mine proposed near park

A proposal to locate a gold mine less than three miles from the northeast corner of Yellowstone National Park is attracting national and international attention.

The New World Mine would operate year-round at elevations of 8,000 to 10,000 feet in the mountains above Cooke City, Montana. Officials with Crown Butte Mine, Inc., owner of the mining claims, have stated that they expect impacts to Yellowstone to be minimal. However, Yellowstone officials and citizens and groups opposed to the mine disagree.

The potential for surface and groundwater contamination is a major concern. The mine would be situated at the headwaters of three drainages: the Clark's Fork of the Yellowstone River (Wyoming's only Wild and Scenic River), the Stillwater River (which flows into the Absaroka-Beartooth Wilderness), and Miller Creek, a tributary of Soda Butte Creek (which flows into Yellowstone National Park).



The proposed New World Mine site is located just outside Yellowstone National Park's northeast corner (\*).

Where and under what conditions the potentially toxic mine tailings are deposited and stored could affect the water quality of one or more of these drainages. These toxic mine tailings would have to be maintained in a neutral state forever.

There are also unanswered questions about the potential of groundwater contamination as water comes in contact with the acid-generating rock as it is being mined.

The area is seismically active. Geologic studies indicate that over 1,000 tremors and quakes of various sizes are recorded in and around Yellowstone each year. Other concerns that have been expressed include potential impacts to wetlands, wildlife (including grizzly bears), air quality, nearby communities, scenic values, and noise.

The National Park Service (NPS) has no permitting authority for projects outside park boundaries. It is, however, working with the agencies (U.S. Forest Service and the Montana Department of State Lands) preparing the environmental impact statement (EIS) for the project in an effort to ensure that any impacts to the park are fully addressed. The NPS has requested that an alternative that would dispose of the mine tailings *outside*

the greater Yellowstone ecosystem be examined, and that geologic studies detailing subsurface faulting and aquifer location be completed and analyzed in the EIS.

Superintendent Mike Finley has stated, "There are many unanswered questions and no guarantees associated with the New World Mine proposal. We don't know yet whether this project can withstand the test of time."

The draft EIS is scheduled for release to the public for comment in early 1996. If you are interested in this issue and would like more information, contact the Superintendent's Office, Yellowstone National Park, WY 82190. To be placed on the mailing list for the draft EIS or to comment on the proposal, please contact the Montana Department of Environmental Quality, P.O. Box 201601, Helena, MT 59620 or Gallatin National Forest, P.O. Box 130, Bozeman, MT 59771.

## Habituation spells disaster

Yellowstone offers unique opportunities to view wildlife in their natural environment. Some birds and mammals live near park roads and developed areas, where they are particularly observable. However, this increases the likelihood that some individuals will become habituated—that is, used to people. Habituated wildlife are misleading—they may appear to be highly tolerant of humans, but they are still wild and unpredictable.

Approaching wildlife at close range can cause the animals stress. Be observant—many animals will show signs of increased alertness or fear. The animal(s) may move away; heads may perk up, or eyes widen and focus on nearby humans; the animal may flatten its ears, flare its nostrils, change body direction, stop eating, or rise from a resting stance.

Habituated wildlife can quickly become conditioned to human foods. Swans,

coyotes, bighorn sheep, ground squirrels, bears, ravens and other species have all demonstrated "begging" behavior in Yellowstone. This apparently harmless activity is dangerous for both you and the animal(s). When they come to the roadside to obtain food, animals often are hit by vehicles, or become exhausted chasing traffic.

Human foods in an animal's diet may result in tooth decay, ulcers, digestive problems, or failure to accumulate adequate fat reserves for the winter when food is scarce. Beggar birds and wildlife may become aggressive, and have occasionally injured park visitors. Please enjoy the opportunity to view and photograph park wildlife in their wild, natural state. The park is not a zoo; animals live and die based on their species' adaptations and their individual ability to survive in this environment. Respect park wildlife—never approach too closely, and be alert for changes in

wildlife behavior that could lead to a problem, for you or for them. **All park animals are wild and potentially**

**dangerous. Never feed or approach any park animals.**

### Coyotes and habituation

The coyote—perhaps Yellowstone's most common predator—is often seen traveling through the park's wide open valleys. Coyotes may live in packs, or may range alone in search of prey or carrion to scavenge. They eat a variety of small mammals, but they can also hunt and kill larger prey; packs have been observed bringing down adult elk in Yellowstone.

Coyotes normally avoid people but are wild and unpredictable. During recent winters, instances of coyote aggression toward humans, including one which involved an actual attack, were reported. Habituation most likely played a role in this unusual behavior.

We are experimenting with scaring unwary coyotes away from visitor use areas. Those animals that continue to pose a threat to themselves or to humans may be translocated to other areas of the park, or even removed from the park ecosystem. **If you see a coyote or other animal which appears to be unwary of people, please report it to a park ranger.**



# Wolves return to Yellowstone

In March, 1995, 14 gray wolves (*Canis lupus*) were released from three fenced enclosures in Yellowstone National Park. The releases represent one tangible outcome of a plan developed over nearly two decades under the authority of the Endangered Species Act, with input by more than 160,000 people, to restore wolves in Yellowstone.

This plan, evaluated in an environmental impact statement (EIS) in 1992-1994, and under rules published in the *Federal Register* in November 1994, is to restore wolves to Yellowstone and central Idaho by establishing experimental populations of gray wolves in both areas. Copies of the rules, and of a summary of the final EIS, are available at park visitor centers or by calling (307) 344-2013.

