



The Tahoma News

July 1 – September 1, 2014

Discover Rainier: Off the Beaten Path



Wonderland Trail hiker at Stevens Creek along the bottom of Stevens Canyon.

If you are in the park on a busy day, you may want to explore less-visited areas to escape the biggest crowds. In taking the extra time to seek out these special places, you can immerse yourself in an old growth forest, reflect next to a cascading waterfall, hike in virtual solitude, or just relax, take in the view, and reconnect with nature. No matter where you go in the park you will find spectacular scenery and a multitude of recreation opportunities.

Interested in Old Growth Forests?

Visit Ohanapeosh via State Route 123 to explore lush old growth forests of Douglas fir and western red cedar. There is also a self-guiding nature trail behind the visitor center that leads past hot springs and the site of an early resort. Explore the old growth forest west of Longmire on the short Twin Firs Trail. Start your hike at the interpretive exhibit on Nisqually to Paradise Road (State Route 706).

Continued on page two

Nisqually Road Work Ahead

A road well-travelled aptly describes the historic Nisqually to Paradise Road. It is the most common entry to popular destinations in Mount Rainier National Park. Like most roads that you travel, it too requires maintenance and periodic repairs.

The road continually endures impacts from thousands of cars, buses, and RVs. It sustains damage from nature's forces: snow, freezing and thawing, rain and more snow; fallen trees and the river meandering too close. Improvements to the road will preserve its integrity as a popular scenic drive and provide continued safe access for years to come.

Continued on page seven

Road and Trail Construction



Nisqually Road

Due to rehabilitation of the road between Nisqually Entrance and Longmire, road conditions will constantly be changing throughout the summer. With heavy equipment, and people working on this scenic, narrow road, the possibility for accidents increases. No one wants you to be the cause or the victim.

Safety guidelines to follow:

- Simply, slow down.
- Avoid passing at any time.
- Blind curves are everywhere limiting your sight distance.
- Driving in the wrong lane to avoid uneven surfaces is dangerous.
- Follow instructions from flaggers, pilot cars, and law enforcement.
- Don't get out of your vehicle when stopped.
- If you pull into a turnout while following a pilot car and all the vehicles in that line have passed, wait for the next pilot car going your direction, otherwise you could find yourself in on-coming traffic or possibly head-on with construction machinery.
- Large machinery and heavy loads use the other lanes. Doing something other than following instructions could put you in grave danger.

State Route 410

This summer the Washington Department of Transportation is conducting rock scaling outside of the park, east of Chinook Pass.

During construction, drivers will experience two to four hour delays on weekdays during daylight hours.

Check WSDOT's construction web page for weekly impacts at <http://www.wsdot.wa.gov/>.

Paradise Trail Construction

Portions of the Skyline and Waterfall trails are undergoing much needed repair this summer and fall. Detours around construction areas will mainly be in place weekdays. Every effort is being made to open the trails on weekends.

See page four for more information on this project.

Welcome!

Look about you on a busy summer day at Paradise or Sunrise and you will see people from all walks of life. As shared public spaces and gathering places, our national parks serve as important and tangible symbols of democracy and the democratic process—common ground created, held, and protected in trust for the common good.



**Superintendent
Randy King**

Keeping common ground requires a renewing commitment from one generation to the next. The park we use and enjoy today is a gift from those who came before us. It also represents a substantial public investment, accumulated since the park's creation in 1899. The current replacement value of everything built in the park—all of the roads, trails, buildings, utilities and related infrastructure—was estimated at just under one and a quarter billion dollars in 2013.

At this and other national parks, we're falling short in our ability to maintain the infrastructure that supports public access and use. There's simply not enough money. And so, choices are made on how to do the most good with the funding that is available. This summer, you'll encounter one such choice if you drive the Nisqually Road between the entrance and Longmire. The road is being rehabilitated and made more resilient to flood events, as new power and telecomm utilities are also installed. Over the next several summers the entire roadway to Paradise will be restored. This project is funded by federal transportation dollars and supported by park entrance fees.

Please consider this and other projects underway in the park this summer as a way of honoring our commitment to the next generation of visitors to Mount Rainier.

Thank you for visiting Mount Rainier!

*Randy King
Superintendent*

Wilderness Junior Rangers!



Junior Rangers: Celebrate the 50th Anniversary of the Wilderness Act by completing your own, free Wilderness Explorer book. Pick one up at a visitor center while supplies last.

Inside this Issue

- What You Need to Know ... 2-3
- Hiking & Climbing ... 4-5
- Roads, History, Games & more ... 6-7
- Wilderness & Climate Change ... 8-9

- Park Partners & Volunteers ... 10
- Interpretive Programs ... 10-11
- Facility Hours & Information ... 12
- Campgrounds ... 12



National Park Service
U.S. Department of the Interior

Mount Rainier National Park

Superintendent
Randy King

Mailing Address
55210 238th Avenue East
Ashford, WA 98304

E-mail
MORAInfo@nps.gov

Park Headquarters
(360) 569-2211
(360) 569-2177 TDD

Lost and Found
(360) 569-6608

Your entrance fees at work!
The *Tahoma News* is printed quarterly with Federal Lands Recreation Enhancement Act funding.

Websites
Mount Rainier National Park: www.nps.gov/mora
North Coast and Cascades Science & Learning Network: <http://nwparkscience.org/>

Official Social Media Sites
Facebook: www.facebook.com/MountRainierNPS
Flickr: www.flickr.com/groups/MountRainierNPS
Twitter: www.twitter.com/MountRainierNPS
YouTube: www.youtube.com/MountRainierNPS



EXPERIENCE YOUR AMERICA™

Discover Rainier: Off the Beaten Path

Continued from page one



Take an easy hike to spectacular Silver Falls near Ohanapecosh Campground.

Wild for Waterfalls?

Then the east side of the park via State Routes 123 and 410 is the place to go. The powerful Silver Falls near Ohanapecosh is only a 0.3 mile hike from State Route 123 or you can take the 1.3 mile trail from Ohanapecosh Campground. For those who like to hike, take the East Side Trail to one or all of the many waterfalls dotting the route. Start off of State Route 123—park at a small pullout 0.5 mile south of Deer Creek—or at the Grove of the Patriarchs on Stevens Canyon Road.



Longmire's historic wooden suspension bridge

Are You a History Buff?

If so, then Longmire on Nisqually Road is the place to visit. The Longmire Museum is the starting point for the Longmire Historic District Walking Tour. Take the self-guiding tour of the historic district to get a taste of early National Park Service rustic architecture. Follow the Trail of the Shadows to learn about the park's first homestead and resort.



Watch for ancient andesite columns along Sunrise Road.

Is Geology Your Interest?

Then drive three miles to the end of Westside Road near the Nisqually Entrance to view the dramatic results of flooding and rockfall. You may even see a mountain goat gazing down at you from a cliff face high above! For great views of lava layers, glaciers, and a glacially carved canyon, stop at one of the first pullouts on Ricksecker Point Road off Nisqually Road. Drive the Sunrise Road to view columnar andesite columns that formed when the toe of a lava flow cooled rapidly when it flowed against glacial ice.

Prefer Uncrowded Trails?

Many trails leave from the Reflection Lakes area on Stevens Canyon Road including the Lakes, High Lakes, Mazama Ridge, and the Wonderland trails, with the Snow and Bench Lakes Trail located in a pullout just down the road to the east. Another



Enjoy hiking among ancient trees and past numerous waterfalls on the Eastside Trail.

great area for trails is on the east side along State Routes 123 and 410. From south to north you will find Silver Falls, Three Lakes, East Side, Shiner Peak, and Crystal Lakes trails to name a few. Trails in the Mowich Lake area lead to subalpine lakes and amazing meadows.



Take in the unsurpassed view of the mountain from Reflection Lakes!

How about Subalpine Meadows and Lakes?