The goal for Yellowstone wolf recovery is to establish 10 packs of wolves reproducing in the Greater Yellowstone area for three consecutive years by the year 2002.

The plan is to place about 15 wolves from Canada in Yellowstone each year for 3-5 years. Each group of wolves will be allowed to acclimate to their new surroundings in Yellowstone for several months before being released into the wild. The purpose of the acclimation period is to let them recover from the stresses of being captured and moved, and to reduce the likelihood that wolves might travel widely or try to return to their former homes.

Wolves translocated to Yellowstone in January 1995 were captured near Hinton, Alberta. Following evaluation of potential impacts on wolf populations this year, we hope to capture and move wolves from northeast British Columbia to supplement the genetic diversity of the new population of wolves in Yellowstone, and to enhance the probability of reaching recovery goals. The gray wolves of western Canada are the same as those naturally recolonizing northern Montana, and that might have eventually reached Yellowstone on their own. They also feed primarily on the same prey that is abundant in Yellowstone—elk and deer.

Wild wolves are shy, and may become frantic if unable to retreat. For this reason, the acclimation sites are closed to the public when occupied by wolves. The areas are posted against entry, and patrolled regularly by rangers. While the wolves are temporarily penned, they are fed road-killed deer, elk, moose and bison.

From March through November, the movements of all three packs of wolves varied greatly. Some stayed relatively close to the pen sites, while others, at times, explored up to 50 miles from the release points, often over rugged, mountainous terrain. By mid-November, none of the wolves released in Yellowstone had come into conflict with livestock and all were using areas within Yellowstone National Park.

One wolf was shot outside the park in late April; the party responsible was prosecuted under the Endangered Species Act. Also in late April, the mate of this dead wolf gave birth to a litter of pups. This female and her pups were relocated back into their enclosure in order to assure their survival, and were then released in mid-October.

One of the other two packs also gave birth to one known wolf. Members of the third pack were very visible in Lamar Valley from May through the early days of July.

All released wolves are radio collared, and biologists monitor their movements from the ground and from aircraft as regularly as weather permits. Information gained from these monitoring efforts will enable managers to evaluate the success of this reintroduction effort, and to modify the effort in future years, if necessary. This reintroduction will provide valuable insights about how to restore wolves and other large canids into other habitats.

Continuing to capture, transport, and release about 15 wolves annually for at least another year or two is essential to ensure the success of the restoration effort. In the fall of 1995-96, one new acclimation pen was built, using surplus materials from the pens constructed in 1994-95. Another was disassembled and moved. Eventually, wolves may be released at sites located near large

groups of wintering ungulates in the Firehole River Valley and/or the Pelican Valley or southeast regions of the park. Prior to 1870, gray wolves were common in the northern Rocky Mountains, including Yellowstone. By the 1930s, government predator control programs had eliminated wolves from Yellowstone.

Restoring wolves to Yellowstone is in keeping with national park goals to perpetuate all native species and their natural interactions with their environment. As with other park wildlife programs, management emphasizes minimizing human impacts on natural animal population dynamics.

Once again the greater Yellowstone area has a nearly complete complement of the native wildlife found here long before Yellowstone became the world's first national park in 1872.



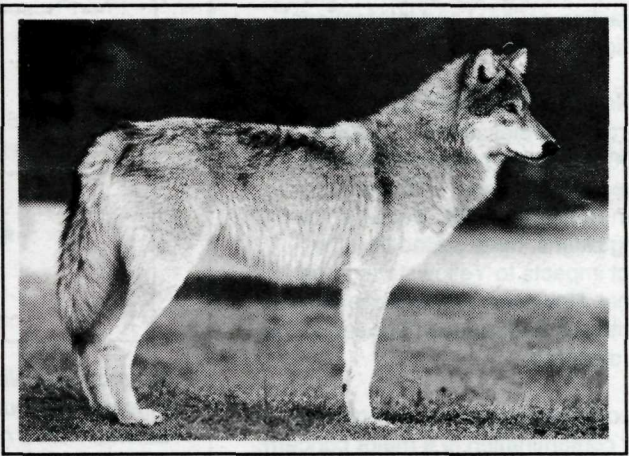
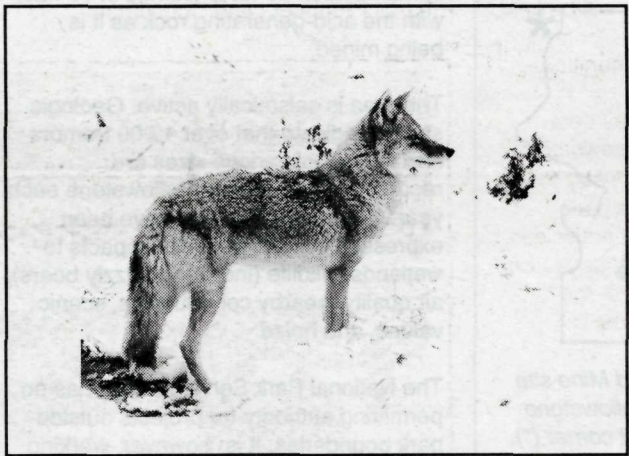
## Coyote or wolf?: identification facts

Unexpectedly, an estimated 3,750 park visitors viewed wolves in Yellowstone's Lamar Valley during the early summer of 1995. They observed wolves playing, resting, killing elk, and interacting with grizzly bears, coyotes, and bison. Lamar may again be a good place to see wolves this winter.

It can be difficult to distinguish between coyotes and wolves. In general, wolves are much larger than coyotes. The wolf track printed here is actual size; tracks can be even larger. The legs and muzzle of a coyote are particularly delicate in appearance; the legs of a wolf appear much longer in proportion to its body. Coyotes are rarely pure black or white in color and are often light to dark gray with rust or brown. Both animals live in packs and can prey on small as well as larger animals, such as elk.

The National Park Service monitors wolf activity in Yellowstone. Wolf observation reports from park visitors play a major role in detecting wolves in the area. If you think you see a wolf-like animal, take detailed notes of your observation and your location, photograph or measure tracks if possible, and report your sighting to a ranger at the nearest visitor center.

For a look at mounted wolves, visit the second floor of the Albright Visitor Center in Mammoth Hot Springs.



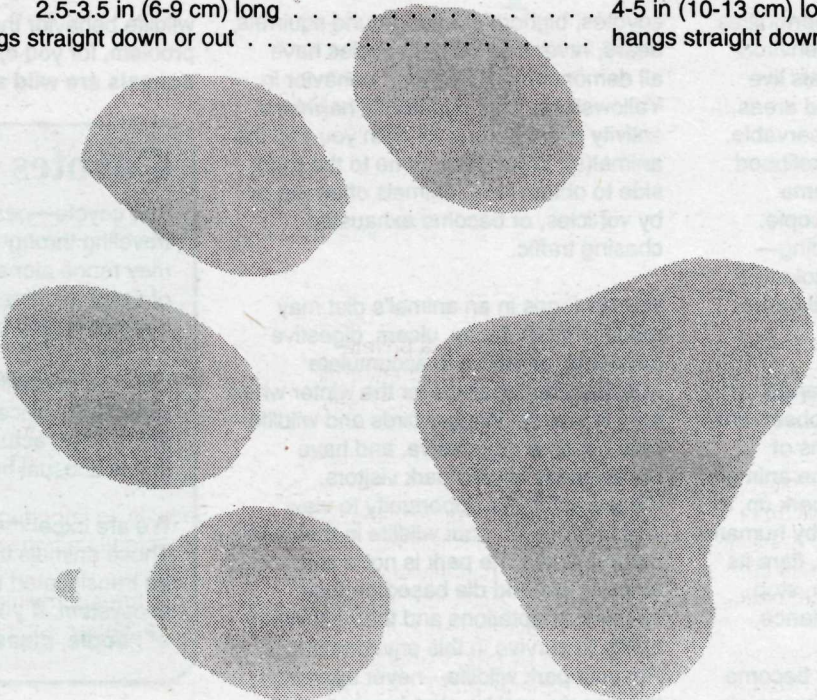
Photos—Monty Sloan, Wolf Park

SPECIES:	COYOTE ( <i>Canis latrans</i> )	WOLF ( <i>Canis lupus</i> )
APPEARANCE:	delicate	massive
HEIGHT:	16-20 in (0.4-0.5 m)	26-34 in (0.6-0.9 m)
LENGTH:	3.5-4.25 ft (1.1-1.3 m)	5-6 ft (1.5-6 m)
WEIGHT:	27-33 lbs (12-15 kg)	70-120 lbs (32-54 kg)
COLOR/COAT:	varies from gray to tan with rust; can be thick and bushy	varies from white to black to silvery gray; thick and bushy
EARS:	long and pointed	rounded and relatively short
MUZZLE:	long and narrow	large, broad and blocky
LEGS:	thin and delicate	thick and long
FEET:	small—2-2.5 in (5-6 cm) wide 2.5-3.5 in (6-9 cm) long	very large—3.5-4 in (9-10 cm) wide 4-5 in (10-13 cm) long
TAIL:	hangs straight down or out	hangs straight down or out

### Your opinion counts

Yellowstone is no stranger to complex, important, and often controversial issues.

If you have comments on issues which affect the park and/or the Greater Yellowstone Ecosystem, please send them to Superintendent Mike Finley, P.O. Box 168, Yellowstone National Park, WY 82190.





## Winter use concerns

As we described in the article on page 1, the rapid increase in winter visitor use is bringing a whole host of concerns to the managers and staff here at Yellowstone.

Through our cooperative efforts with Grand Teton National Park and the national forests that surround us, we will be looking more closely at a wide variety of problems. Some of these issues come from our own observations; most have been suggested by visitors like you. Some of the concerns that we face are:

**Overcrowding:** During peak use periods, parking areas, roads, warming huts, and restrooms are full, making it difficult for visitors to enjoy the areas.

**Visitor Conflicts:** Many winter visitors expect a quiet, serene experience, while others prefer a more social setting. Both groups come to enjoy the many natural features of the area, but there are conflicts where different uses exist (snowmobilers and cross-country skiers, for example).

**Safety:** Young or unskilled drivers can cause safety problems. Heavy use and warm weather make it impossible to keep roads and trails well groomed. In locations where snow machines and autos come in close proximity, safety concerns increase.

**Gasoline:** Gas storage capacity is limited in Yellowstone Park during the winter. Each year we come close to running out of fuel.

**Community Expectations:** Communities around the region have become increasingly dependent on winter use. Community expectations and marketing efforts assume continued and unlimited growth in winter recreation use. The number of businesses renting snowmachines and the number of snowmachines being rented is increasingly rapidly. These expectations and marketing efforts may be inconsistent with resource capacity.