For an outstanding wildflower meadow experience highlighted by beautiful lakes, try Reflection Lakes off Stevens Canyon Road, Mowich Lake via State Route 165, or Chinook Pass and Tipsoo Lake on State Route 410. In mid-summer the meadows should be bursting with color, providing a great backdrop for these tranquil lakes set in glacially carved basins.



A visit to Mowich Lake in the northwest corner of the park is worth the drive.

Did You Bring a Picnic?

At Ohanapecosh off State Route 123 stop at the picnic area adjacent to the campground. Visit the Box Canyon Picnic Area just west of Box Canyon itself. Be sure to stop at the latter for a look at the Cowlitz River, 180 feet below, as it cuts a deep slot into bedrock. From the Tipsoo Lake picnic area off State Route 410 you'll have a great view of the meadows surrounding the lake. Picnic at Mowich Lake via State Route 165 and admire the colorful subalpine wildflowers surrounding the deepest and largest lake in the park.

Connecting Parks, Science and People

By Dr. Jerry Freilich, North Coast & Cascades Science Learning Network Coordinator

Quietly and discreetly, a great deal of science is done each year in our national parks. The National Park Service monitors ecosystem health and investigates sensitive plants and animals to improve management. Scientists from outside agencies and universities do their own research, using the parks as "controls" to compare with more heavily impacted areas.

The North Coast & Cascades Science Learning Network (SLN) is an organization within the northwest national parks created to encourage research in the parks and to disseminate scientific information. The "Network" serves all eight National Park Service sites in the Pacific Northwest and operates a science information website <http://www.nwparkscience.org>. The SLN website supplements the Service's own sites at each park and features in-depth science information about park resources. The site has two-three page "Resource Briefs" on a diversity of topics and a series of "Science Minute Videos" <http://www.nwparkscience.org/video>. Each video is about four minutes long highlighting both the science work itself and park scientists who do it. Have a look at these wonderful short films and send us your comments.

The SLN serves Mount Rainier, Olympic, North Cascades, and five smaller, historical sites in Washington and Oregon. The SLN also provides funding and support for graduate research and special projects. Please contact the SLN's director, Dr. Jerry Freilich, jerry_freilich@nps.gov, based at Olympic, for additional information.

Parking in Paradise



If you are visiting Paradise on a nice day be prepared for heavy traffic, busy parking lots, and pedestrians on the roadway. Due to the popularity of the Paradise area, visitors are asked to park their vehicles in certain lots depending on the intent of their visit and the type of vehicle they're driving. Please drive courteously and help improve traffic flow by following these guidelines:

- Parking in the upper Paradise lot, adjacent to the Jackson Visitor Center, is intended for short-term visitors and is limited to two hours. This lot is generally full by 11:00 am. Disabled visitors with a valid disabled parking permit may park in the upper lot with no time

restriction; disabled-accessible trailheads are available near the visitor center and the Paradise Inn. Paradise Inn overnight guests may also park in the upper lot during their stay.

- Parking in the lower Paradise lot is intended for visitors staying longer than two hours, for those hiking in the Paradise area, and for backcountry campers and climbers with a valid backcountry permit. When the upper Paradise lot is full, short-term visitors may also use the lower lot.
- Additional parking for long-term and overnight visitors is available along the one-way Paradise Valley Road, east of the upper Paradise lot.

Parking can be difficult to find on sunny summer weekends at Paradise, Sunrise, Grove of the Patriarchs, and at trailheads between Longmire and Paradise. To avoid congestion, visit these areas on weekdays, arrive early, and carpool.

- Motorhomes, RVs, and vehicles towing trailers must park along the Paradise Valley Road, east of the upper Paradise lot.
- The Paradise Shuttle is not operating this season due to funding.

How Far Is It?

One Way Driving Times & Distances

| Road | Distance | Time |
|---|----------|---------|
| Longmire to Paradise | 12 miles | 25 min |
| Paradise to Ohanapecosh via Stevens Canyon Rd | 23 miles | 45 min |
| Ohanapecosh to White River Entrance | 18 miles | 30 min |
| White River Entrance to Sunrise | 13 miles | 45 min |
| White River Entrance to Carbon River via Enumclaw | 61 miles | 2 hrs |
| Longmire to Carbon River via Eatonville/Orting | 80 miles | 2.5 hrs |
| Longmire to Mowich Lake via Eatonville/Orting | 89 miles | 3 hrs |

Park Notices and Safety Information

Mount Rainier National Park was established in 1899 to preserve the natural and cultural resources in this area and to provide for public benefit and enjoyment. To protect yourself and your park, please follow these rules.

Accessibility

Most comfort stations, visitor centers, picnic areas, and designated campsites are accessible or accessible with help for wheelchair users. Accessible lodging is available inside the park and in local communities. In the Jackson Visitor Center at Paradise, the audiovisual programs are captioned; assistive listening devices are available for the park film; an audio described tour of the exhibits is available; and the building and exhibits are accessible to wheelchair users. The Kautz Creek Boardwalk Nature Trail is accessible in summer. An accessible trail leads to the base of the Paradise meadows and a portion of the trails at Paradise are accessible with help. Inquire at the Jackson Visitor Center for more information.

TDD: (360) 569-2177

Please Recycle!

Mount Rainier National Park has been recycling since the late 1960s. We recycle aluminum cans, plastic, glass, office paper, mixed paper, cardboard, scrap metal, used oil, batteries, and a number of other items.

We also purchase recycled plastic products such as plastic bags, picnic tables, and plastic lumber; paper products made of pre- and postconsumer recycled paper; automobile products; and other products.

Be part of the effort! Please deposit aluminum cans, plastic bottles, and glass in the recycle cans provided.

NOTICE: Marijuana is Illegal in Mount Rainier National Park

While limited recreational use of marijuana is now legal in Washington State, possession of any amount of marijuana or other illegal drugs remains illegal in Mount Rainier National Park, surrounding national forests, and all federal lands.

Don't Be A Victim!

Burglaries have recently occurred at numerous trailheads and parking areas in the park. Those responsible for the crimes were investigated, arrested by Mount Rainier rangers and National Park Service special agents, and convicted in court. However, these convictions will not necessarily end the problem of car burglaries in the park.

Follow these simple guidelines to avoid becoming a victim of future car break-ins:

- Do not leave any valuables in your vehicle, even for a short time.
- Do not leave bags, packs, or purses, that look like they could contain valuables visible in your vehicle.
- If you must store any personal items in the trunk of your car, do so before you arrive at your destination. You may be being watched at the trailheads and parking lots.
- Immediately report all suspicious activity you observe at or around parking lots or along roads to a park ranger.

Firearms

The use of firearms is prohibited within Mount Rainier National Park. Also, federal law prohibits firearms in certain facilities in this park; those places have signs at public entrances. People who can legally possess firearms under federal, Washington State, and local laws may possess them in the park.

Fires in the Park

Make fires only in a fire grill. Collecting firewood is prohibited. See page twelve for firewood sales in the park.

Wildlife

Do not feed, approach, or disturb the wildlife.

Bikes in the Park

Bicycle only on roads, not on trails. Mountain bikes are permitted on Westside Road and the Carbon River Road, but not on trails.

Camping

Camp in designated campsites only. Sleeping in vehicles outside of campgrounds is not permitted.

Fishing & Boating

A license is not required for fishing, but certain park waters are closed or open to fly fishing only. NOTICE: Mercury has been detected in park fish.

Motorized boating is prohibited in the park. Non-motorized boating is permitted on all lakes except Frozen Lake, Reflection Lakes, Ghost Lake, Shadow Lake, and Tipsoo Lake.

Pets and Service Animals

Pets must be on leashes no longer than six feet and are not allowed in buildings, on trails, in off-trail or backcountry areas, or on snow.

Service animals individually trained to perform specific tasks are allowed on trails and in park facilities only if they are providing a service for a disabled person. Under the Americans with Disabilities Act (ADA), "therapy animals" providing emotional support do not qualify as service animals. These pets are prohibited on trails, in park buildings, or other non-motorized areas. Service dogs-in-training are not service animals under ADA, but are considered pets.