**Resource Damage:** We are unsure of the effects of rapidly increasing winter

use on wildlife and other resources. Geothermal features in Yellowstone and tree plantations on the forests may be damaged by improper visitor use. Snowmobile exhaust and noise levels creates health concerns for employees.

**Employee Stress:** Staffing has not kept up with the rise in winter use, resulting in employee stress and reduced efficiency and service to visitors. Many park employees live in housing designed for summer-only occupancy. Operational funding is inadequate to meet demands. Also, the Forest Service receives no additional funding for construction, maintenance, housing or necessary patrolling for national and regional trails.

## Snowmobile studies underway this winter

### Snowmobile Emissions

One of the issues that concerns managers at Yellowstone and Grand Teton National Parks and the nearby national forests is snowmobile emissions. Snowmobiles are powered by two-stroke engines, in which oil is mixed directly with gasoline. The resulting exhaust is believed to contain significantly more carbon monoxide and particulate matter than a modern automobile.

The exhaust fumes from the machines create clouds of blue smoke where snowmobiles concentrate, especially in the communities, at park entrances, and along major travel corridors. The fumes create health and environmental concerns for residents, employees, and visitors who live, work, and play in these areas. These problems are particularly acute in Yellowstone National Park, where up to 2,000 snowmobiles enter the park daily.

To begin to address these concerns, the *Snowmobile in the Park Project* is underway in Yellowstone. The project is designed to provide industry and government with detailed laboratory and

field data on alternative fuels and lubrication oils for snowmobiles. This project will provide information on emissions from snowmobiles, including air toxics. These alternative fuels and oils are expected to reduce pollution, color, and visible smoke caused by snowmobiles.

The alternate fuels include biomass-derived (grain) ethanol blend, along with biodegradable lubrication oils, such as esters of animal and plant fats and their derivatives (for example, CONOCO's Bio-Synthetic 2-Cycle oil). The fuels and oils will be tested at the Southwest Research Institute. Products that reduce emissions and health concerns, show increased biodegradability and efficiency, and meet manufacturers specifications will be field tested in Yellowstone and in Montana and Wyoming gateway communities.

The National Park Service has been working cooperatively with snowmobile manufacturers and the oil industry to address these concerns. The park believes that concerns about emissions, noise, and safety equipment need to be addressed at their source, with the manufacturers of snowmobiles.

Numerous parties have been invited to participate in the *Snowmobile in the Park Project*. These include:

U.S. Department of Energy  
Montana Department of Environmental Quality  
U.S. Department of the Interior  
National Park Service,  
Yellowstone National Park  
National Park Service,  
Air Resources Division  
International Snowmobile Manufacturers Association  
CONOCO, Inc.  
Wyoming Department of Commerce  
West Yellowstone Chamber of Commerce  
Ethanol Producers and Consumers of Montana

Renewable Fuels Association  
Montana Snowmobile Association  
International Association of Snowmobile Administrators

### Groomed Roadways

This winter, another project will evaluate the effect of snowmobiles and snowcoaches on the groomed road surfaces. The project will be conducted several times throughout the winter, between Old Faithful and Madison Junction, both on the Old Freight Road and on the main Grand Loop Road. Snowmobile and snowcoach traffic will be separated so that the effects of each type of vehicle can be compared.



NPS file photo

## Grand Teton information

### Visitor Centers and Activities

The Moose Visitor Center in Grand Teton National Park is open daily 8:00am-5:00pm, except Christmas Day. Services include information, audiovisual programs, exhibits, raised relief map, permits, and publication sales. Free ranger-led snowshoe hikes (reservations required, snowshoes provided) are given from late December to mid-March.

The Information Station at Flagg Ranch will be open daily (except Christmas Day) from mid-December to mid-March.

Park activities include snowmobiling in designated areas, cross-country skiing, and snowshoeing.

### Grand Teton Roads

Although U.S. Highway 89/191 in Grand Teton National Park remains open through the winter, adverse weather can cause temporary closures.

**For detailed road, ranger-led program or other information, please call (307) 739-3399.**

### National Elk Refuge

Established in 1912, the National Elk Refuge maintains a winter range and supplemental feeding area for 7,500 elk. Visitors can ride horse-drawn sleighs through the elk herd within the refuge near Jackson. For information on these sleigh rides, call (307) 733-9212.

## Figuring out entrance fees

Legislation passed by Congress in 1988 raised the ceiling on entrance fees charged at Yellowstone and Grand Teton National Parks. Entrance fees are now \$10 for a private, noncommercial automobile and \$4 for each visitor (ages 17 to 61, inclusive) entering the park by snowmobile, motorcycle, bus, bicycle or on foot. A maximum of \$10 will be charged for an immediate family residing in the same household. These fees are good for a seven day pass to both parks.

Also available for \$15 is a parks-specific pass to Yellowstone and Grand Teton, valid for one year from date of purchase. The \$25 Golden Eagle Passport, valid

for one year from date of purchase, allows the permit holder and accompanying passengers in a private noncommercial vehicle to enter all parks which charge entrance fees.

The Golden Age Passport (for those U.S. residents over 62) can be obtained for a one-time \$10 fee. And the Golden Access Passport is still offered free of charge to qualifying individuals with special needs. These special passes admit the holder and accompanying passengers in a private, noncommercial vehicle to national parks plus a 50 percent reduction in camping fees.