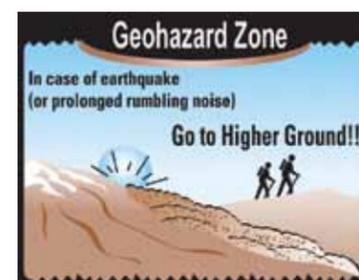
Permits

Permits are required for all overnight stays in the backcountry.

Mount Rainier: An Active Volcano

Active steam vents, periodic earth tremors, and historic eruptions provide evidence that Mount Rainier is sleeping, not dead. Seismic monitoring stations around the mountain should provide days or weeks of advance warning of impending eruptions. Other geologic hazards, however, can occur with little warning. These include debris flows and rockfalls.

The more time you spend in an area with geologic hazards, the greater the chance that you could be involved in an emergency event. While most people consider the danger to be relatively low, you must decide if you will assume the risk of visiting these potentially dangerous locations.



If you are near a river and notice a rapid rise in water level, feel a prolonged shaking of the ground, and/or hear a roaring sound coming from upvalley—often described as the sound made by a fast-moving freight train—move quickly to higher ground! A location 200 feet or more above river level should be safe.

Detailed information is available at park visitor centers or from scientists at the U.S.G.S. Cascades Volcano Observatory, 1300 SE Cardinal Court, Building 10, Suite 100, Vancouver, WA 98661, vulcan.wr.usgs.gov.

Knowledge and Safety: Keys to Great Hiking

With 280 miles of park trails, there are plenty of opportunities to be adventurous, explore, learn, and have fun hiking. Waterfalls, meadows, deep forests, and rugged highcountry await those who properly prepare for their journeys. Here are some important tips for all hikers:

- Talk with rangers about trail conditions, distances and elevations.
- Carry a topographic map.
- Know the weather forecast, and stay alert for changing conditions
- Be prepared by carrying the ten essentials.
- Choose appropriate outdoor clothing, footwear and gear.
- Whenever possible do not hike alone.
- Always tell someone of your travel plans so they can notify the park if you fail to return.

Pay Attention To The Weather

At Mount Rainier, the weather can change rapidly. Hikers who aren't prepared increase their risk of becoming lost or injured. Avoid problems: know and plan for Mount Rainier's changeable weather.

Crossing Streams Safely

Many hikers underestimate the power of moving water and some consider their former successful stream crossings a ticket to the other side. This may not be true. Regardless of your knowledge, skills, and experience use these pointers in making wise decisions when crossing a stream.

- Early morning when river levels are generally at their lowest is the best time to cross.
- Look for an area with a smooth bottom and slow moving water below knee height.
- Before crossing, scout downstream for log jams, waterfalls, and other hazards that could trap you. Locate a point where you can exit if you fall in.
- Use a sturdy stick to maintain two points of contact with the ground at all times.
- Unfasten the belt of your pack so you can easily discard it if necessary.
- Staring down at moving water can make you dizzy. Look forward as much as possible.



Steve Redman photo

Wilderness Camping

Wilderness camping permits are required for all overnight stays in the park's backcountry. Permits and backcountry information are available at all wilderness information centers and most visitor centers (see page twelve for locations and hours).

Although permits are free, there is an optional, fee-based reservation system for campers and climbers in effect May through September. Backcountry reservations are \$20 per party (one-12 people) for one to 14 consecutive nights.

Seventy percent of all backcountry sites and zones are available for reservation. Permits for the remaining 30 percent are issued on a first-come, first-served basis, no more than one day in advance of the start of the trip.

Paradise Trail Work

Paradise is one of the most scenic and heavily visited areas of the park. Visitors with many interests—hiking, photography, wildlife viewing, wildflowers, climbing—travel Mount Rainier's slopes on the network of trails surrounding Paradise throughout the snow-free months. While they are heavily travelled, it's the weather and other environmental conditions that take a toll on these trail located in one on the snowiest places on Earth.



This summer portions of the Skyline and Waterfall trails are undergoing much needed repair. The asphalt surface and some of the bridges and culverts are being removed and replaced.

A few tips to avoid having your hike affected by trail work:

- Sections of the Skyline and Waterfall trails will be closed weekdays.
- As possible, these trails will be open weekends.
- Watch for the occasional vehicle transporting materials on Paradise area trails.
- Follow detour signs to avoid having to backtrack at closures.
- Stop by the Paradise Jackson Visitor Center to pick up a Paradise area trail map and to check for the latest on closures and detours.

Please stay on trails while hiking in the park. Enjoy your visit to Paradise!

Climbing

Each year, approximately 10,000 people attempt to climb Mount Rainier. Nearly half reach the 14,410-foot summit. Climbing permits are required for travel above 10,000 feet and on glaciers. Climbing information—including fees, routes, and conditions—is available at the Paradise Climbing Information Center and other ranger stations. *Please obtain permits 30 minutes prior to ranger stations' closing times (see page 12).* Guided climbs and climbing seminars are available through:

- Alpine Ascents International (206) 378-1927
- International Mountain Guides (360) 569-2609
- Rainier Mountaineering, Inc. (888) 892-5462

Hiking the Muir Snowfield

The Muir Snowfield, a permanent field of snow, ice, and rock outcrops, is located north of Paradise between 7,000 and 10,000 feet in elevation. Thousands of people hike on the Muir Snowfield each year en route to Camp Muir. On a clear day, the hike is spectacular. But when the weather deteriorates, as it often and unpredictably does, crossing the Muir Snowfield can be disastrous.

- Avoid the snowfield in questionable weather, especially if you're alone or unprepared. Weather conditions can change suddenly and drastically.
- If you're ascending and clouds or fog start rolling in, turn around and head back to Paradise. If that's not possible, stop moving, dig in, and wait for better weather.
- Without a compass, map, and altimeter, it is extremely difficult to find your way to the trailhead in a whiteout. Carry these items and know how to use them.
- Do not descend on skis or a snowboard in limited visibility—you could become lost.
- When hiking to Camp Muir, be sure to carry emergency bivouac gear so that you can spend the night out if you have to.
- To protect fragile alpine vegetation, hike only on snow or official trails.

While it may be disappointing to abandon your hike to Camp Muir, remember that the snowfield will still be there in better weather.

| Easy & Moderate Hikes | | | | |
|--------------------------------|-------------------------------|---|---------------------|---|
| Area | Trail Name | Trailhead Location | Round-Trip Distance | Comments |
| Carbon River | Rainforest Nature Trail | Carbon River Entrance | 0.3-mile loop trail | Self-guiding trail through an inland temperate rainforest |
| Kautz Creek | Kautz Creek Viewpoint | 3 miles southwest of Longmire | 0.1 mile | Wheelchair-accessible boardwalk and viewpoint |
| Longmire | Twin Firs | 1.9 miles southwest of Longmire | 0.4-mile loop trail | Short hike in old growth forest. Limited parking |
| | Trail of the Shadows | Across from the National Park Inn | 0.7-mile loop trail | Good for children & evening strolls; meadow/mtn. views; east half of loop suitable for wheelchairs with assistance. |
| | Carter Falls | 2 miles northeast of Longmire | 2 miles | Moderate hike, climbs 500' up forested canyon to waterfall |
| Paradise | Nisqually Vista | Lower Paradise parking lot | 1.2-mile loop | Wildflower meadows, great views of Nisqually Glacier |
| | Skyline Trail to Myrtle Falls | Large stairway/ramp near visitor center | 1 mile | Suitable for strollers and wheelchairs (with assistance) |
| Stevens Canyon Road | Bench & Snow Lakes | 1.5 miles east of Reflection Lakes | 2.5 miles | Watch for bears in the meadows in late summer |
| | Box Canyon | 11 miles east of Paradise | 0.5-mile loop | View a deep, narrow canyon and glacially-polished rocks |
| Ohanapecosh | Grove of the Patriarchs | Near Stevens Canyon entrance | 1.2-mile loop | Old growth forest, ancient trees |
| | Silver Falls | Ohanapecosh Campground | 2.4-mile loop | Old growth forest, waterfall, river, suspension foot-bridge |
| Mather Memorial Parkway/SR 410 | Tipsoo Lake | Off SR 410, east of Cayuse Pass | 0.5-mile loop | Short trail around the lake, mountain views |
| Sunrise | Silver Forest/Emmons Vista | South side of parking lot | 2 miles | Glacier views at Emmons Vista Overlooks (0.5 mile one-way) |
| | Nature Trail | North side of parking lot | 1.5 miles | Wildflower meadows and great mountain views |



Daniel Keebler photo

A beautiful day on the mountain can turn into dangerous whiteout conditions in a matter of minutes. Knowing what to do and making the right decision can be the difference between life and death.

Hazards of the Season

Winter snowpack lingers late into summer on the mountain. As of June 6, almost 10 feet of snow is on the ground at the 5,000-foot elevation. Snow may be found covering portions of trails well into August. History shows that heavy snowpack conditions significantly increase search and rescue incidents that occur in the backcountry. Many early season hikers are not prepared for the route-finding challenges encountered by a lingering snowpack. Conditions change rapidly during the day and footprints in the snow quickly disappear. This has left many day hikers disoriented upon their return trip, expecting to simply follow their own tracks back to the snow-free trail. This results in many lost individuals, injuries, and fatalities.

Snow avalanches are common in early summer. The greatest danger to you is an avalanche that you trigger by skiing, snowboarding, snowshoeing, or climbing. Be prepared for travel in avalanche terrain. Carry a transceiver, probe, and shovel and know how to use them. Determine if the location you are traveling is avalanche prone. When in doubt, ask questions or don't go. Unstable snow may slide at any time—not just in winter! Remember, even small avalanches can be deadly.

Be aware that mountain weather changes rapidly. A pleasant outing can quickly be transformed into a survival ordeal. Having proper gear (adequate boots, ice axe, the ten essentials, etc.) is a must. Navigation in storm conditions can be extremely difficult. If you're ascending and clouds or fog start rolling in, turn around and head back to the trailhead. If that's not possible, stop moving, dig in, and wait for better weather.

Also consider the steep snow slopes, melt holes, thinning snow bridges, and other hazards that you may encounter, and be honest with yourself in assessing your skills and experience.

Be prepared for route-finding conditions. Trails may be snow-free at lower elevations but anticipate and prepare for snow at higher elevations. If you plan on retracing your route back to the trailhead consider using wands on snow-covered trails. Always carry a good map and compass, and actively use them on snow-covered trails. Also consider supplementing your map and compass with an external antenna GPS for best coverage beneath a forest canopy. Again, it is extremely important that you know how to use these tools.

Most importantly, plan your route ahead of time, have a backup plan, and never travel alone. When route-finding, note important landmarks. If the trail becomes difficult to follow, stop and find where you are on the map before continuing. If at any point you feel uncomfortable or unprepared, turn around.

If You See a Black Bear or a Mountain Lion

Mount Rainier National Park provides habitat for many animal species. Among the largest and most feared are the black bear and the mountain lion. Though you are not likely to see them, if you do meet one of these larger mammals, your best defenses are awareness and knowledge.

Watch them from a distance. Wildlife tend to have a "personal space" and if you enter that space they may become aggressive. The best way to avoid unwanted encounters is to be alert, and don't attract or surprise them. Watch for evidence of their presence such as scat and tracks. Bears commonly rip up logs for insects, and usually leave lots of scat around. Mountain lions cover their scat by raking dirt with their rear feet. Keep all food and attractants, including trash, securely stored and inaccessible to wildlife. Food conditioning, where animals associate people with food, is one of the leading causes of bears injuring humans.



Close Encounters With Black Bears

Although black bear attacks are extremely rare in the United States and have never occurred in this park, your safety depends mostly on your own actions. If you encounter a black bear, do not run, but back away slowly and leave the

area. A defensive bear will appear agitated and will often give visual and vocal warnings like swatting or stomping the ground, exhaling loudly, huffing, snapping teeth, or lowering the head with ears drawn back while facing you. This response may escalate to a charge. Bears respond to people in different ways—take time to understand the signals. Be aware of aggressive signals and know how to respond to prevent close encounters.

If Charged by a Black Bear

- Stand your ground and do not run.
- If the bear stops, slowly back away while talking, keeping the bear in view while leaving the area.
- If it continues, act aggressively, shouting and throwing rocks or sticks.
- If the bear attacks and you have food, distance yourself from the food.
- If the bear attacks and you do not have food, fight back aggressively. This is likely a predatory attack. The bear is treating you as prey.

Close Encounters With Mountain Lions

Mountain lions (also known as cougars) usually do not like confrontation. If you see one, give it plenty of space so it can get away. Never approach cougar kittens. Leave the area immediately.



- Do not run or turn your back on a lion.
- Gather children with adults. Quickly pick up and hold small children.
- Stand in a group with your companions.
- If the lion moves toward you, wave your arms and make noise. Make yourself look large, intimidating and in control: stand up tall, open your jacket, yell, throw things.
- Back away slowly while facing the animal.
- If attacked, fight back aggressively. Stay standing. Hit as hard as possible especially to the head. Use a stick or rock as a weapon. Throw dirt in the eyes. Protect your head and neck.

Report all bear and mountain lion sightings to a ranger.

Before you step off the trail...

... consider this: each step into a meadow crushes an average of 20 plants!



When exploring Mount Rainier's fragile meadows hike only on maintained trails or thick patches of snow.

Leave No Trace

Plan ahead & prepare
Travel & camp on durable surfaces
Dispose of waste properly
Leave what you find
Minimize campfire impacts*
Respect wildlife
Be considerate of others

*Fires are for emergency use only; they are not allowed in Mount Rainier's Wilderness

Keep Wildlife Wild

- Please don't feed the wildlife.
- Store your food in an animal-proof container or inside your car.
- Don't leave food, beverages, pet food, or toiletries unattended for any length of time.
- Clean up picnic areas after you eat.



Human food puts animals at risk and some die as a result. For example birds, like jays or ravens are effective nest predators—eating the eggs or young of other birds. By

feeding jays or ravens, visitors concentrate these nest predators near roads and trails and inadvertently contribute to the death of songbirds in the same area.

Feeding wildlife harms them in many ways. Beggar squirrels, foxes, deer, and jays learn to approach people and busy areas. They often get hit and killed by cars. Animals that become accustomed to humans and human food may also pursue and injure visitors. Biologists and rangers must intervene, with killing the animal as the last resort.

Carry the "10 Essentials" and know how to use them!

1. Map & compass
2. Sunglasses, sunscreen, & hat
3. Extra clothing (warm!) & rain gear
4. Flashlight or head lamp (extra batteries)
5. First aid supplies
6. Waterproof matches or lighter
7. Repair kit & tools (for gear)
8. Extra food
9. Extra water
10. Emergency shelter



Historic Roads To Exploring Mount Rainier

Early history suggests that local people found their way to the mountain, descending upon Longmire and Paradise, before there were roads. Visitation to the national park—designated as the nation’s fifth national park in 1899—climbed from 1,786 in 1906 to 15,038 four years later presenting an immediate need to construct roads. Today, with six entrances to the park, the roads bring more than 1.7 million visitors from around the world.

These roads are an important contribution to the Mount Rainier National Historic Landmark District. Landmark status is the highest level of recognition for historic resources, and preservation of historic roads.



Nisqually Road

Nisqually to Paradise Road The first route leading into the mountain was a rough trail constructed by James Longmire in 1884. The road ended at the present day Longmire National Historic District and was extended to Paradise as a foot trail.