## Some snow facts

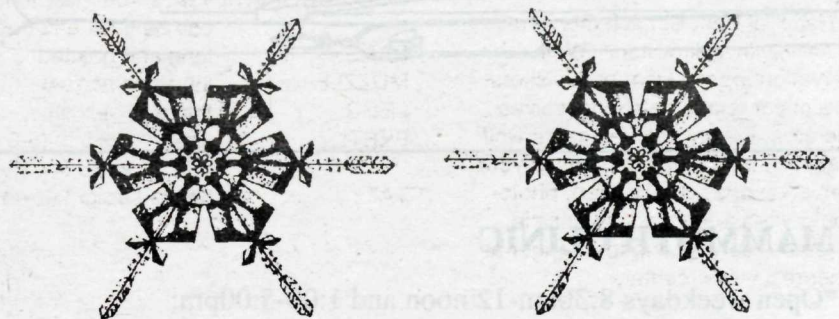
Ten percent of the earth's surface is covered with snow or "old snow" (ice). This is about 48 million square miles. In winter months more than 20% and up to 50% of the earth's surface is snow and/or ice. This snow covering is the greatest source of fresh water for humans.

When we fight snow, try to overpower it, ignore its dangers, we suffer. When we understand it, adapt to it, it becomes a source of pleasure and an ally.

Snow is an important economic force, both positive and negative, including effects on recreation, tourism, snow removal and insurance.

There are approximately one million snow crystals in a space measuring two feet by two feet by ten inches.

Snow crystals are all different but have enough similarities that they can be classified into certain shapes or types.





# Yellowstone's weather—predictably unpredictable

Visitors to Yellowstone National Park may be surprised to encounter "winter" weather any time of year. If unprepared, the consequences range from uncomfortable and inconvenient to life-threatening. During the coldest months, wind and snow can kill if rules of nature are ignored and protective clothing is not worn. The information presented here describes the "normals" and extremes of Yellowstone's year round climate and may be used as a guide in planning a visit to the park. Obtain information on current weather conditions and forecasts at visitor centers or ranger stations when planning outdoor activities.

Weather observations were started at Yellowstone National Park Headquarters—Mammoth Hot Springs—by U.S. Army personnel in January 1887; a Weather Bureau station was established in 1903. The observation site is located in the extreme northern part of the park on the mountain slopes above the Gardner river. Mountains to the east, south, and west rise 2,000 to 3,000 feet higher than the valley. The station itself, being at 6,241 feet above sea level, is lower than most of the park, which varies from 7,000 to 8,500 feet, with several ridges and peaks going up to 11,000 feet or more.

Because of the lower elevation and mountain barriers which trap moisture-laden air at this headquarters site, temperature will average about five degrees warmer and precipitation less than at other locations in the park. The valley location is also favorable for lighter winds.

In summer, a general rule is that the higher the elevation, the cooler the

temperatures and the greater the moisture and shower activity. In winter, precipitation is heavier at the higher elevations and in the southern portion of the park; the coldest temperatures occur in the mountain valleys.

Summer nights are invariably cool, and temperatures drop into the 30s and 40s on the average at most places before sunrise. The lowest recorded temperature during the summer is 9 degrees, on August 25, 1910 at Canyon.

are well below zero and all areas of the park have recorded at least -40 degrees at some time. The lowest recorded temperature is -66 at the West Yellowstone station on February 9, 1933. On the other hand, there are occasional mild periods during the winter when daytime temperatures reach well up into the 40s.

Annual precipitation varies from an average of just under 14 inches at the Lamar Ranger Station in the northeast portion of the park to around 38 inches at Bechler Ranger Station in the southwest corner. For most places at the lower elevations, June is the wettest month with averages ranging from two to three inches.

Snowfall is quite heavy over the mountains. For most of the park which lies between 7,000 and 8,500 feet, annual snowfall averages close to 150 inches. At higher elevations, amounts are normally well over 200 inches annually, and in some locations, over 400 inches. Of course, amounts vary from year to year. Occasionally during summer, cold air from western Canada will invade this area, causing snow. While not common, there are records of several inches in the summertime.

Yellowstone's weather is well known for its unpredictability and sudden changes. Be prepared for a range of conditions, especially if you will be out for several hours or overnight. See the park map on page 12 for locations of warming huts and phones. Careful, thorough pretrip planning is the key to an enjoyable winter visit to Yellowstone.

Wind chill chart

Estimated Actual Thermometer Reading, °F													
Wind Speed in MPH	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60	
Equivalent Temperature, °F													
Calm	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60	
5	48	37	27	16	6	-5	-15	-26	-36	-47	-57	-68	
10	40	28	16	4	-9	-21	-33	-46	-58	-70	-83	-95	
15	36	22	9	-5	-18	-36	-45	-58	-72	-85	-99	-112	
20	32	18	4	-10	-25	-39	-53	-67	-82	-96	-110	-124	
25	30	16	0	-15	-29	-44	-59	-74	-88	-104	-118	-133	
30	28	13	-2	-18	-33	-48	-63	-79	-94	-109	-125	-140	
35	27	11	-4	-20	-35	-49	-67	-82	-98	-113	-129	-145	
40	26	10	-6	-21	-37	-53	-69	-85	-100	-116	-132	-148	
Wind speeds greater than 40 MPH have little additional effect.	Little Danger (for a properly clothed person)				Increasing Danger				Great Danger				
Danger From Freezing Of Exposed Flesh													

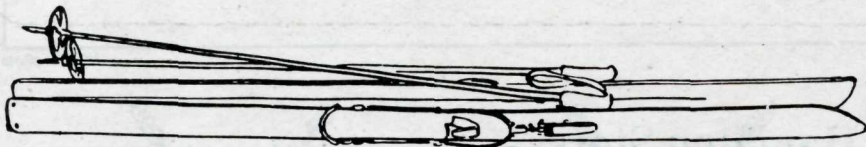
The average maximum temperatures for the park during the summer months are in the 70s. Readings occasionally reach the 80s, and rarely the 90s, at the lower elevations but there is no record as high as 100° F at any place in the park.