Today’s road was engineered along much of the same route that Longmire used. It beckons people to visit meadows, waterfalls, and historic buildings. Very early morning or late evening travel along this road will help to avoid parking congestion and road construction. Early risers should watch for wildlife in the meadows below the Paradise Valley Loop Road and along the Trail of the Shadows in Longmire.

Westside Road Along with the Carbon River Road, the Westside Road was part of an early plan to develop a series of connecting roads that would circumnavigate Mount Rainier. It was referred to as the “Around-the-Mountain-Road”. The idea was eventually abandoned when steep terrain and floods continually challenged the efforts along both roads.



John Chao photo

Sunrise from Sourdough Ridge

Only three miles of Westside Road are maintained and open to vehicle traffic. The remainder continues as a hiking and mountain bike trail that crosses creeks and winds through the forest. Both the road and the trail are easy to access any time of day. Along the way, it will become very clear why completing and maintaining the road were considered unattainable.

Carbon River Road (Open only to pedestrian and mountain bike traffic.) Paralleling the Carbon River, this road is subject to the meandering whims and the fierce dynamic nature of the glacial river.

As one of the few remaining unpaved historic scenic parkways within the National Park Service, the Carbon River Road retained the original historic character of early park roads until 2006. That year the road suffered extreme flood damage thus is now open to vehicles only to the park boundary.

This pedestrian road provides daily access to several visitor destinations, including the Rainforest Nature Loop Trail and the Chenuis Falls picnic area. Due to very limited parking, an early arrival is recommended for more adventurous hikers and wilderness campers.

Mowich Lake Mowich Road branches off from SR165, the same highway used to reach Carbon River. It is unpaved after the first three miles and may be rough. Mowich Lake is the largest and deepest lake in Mount Rainier National Park. It is set in a glacial basin surrounded by fragile



Carbon River Rainforest

John Chao photo

northeastern portion of Mount Rainier leading to the highest elevation accessible by motor vehicles. Even though the historic name has given way to being called the White River Road and the Road to Sunrise, the road’s alignment is a reminder of its natural and cultural history.

“Sunrise”: the name is a clue to the most inspiring time of day to visit. The road provides access to White River Campground, the Wonderland Trail, and a number of backcountry trails. There are views of other significant mountains in the Cascade range, glaciers, crevasses, and subalpine meadows. Here, opportunities for photography, hiking, wildlife, and wildflower viewing are recognized as some of the best in the park.

Cayuse Pass to Tipsoo Lake This is technically part of State Route 410 that runs through the national park. Plan an evening visit to Tipsoo Lake where there are trails, mountain views, abundant wildflowers, huckleberries in season, lakes, and picnic tables.

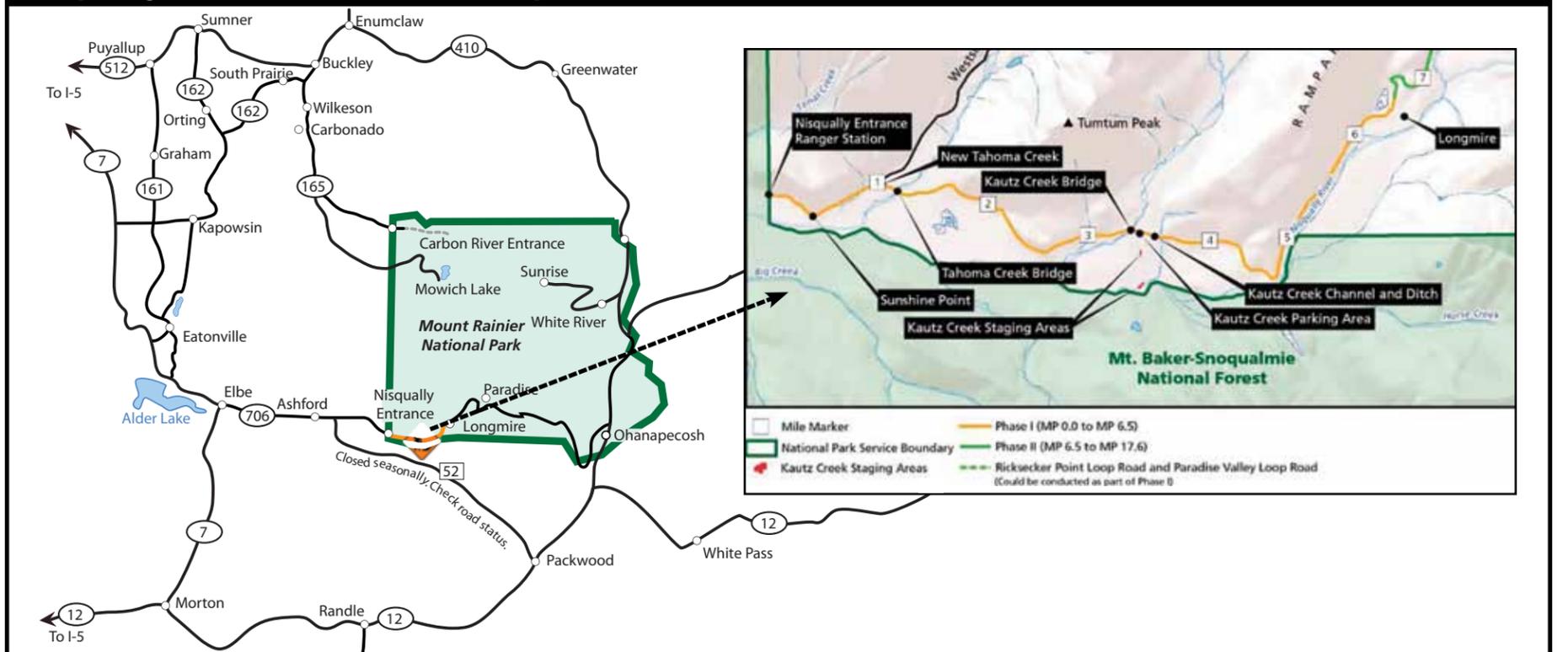


Martha Falls in Stevens Canyon

Stevens Canyon Road Construction on the last major new road built at Mount Rainier began in the 1930s. It took 24 years to complete the road, due in part to the interruption of World War II. The road was originally built to give park rangers and naturalists on the west side, quicker access to the popular east side destination of Yakima Park, known today as Sunrise.

A natural rock wall on the north aligns with an extensive steep valley to the south. With significant change in elevation the landscape offers canyons, rivers, waterfalls, and lakes. A morning drive from east to west provides unexpected mountain glimpses. Whereas, an afternoon drive west to east, has the mountain in your rearview mirror with a spectacular last look from the Backbone Ridge turnout.

Nisqually Road Construction Maps





Archaeologist Ben Diaz with a 1920s glass bottle found beneath the road with the "Whistle" logo.

History Buried Beneath the Road

Hidden beneath the lines and the asphalt on the Nisqually to Paradise Road are natural geologic timelines and artifacts. As the old layers of asphalt are removed and areas are trenched, stories of the past are exposed and recorded by archaeologists.

Ben Diaz, park archaeologist, has been on site during the rehabilitation of the Nisqually Road. Diaz commented, "During excavation activities two features contributing to the Longmire Historic District archaeological site were exposed. These include a structure that had been burned, and a trash pit likely associated with the old auto barn circa 1920."

Beneath all the historic findings are rounded rocks from ancient lahars. Diaz has also identified distinct ash layers from a Mount St. Helens eruption 3400 years ago and a layer that originates from Mount Mazama (now called Crater Lake) that erupted 7600 years ago. Surveys yielded eighteen new historic sites. Stone tool artifacts older than the 3400-year-old Mount St. Helens eruption were found in earlier excavations.

One of the historical sites along the current road is the first wagon road. It was built by James Longmire in 1893 and terminated at his Longmire Springs development. Surveys for today's road date to 1903.

Nisqually Road Work Ahead

Continued from page one



Taking advantage of optimal weather conditions, construction will continue throughout the summer months and into autumn as weather permits. Even though any traffic stop from the entrance to Longmire might be 20-minutes long, only 30-minutes total delay is expected. During this road rehabilitation driving conditions will continually change. Dips, loose gravel, bumps, holes and uneven surfaces will, in the end, give way to a smooth, uninterrupted drive.

Major construction components include in-ground utility work, replacement of the current road surface, cleaning and replacement of culverts, and subsurface reinforcement. Approaching the National Park Service's centennial, this effort is an important investment in Mount Rainier's next hundred years.

The National Park Service and the Western Federal Lands Highway Division are working together to ensure the safety and stability of the Nisqually to Paradise Road, and to preserve the road's historic character. Tucci & Sons from Tacoma, Washington was awarded the bid and has hired many local sub-contractors to complete various aspects of this road construction project.

Travel Bingo!

| | | | | |
|---------------------|--|--|--------------------------------|--------------------------------|
| B | I | N | G | O |
| Mountain Summit | Gray Jay | Wild flowers | Tree Stump | Flagpole |
| Deer | Trailhead | Waterfall | Arrowhead Sign | Lichen Hanging On a Branch |
| Moss on a Rock | Sapling (Young Tree) | FREE! Construction | Big Tree Wider Than 3ft | Sun |
| Park Ranger | Animal Sound Rabbit Rabbit Tweet Tweet | Steller's Jay | Creek | Pine cone |
| Fern | Glacier | Sign for Mount Rainier National Park | Chipmunk | Bridge |

How long since you last played Travel Bingo? This special edition will keep you on the lookout as you travel around the park. Cross off the items as you find them until you complete a vertical, diagonal, or horizontal row. Go ahead, be an overachiever and find all of the items!

Mount Rainier Places Word Search

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G | E | U | S | T | R | E | T | N | E | C | R | O | T | I | S | I | V | N | O | S | K | C | A | J | Z |
| O | D | C | A | R | B | O | N | R | I | V | E | R | L | C | A | R | T | E | R | F | A | L | L | S | A |
| H | U | G | O | A | F | C | K | A | E | P | E | L | C | A | N | N | I | P | C | A | T | O | P | S | G |
| S | C | A | U | Q | V | Y | O | M | J | I | B | E | O | G | S | C | O | U | W | T | M | V | K | O | R |
| K | A | E | P | S | E | H | C | A | N | E | E | T | H | F | G | M | M | O | M | S | U | M | R | E | O |
| B | L | E | C | A | J | B | V | I | W | E | S | I | D | A | R | A | P | P | T | P | E | A | T | S | V |
| O | E | W | S | X | E | D | A | C | R | F | V | T | G | B | Y | H | N | U | S | J | M | M | I | K | E |
| X | Y | R | T | Y | H | R | E | F | L | E | C | T | I | O | N | L | A | K | E | S | N | A | M | L | O |
| C | Z | F | V | C | T | D | E | W | S | X | Q | A | Z | M | L | P | N | K | R | O | B | J | C | I | F |
| A | T | W | I | N | F | I | R | S | G | O | C | O | U | G | A | R | R | O | C | K | V | G | H | U | T |
| N | P | O | U | I | R | U | Y | T | R | O | E | R | W | Q | A | S | D | F | A | G | H | J | K | R | H |
| Y | O | O | D | E | O | R | F | V | W | H | I | T | E | R | I | V | E | R | I | V | E | R | L | E | E |
| O | M | P | O | I | G | U | Y | H | J | A | T | S | I | V | A | T | L | A | B | V | B | N | M | V | P |
| N | L | K | J | H | I | G | N | C | D | N | M | K | J | N | I | B | G | T | M | R | F | F | V | I | A |
| T | I | P | S | O | O | L | A | K | E | A | C | P | W | L | A | R | X | S | U | W | E | D | C | R | T |
| R | A | C | U | I | E | R | M | E | I | P | S | G | A | D | H | F | K | U | L | M | C | N | B | Y | R |
| A | E | K | N | I | R | H | A | V | A | E | L | O | D | X | S | A | M | M | O | W | I | C | H | L | I |
| I | P | I | R | G | W | B | S | H | R | C | L | R | G | N | B | R | R | Y | C | F | R | S | S | L | A |
| L | X | N | I | D | G | N | R | B | N | O | A | W | F | E | G | D | I | R | T | R | A | P | M | A | R |
| L | N | L | S | N | K | P | T | T | A | S | F | I | L | O | N | G | M | I | R | E | A | T | N | U | C |
| O | F | R | E | T | R | V | Y | S | C | H | A | C | R | H | C | B | N | V | S | K | D | L | W | Q | H |
| O | C | R | P | T | J | C | Q | A | T | J | D | M | H | N | T | E | S | I | T | W | R | T | R | S | S |
| P | E | R | O | R | M | L | E | R | C | N | A | T | S | L | G | G | R | C | I | N | E | D | S | I | D |
| R | O | J | I | N | N | O | F | A | N | I | R | E | M | M | O | N | S | V | I | S | T | A | S | N | S |
| G | N | K | N | D | I | R | Y | D | R | G | A | L | A | G | U | E | D | E | M | N | B | R | N | O | T |
| C | L | M | T | E | C | T | B | R | L | L | N | O | S | S | K | Y | L | I | N | E | T | R | A | I | L |

Sharpen your pencil and get ready to search for the names of 27 park places! The answer key is located on page 9. Once you find all the names, see if you can find them on the map provided at the entrance station.

Alta Vista
Box Canyon Trail Loop
Camp Muir
Carbon River
Carter Falls
Columbia Crest
Cougar Rock
Emmons Vista
Grove of the Patriarchs
Jackson Visitor Center

Longmire
Mount Rainier
Mowich
Naches Peak
Narada Falls
Nisqually River
Ohanapecosh
Paradise
Pinnacle Peak
Rampart Ridge

Reflection Lakes
Skyline Trail
Sunrise
Sunrise Point
Tipsoo Lake
Twin Firs
White River

Celebrating the 50th Anniversary of the Wilderness Act



Take a moment to contemplate the word “wilderness.” What exactly does it mean? More precisely, what does it mean to you?

For some, it conjures up a sense of fear, a place where innumerable dangers lurk. Some may describe it as a place to find solitude and peace. For others, wilderness is a place to find spiritual renewal. For still others, it is a place to find challenges that test one’s courage.



Do any of the above begin to resonate with you? The truth is there is no correct definition as to what wilderness should mean to anyone. However, in order for us to be able to discover our own meaning for the term, we must first be able to experience wild places.

This year we celebrate the fiftieth anniversary of the Wilderness Act, a piece of landmark conservation legislation passed with sweeping bipartisan congressional support and signed into law by President Lyndon Johnson on September 3, 1964. The Act declared it national policy to “secure for the American people of present and future generations the benefits of an enduring resource of wilderness.” The law made it possible to designate and preserve areas as “Wilderness,” which meant they were to be protected in their natural condition in perpetuity. Such legally designated lands are often referred to as “Big W” wilderness.

In 1964 about nine million acres of “primitive” and “wild” areas in 13 states immediately received permanent protection. That was just the beginning. In the past five decades, congressional actions continue to designate additional lands as worthy of wilderness protection. Today nearly five percent of the United States is legally protected Wilderness—that is more 109.5 million acres in 757 areas in 44 of the 50 states and Puerto Rico. The National Park Service oversees more than 44 million acres of designated Wilderness in 49 national parks—over half of all National Park Service lands.