Winters are cold with temperatures well below freezing most of the time. In January, which is usually the coldest month, temperatures on average range from near zero at night to the middle 20s in the early afternoon. Values frequently

## Chambers provide gateway info

Facilities and services are also available in communities outside Yellowstone. For information, contact Chambers of Commerce in:

Gardiner, Montana	(406) 848-7971	Red Lodge, Montana	(406) 446-1718
Livingston, Montana	(406) 222-0850	Billings, Montana	(406) 245-4111
Bozeman, Montana	(406) 586-5421	Cody, Wyoming	(307) 587-2297
West Yellowstone, Montana	(406) 646-7701	Dubois, Wyoming	(307) 455-2556
Cooke City-Silver Gate, Montana	(406) 838-2272	Jackson, Wyoming	(307) 733-3316
		Idaho Falls, Idaho	(208) 523-1010



### MAMMOTH CLINIC

- \*Open weekdays 8:30am-12 noon and 1:00-5:00pm; closed Wednesday afternoons
- \*Full-time board certified family practitioner
- \*Minor x-ray and clinical laboratory procedures
- \*Prompt personal, family and emergency medical care
- \*For appointments, call (307) 344-7965
- \*For emergencies, dial 911



### YELLOWSTONE PARK MEDICAL SERVICES

We're there when you need us!

A division of West Park Hospital—Cody, Wyoming

## Expedition: Yellowstone!

The National Park Service continues to offer a curriculum for upper elementary grades called *Expedition: Yellowstone!*. Through this curriculum, students learn about the park either by studying it at their school or by combining classroom work with a trip (an "Expedition!") to Yellowstone. This residential program, taught by park ranger-naturalists, operates on a fee basis in the spring and fall.

Aimed at the 4th, 5th, and 6th grade levels, the curriculum materials consist of a teacher's workbook and a storybook entitled *Expedition Yellowstone, A Mountain Adventure*. For more information, please fill out the coupon below.

Please send me more information about *Expedition: Yellowstone!*

Name \_\_\_\_\_

School \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Phone: (\_\_\_\_\_) \_\_\_\_\_

Leave this coupon at any park visitor center or mail to: *Expedition: Yellowstone!*, Box 168, Yellowstone National Park, WY 82190

## Yellowstone Park Medical Services

West Park Hospital, Cody, Wyoming, through its Yellowstone Park Medical Services Division, has been offering medical care to Yellowstone's visitors, employees and residents since 1980.

A board certified family practitioner provides year-round health care to the Yellowstone Park community, including biweekly visits to Old Faithful. Experienced registered nurses and office staff complete the team offering courteous, professional family and emergency medical care.

In the summer, the operation grows to meet the needs of the park's increased number of visitors and the employees who serve them.

Outpatient services are provided at Lake Hospital and Old Faithful Clinic, as well as at Mammoth. Lake Hospital is also an acute care facility with ten inpatient beds, clinical laboratory, pharmacy, radiology and 24-hour ambulance and emergency services. The staff is assembled from highly qualified, experienced professionals from across the country.

For information on employment for the 1996 season (both professional and nonprofessional positions are available), send a resume to: Yellowstone Park Medical Services, 707 Sheridan Avenue, Cody, WY 82414 or call (307) 578-2461.



## ■ TW Recreational Services, Inc.— lodging concessioner

TW Recreational Services, Inc. has been Yellowstone's lodging concessioner since 1979. Summer operations include lodging facilities, five campgrounds including an R.V. Park, restaurants, cafeterias, snack shops, cocktail lounges, gift shops, cookouts, corrals, sightseeing services and a full service marina on Yellowstone Lake. Winter operations include lodging, restaurants, lounges, ski shops, snow-coach tours and snowmobile rentals.

TW Recreational Services, Inc. has decades of experience in providing lodging, food, gift shops, and other visitor services at national parks, state parks, state lodges and recreational areas. The company operates visitor facilities at Zion and Bryce Canyon National Parks in Utah, North Rim-Grand Canyon National Park in Arizona, Mt. Rushmore National Memorial in South Dakota, Everglades National Park in Florida, and Scotty's Castle, Death Valley National

Monument in California. During the past several years, TW Recreational Services, Inc. has provided millions of dollars in investment funding for new concession facilities at Yellowstone, Zion and Bryce Canyon, and improvements in concession facilities at Grand Canyon's North Rim and Everglades.

TW Recreational Services, Inc. hires more than 3,700 seasonal employees in Yellowstone National Park. For employment information and applications, please contact the address below.

The staff and management extend a warm welcome to Yellowstone visitors. We invite your questions and comments and will do our utmost to assure your visit to Yellowstone is a memorable experience. For information and reservations, contact TW RECREATIONAL SERVICES, Yellowstone National Park, WY 82190, (307) 344-7311.

## EXPLORE YELLOWSTONE

### This Winter Season



A winter visit to Yellowstone will provide you with an unforgettable vacation where cross-country skiing and snowcoach touring are without equal. Enjoy all that Yellowstone has to offer during this season... wildlife in abundance, frozen lakes, icy waterfalls, the Old Faithful Geyser, thousands of other thermal features, and much, much more.

For more information, contact any hotel front desk or activity desk, or call (307) 344-7311.



**TW RECREATIONAL SERVICES**  
Authorized Concessioner of  
the National Park Service  
AA/EEO

## USWEST COMMUNICATIONS

As provider of telephone service to Yellowstone, the world's first National Park, we wish you a safe and enjoyable visit.



Providing electricity to Yellowstone National Park since 1959. May your visit to Yellowstone be memorable.  
**The Montana Power Company**

## ■ Snowmobilers: YPSS offers services and advice

Prior to the invention and proliferation of the snowmobile, the roads of Yellowstone Park were seldom travelled in the winter months. The resident winterkeepers, a few hardy souls on skis and snowshoes or in snowplanes, and an occasional ranger were about the only people out there among all of the winter wildlife and scenery. The tempo has changed over the past 15 to 20 years but the unique Yellowstone winter wilderness experience is still here.

Yellowstone Park Service Stations (YPSS) has offered basic services to snowmobilers in Yellowstone since 1972. We encourage you to play it safe out there—Yellowstone can be very unforgiving in winter. Familiarize yourself with the location of warming huts, public telephones and other services in the park and know where you are as you travel.

Dress intelligently and carry a tow rope, a flashlight, matches, an extra drive belt and spare spark plugs. Fill your fuel tank when you have the opportunity to do so. Travel at least in pairs if you can and watch each other for signs of hypothermia. Let someone know what your travel plans are, especially if travelling at night, and check back in with them when you arrive at your destination. Be on the lookout for animals on the road. Do not approach wildlife closely. The energy an animal expends running from you may seriously affect the animal's prospects for survival.

We feel privileged to be able to live and work here in the winter. We hope you enjoy it as much as we do and will help us to preserve it.

## YPSS YELLOWSTONE PARK SERVICE STATIONS



Yellowstone Park Service Stations has been serving Yellowstone visitors since 1947, and since 1972 has served winter travelers. We offer quality petroleum products at four winter locations.

Snowmobile fuel is available at Canyon and Old Faithful December 8-March 10, at Fishing Bridge December 15-March 10, and at Mammoth Terraces December 20-March 3.

Drive Belts, Spark Plugs and Accessories are available at Old Faithful, Canyon and Fishing Bridge (Snowmobile repair services are **not** available)

Conoco, Master Card, Visa, Discover and American Express credit cards are accepted



## HAMILTON STORES INC.

EST. 1915  
YELLOWSTONE NATIONAL PARK

Serving the traveling public since 1915, Hamilton Stores, Inc., offers a wide variety of merchandise including Yellowstone souvenirs, gifts, film and photo supplies, souvenir T shirts and sweatshirts, winter accessories, and groceries and food, including hot and cold beverages, beer and liquor.

Mammoth General Store is open year round to serve the traveling public. Come in and meet Ted Lowe, our manager for over 20 years.

We are an authorized UPS shipping agent.

## ■ Hamilton Stores— oldest park concessioner

The 1872 Act that set the Park aside "for the benefit and enjoyment of the people, and the protection of the natural and scenic treasures therein" also granted leases for the various concessioners who served the public. For the first decade of the park's official existence, no lease to sell general store merchandise was issued. Then, in 1882, Henry E. Klammer applied for, and received, permits to provide fresh meat to camps and hotels, pasture and slaughter beef cattle, operate a dairy herd, and open a general store in the Old Faithful area of the park.

In 1915, a year after the Klammer General Store was purchased by Charles Ashworth Hamilton, horse transportation in the Yellowstone reached its zenith. Three thousand hayburners pulled Yellowstone wagons, coaches, surreys, freight wagons, and—grandest of all—double decker twenty-six passenger Tallyhos or stagecoaches. However, autos were allowed into the park for the first time that year, and Charles Hamilton quickly spotted the tire marks in the dirt. In the

next five years he acquired store concessions at Lake and Fishing Bridge, and built filling stations at each location. This was the start of what was to become the oldest privately/family owned concession in the National Park System, serving the traveling public for over 75 years.

Hamilton Stores invites you to visit its locations during the summer season for a bit of that history—most especially, the original store at Old Faithful (the Lower Basin Store) and the General Store in the Lake area. The upper store at Old Faithful and the Fishing Bridge General Store also convey rustic charm. The newest store, Grant Village General Store, was built and decorated with the craft of many Montana artisans. The general store at Mammoth Hot Springs, open year round, can also be seen in historic photos from around the turn of the century featuring horse-drawn stagecoaches and people in period dress.

Mammoth General Store remains open year round for your convenience.