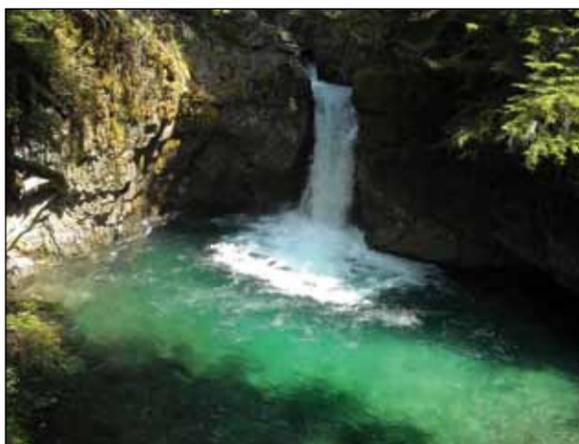
The 1988 Washington Wilderness Act added 97 percent of Mount Rainier’s 236,381 acres to our national wilderness legacy. Through the park’s Big W wilderness wind over 280 miles of trails, including the historic 93-mile Wonderland Trail that encircles the mountain. Each year, over 500,000 wild country enthusiasts from all over the world escape into Mount Rainier’s forests, meadows, and ice fields seeking reprieve from the fast-paced modern world. Still more visitors travel the park roads and pause at pullouts to take in vistas of the world untrammelled.

In Wildness is the preservation of the world.

~ Henry David Thoreau

In the early days of our nation, the wild landscape was something to be “conquered” and “tamed.” At the time, the wilderness seemed limitless. With the industrial revolution and westward expansion, humans proved adept at altering the natural world.

As the nineteenth century wore on, voices began to emerge calling attention to the loss of our nation’s natural spaces. Writers such as Ralph Waldo Emerson, Henry David Thoreau, and John Muir joined painters, photographers, and poets to raise awareness of and popularize the cultural value of wilderness. These early visionaries shared a passionate conviction that wilderness was not some luxury, but rather a vital link to human well-being. And, given that the European continent had so little untouched land, the fact this nation had so much open space only lightly touched by the human presence, meant that these undeveloped natural places helped define our cultural identity. Wilderness spaces—their challenges, influences, and rewards—shaped us as Americans, whether we ventured into them or not.



In the early to mid-twentieth century, awareness grew among the population as to the importance of our nation’s wild places. Designating some lands as national parks provided protection for key places, but it was not enough to stem the loss of our great expanses. Lasting protection would require legal means. The post-World War II push to build roads to meet the spike in cross-country travel and automobile recreation galvanized wilderness leaders to work for national legislation to keep some lands wild.

I am glad I shall never be young without wild country to be young in.

~ Aldo Leopold

A new group called the Wilderness Society formed in 1935 that included the likes of Aldo Leopold and Bob Marshall; and in time Olaus and Mardy Murie, and Howard Zahniser, who eventually became executive director. In 1956, Zahniser began the task of drafting and redrafting the bill that would become the Wilderness Act. It would take eight years, 66 drafts, and 18 hearings. Meanwhile, the society’s members wrote and worked indefatigably to raise awareness of what the Act would protect

for all time. Supporters Senator Hubert Humphrey (D-MN) and Representative John Saylor (R-PA) introduced the bill to Congress, which passed it almost unanimously.

The Act created the National Wilderness Preservation System and allows Congress and Americans to designate “wilderness areas”—the nation’s highest form of land protection. Land designated as Wilderness does not allow for roads, vehicles, or permanent structures, or for activities like logging or mining.

The Act defines Wilderness in this way: “A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain.”

Zahniser’s use of the word “untrammelled” was to specifically call out the unrestrained and unhampered qualities of nature in wild places.

As with all legislation, wording in the bill—such as what defines a road—is subject to different interpretations. North American Indians have long taken issue with the idea that humans are visitors who do not remain in wild places, as clearly native people lived throughout the continent for centuries on lands considered “wild,” including here at Mount Rainier.

Imperfections of nomenclature aside, however, the bill does protect wild places, making it possible for our grandchildren’s children to experience this country’s primeval landscape. In doing so, they may come to know on a more visceral level who they are. They, too, will be able to contemplate the meaning of wild places.

If future generations are to remember us with gratitude rather than contempt, we must leave them something more than the miracles of technology. We must leave them a glimpse of the world as it was in the beginning, not just after we got through with it.

~ President Johnson, upon signing the Wilderness Act

Mount Rainier's Wilderness: A Defense against Climate Change

More than 97 percent of Mount Rainier National Park is legally designated as wilderness, which includes glaciers, forests, meadows, lakes, and other wetlands. While enduring impacts from climate change, wilderness is also recognized as a strong defense against it. In 1964, when Congress approved the Wilderness Act, climate change was not yet recognized as a major threat. Fifty years later, scientists around the world and here at Mount Rainier have identified impacts of climate change on wilderness and ultimately our life on earth.



John Chao photo

The Wilderness Act defines wilderness as an area where Earth and its community of life are "untrammelled by man" but the Act also requires that managers preserve and protect wilderness in its natural condition.

To help anticipate the advancing effects of climate change, scientists look to the past. Much of our knowledge about prior climates has come from old trees, wood, and pollen cores that increasingly can be found only in undisturbed wilderness lands. Trees, aside from providing shade and cool, absorb and lock away carbon dioxide in the wood, roots, and leaves. A forest keeps carbon from becoming available as a "greenhouse" gas that raises the Earth's temperature.

Much of Mount Rainier's wilderness is subalpine and alpine environments. The boundary between these is controlled by extremes in temperature, moisture, and wind. Changes to any of these extremes affect the annual snowpack which eventually impacts the long-lived vegetation in both ecosystems. An upward movement of the subalpine

treeline would shrink the alpine tundra causing a possible loss of both plant and animal species.

Glaciers found in Mount Rainier's wilderness provide storage and the slow release of cool waters during summer. Changes in temperature affect the timing of this release, resulting in warmer summer streams. Warmer water may not be suitable for native bull trout and tailed frogs that are dependent upon cold headwater streams.

Wilderness, due to its large acreage and elevation range, provides for some species to adapt to climate change. As temperatures increase and ecosystems change, wildlife species will migrate, looking for suitable environments. Several animals inhabiting subalpine and alpine environments in the park are vulnerable to changes in climate including the Cascade red fox, white-tailed ptarmigan, and pika.



American pika (*Ochotona princeps*)

As Mount Rainier's wilderness defends against climate change, it will potentially suffer many impacts. Air pollutants, such as mercury, may increase in lakes, ponds, and wetlands under warming temperatures. Invasive species may expand and habitats for native species may be fragmented. Competition between species, disease, and disturbance—wildfire, landslides, etc.—may increase.

Wilderness, by providing for carbon storage, large acreage, and a broad elevation range, provides important mitigation to climate change impacts but still requires our protection.

Using Your Photos to Discover How Climate Change is Affecting Wildflowers

By Dr. Janneke Hille Ris Lambers, Elli J. Theobald and Anna Wilson, MeadoWatch, University of Washington



Elli J. Theobald photo

Seasons define our experience at Mount Rainier National Park. In the summer, many people enjoy the wildflowers that bloom in profusion in the meadows, while just a few months earlier up to 20 feet of snow covered last summer's display. Not surprisingly, the winter wonderland strongly influences wildflowers. Specifically, snow controls when avalanche lilies, lupines, and all flowers blossom. When snow melts earlier, flowers bloom earlier and when snow melts later, flowers bloom later.

This leads to a critical question: as average temperatures increase with climate change, how will the wildflowers so many of us enjoy be affected? This is a difficult question to answer without a lot of information—and you can help! You can contribute to research at the University of Washington by sharing your wildflower photos. Each of your pictures is an 'observation' of when and where wildflowers bloom. These data can help uncover how climate change affects the timing of the seasons.

All you need to do is take photos of wildflowers (close enough to identify the species) from anywhere in Mount Rainier National Park. Make sure your photos are date-stamped and geo-tagged (most smartphones automatically enable this feature), and visit www.meadowatch.org for instructions on how to contribute your photos to our project. You will be helping build a long-term data set we use to understand the impacts of climate change in Mount Rainier National Park. Thanks for your help and enjoy your visit.