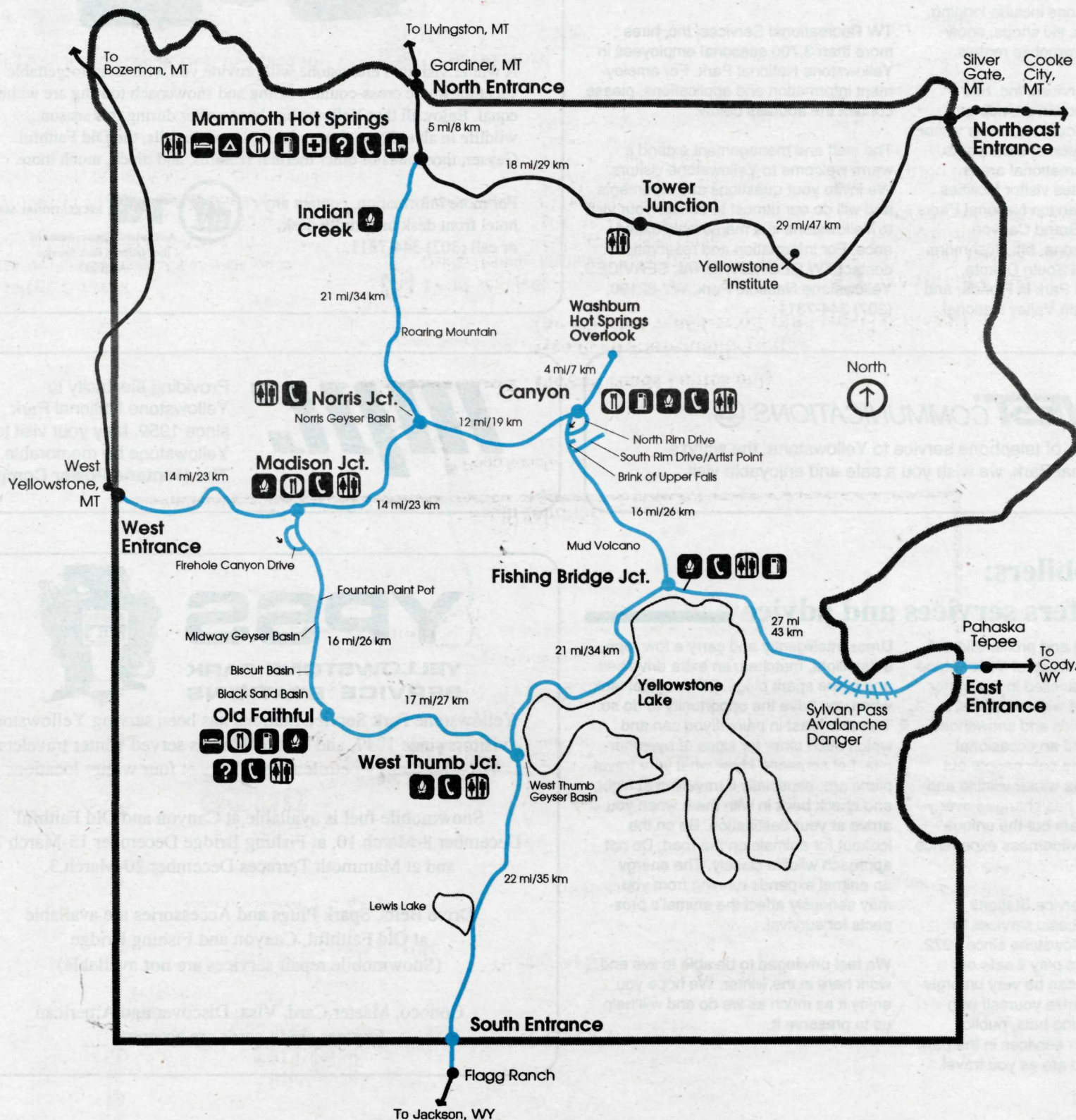


# Yellowstone National Park winter facilities

Park information (307) 344-7381

TDD: (307) 344-2386

Emergency 911



**Plowed roads - autos only**

**Groomed snowmobile routes  
(no wheeled vehicles; off road travel is illegal)**

## **Visitor centers**

Mammoth Hot Springs: Open year round  
Old Faithful: December 8–March 10



**Warming huts:** December 8–March 10  
Indian Creek, Madison Junction, Old Faithful,  
West Thumb, Fishing Bridge, Canyon



**Lodging**  
Mammoth Hot Springs Hotel: Dec. 20–March 3  
Old Faithful Snow Lodge: Dec. 15–March 10



**Telephones**



## **Food service:**

Dining Rooms: Mammoth Hotel, Dec. 20–March 3  
Old Faithful Snow Lodge,  
Dec. 15–March 10

Snack Shop: Old Faithful Four Seasons  
Snack Shop, Dec. 9–March 10

Light Lunches: Mammoth General Store,  
Open year round

Snack Bars: Madison and Canyon Warming  
Huts, mid-Dec.–March 10



## **General store**

Mammoth Hot Springs - Open year round



## **Snowmobile fuel:**

Old Faithful, Canyon Junction: Dec. 8–Mar. 10;  
Fishing Bridge: Dec. 15–approx. March 10;  
Mammoth Hot Springs: Dec. 20–March 3



## **Campground**

Mammoth Hot Springs—Open year round



## **Clinic**

Mammoth Hot Springs—Open  
weekdays 8:30am–12 noon and 1:00–5:00pm;  
closed Wed. afternoons; phone (307)344-7965



## **Restrooms**

Dates subject to change due to weather conditions and/or resource management concerns.

TW Recreational Services, Inc. also offers full service ski shops, guided ski tours, skier shuttles, and snowcoach tours at Old Faithful and Mammoth, and snowcoach tours/transportation out of West Yellowstone. Snowmobile rentals, guided sightseeing tours, ice skate rentals, and hot tub rentals are also available at Mammoth. Dinner reservations are required; call (307) 344-7901. Reservations are strongly recommended for lodging and snowcoach tours. **For TW information and reservations, call (307) 344-7311.**



This map courtesy of Conoco -- providing petroleum products since 1917...

All service stations in Yellowstone offer environmentally sensitive fuels, specially formulated by Conoco to reduce hydrocarbon emissions and decrease other pollution-related problems.