Reintroducing Fishers to Native Habitat

Most of Mount Rainier's wildlife is fairly elusive, but you are likely to see deer, marmots, and squirrels during your visit, and maybe even mountain goats if you venture into the backcountry. What's missing here? The Pacific fisher has been missing from its native habitat on Mount Rainier's slopes since the mid-1930s.

The fisher is a small, reclusive predator that thrives in old growth forests. Along with wolves and lynx, fishers were extirpated (eliminated) from Mount Rainier's forests during the past century. Over the next four to six years, Mount Rainier and North Cascades national parks are teaming up with Washington Department of Fish and Wildlife to reintroduce fishers to their historical range in the Cascades.

Returning fishers will restore a critical native predator to a spectacular forest ecosystem.



What?
No Bag?

Rainier Guest Services is greening the park one less bag at time.

In an effort to reduce waste, bags are no longer automatically offered at stores within the park. By providing bags only to those who request them, Rainier Guest Services estimates that they can prevent at least 80,000 bags from ending up in a landfill.

Thanks for helping us to do our part!

Word Search Key

Key to the Mount Rainier Places word search located on page seven.

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S | T | R | E | T | N | E | C | R | O | T | I | S | I | V | N | O | S | K | C | A | J | Z | |
| A | R | B | O | N | R | I | V | E | R | L | C | A | R | T | E | R | F | A | L | L | S | A | |
| O | A | F | C | K | A | E | P | E | L | C | A | N | N | I | P | C | A | T | O | P | S | G | |
| U | Q | V | Y | O | M | J | I | B | E | O | G | S | C | O | U | W | T | M | V | K | O | R | |
| P | S | E | H | C | A | N | E | E | T | H | F | G | M | M | O | M | S | U | M | R | E | O | |
| C | A | J | B | V | I | W | E | S | I | D | A | R | A | P | P | T | P | E | A | T | S | V | |
| S | X | E | D | A | C | R | F | V | L | T | G | B | Y | H | N | U | S | J | M | M | I | K | E |
| T | Y | H | R | E | F | L | E | C | T | I | O | N | L | A | K | E | S | N | A | M | L | O | |
| V | C | T | D | E | W | S | X | Q | A | Z | M | L | P | N | K | R | O | B | J | C | I | F | |
| I | N | F | I | R | S | G | O | C | O | U | G | A | R | R | O | C | K | V | G | H | U | T | |
| U | I | R | U | Y | T | R | O | E | R | W | Q | A | S | D | F | A | G | H | J | K | R | H | |
| D | E | O | R | F | V | W | H | I | T | E | R | I | V | E | R | I | V | E | R | L | E | E | |
| O | I | G | U | Y | H | J | A | T | S | I | V | A | T | L | A | B | V | B | N | M | V | P | |
| J | H | I | G | N | C | D | N | M | K | J | N | I | B | G | T | M | R | F | F | V | I | A | |
| S | O | O | L | A | K | E | A | C | P | W | L | A | R | X | S | U | W | E | D | C | R | T | |
| U | I | E | R | M | E | I | P | S | G | A | D | H | F | K | U | L | M | C | N | B | Y | R | |
| N | I | R | H | A | V | A | E | L | O | D | X | S | A | M | M | O | W | I | C | H | L | I | |
| R | G | W | B | S | H | R | C | L | R | G | N | B | R | R | Y | C | F | R | S | S | L | A | |
| I | D | G | N | R | B | N | O | A | W | F | E | G | O | I | R | T | R | A | P | M | A | R | |
| S | N | K | P | T | T | A | S | F | I | L | O | N | G | M | I | R | E | A | T | N | U | C | |
| E | T | R | V | Y | S | C | H | A | C | R | H | C | B | N | V | S | K | D | L | W | Q | H | |
| P | T | J | C | Q | A | T | J | D | M | H | N | T | E | S | I | T | W | R | T | R | S | S | |
| O | R | M | L | E | R | C | N | A | T | S | L | G | G | R | C | I | N | E | D | S | I | D | |
| I | N | N | O | F | A | N | I | R | E | M | M | O | N | S | V | I | S | T | A | S | N | S | |
| N | D | I | R | Y | D | R | G | A | L | A | G | U | E | D | E | M | N | B | R | N | O | T | |
| T | E | C | T | B | R | L | L | N | O | S | S | K | Y | L | I | N | E | T | R | A | I | L | |

Help Us Enhance Park Trails

By Laurie B. Ward, Washington's National Park Fund Executive Director



Do you enjoy hiking the trails of Mount Rainier? Would you be interested in helping out but find yourself limited by time? Consider adopting-a-trail mile through Washington's National Park Fund.

Founded by Governor Daniel Evans in 1993, the Fund, a 501(c)(3) nonprofit organization, serves as the park's official philanthropic partner. The Fund accepts charitable gifts that are then given back to Mount Rainier National Park for projects focusing on these four main areas:

- Improving Visitors' Experiences by maintaining trails, supporting the park's Search and Rescue program, and improving campgrounds
- Bringing more Youth and Families—many of whom might otherwise never visit—into the park
- Funding necessary Science and Research on glaciers, rivers, flora (flowers) and fauna (animals)
- Strengthening Mount Rainier's Volunteerism and Stewardship activities (the Fund provides \$50,000 each year so the park can support nearly 2,000 volunteers whose efforts are valued at \$1.8 million!)

Your gifts help fund trail maintenance by volunteer and youth groups like Washington Trails Association, Washington Conservation Corps, Student Conservation Association, scout troops, and others.

Whether you adopt a trail mile, include Mount Rainier in your will, or drop a few coins in the donation boxes at Mount Rainier's visitor centers, they all add up and have a major impact on this beloved place. Please consider giving back to Mount Rainier National Park through Washington's National Park Fund. Turn your passion for Mount Rainier into action that will benefit visitors today and tomorrow.

Over the past six years the Fund has given more than \$2.5 million back to Mount Rainier, North Cascades, and Olympic national parks.

For more information please go to the Fund's website: www.wnnpf.org or email Washington's National Park Fund at fund@wnnpf.org. Tax ID#: 01-0869799

Love Your Parks? Love Your Plates!

Support Mount Rainier, North Cascades and Olympic national parks by purchasing your national parks license plate today! The plates are available for your car, truck, trailer, or motorcycle.



The parks receive \$28 from each plate of renewal. Last year plates generated \$130,000 for these treasured places!

More information is available on Washington's National Park Fund's website at www.wnnpf.org.



Experience Mount Rainier as a Volunteer Ranger

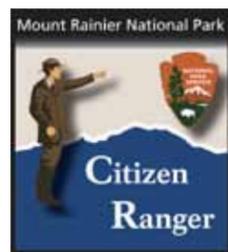
As you visit Mount Rainier, keep your eyes open for people wearing hats, shirts, and jackets with a "volunteer" logo. You'll see volunteers working in the visitor centers and assisting visitors in the meadows. Even more are busy behind the scenes, organizing the park's collection of historic photos and taking care of plants in our greenhouse.

Last year, almost 1,800 people worked in partnership with the National Park Service to protect the natural and cultural resources of Mount Rainier and serve its visitors. These invaluable partners help us accomplish far more than we could have alone.

Have you ever dreamed of being a park ranger? You still can—for a day, for a summer, or on winter weekends as your schedule permits. Opportunities abound. Ask how you can become part of our team!

www.nps.gov/mora/supportyourpark/volunteer.htm

Citizen Ranger Learning Adventures!



There is a new way to explore the park! Have your own adventure by completing "Citizen Ranger Quest" activities. Has your inner Junior Ranger never really gone away? Try out a Quest! They are designed for older

children (12 and up) and adults. However, these in-park learning adventures can also be enjoyed by younger children with help from adults or older children. Groups, families, or individuals completing four of the do-it-yourself activities become: "Mount Rainier Citizen Rangers," and receive a certificate and patch.

Quest topics are diverse and vary from history to science to stewardship. Some Quests take place indoors while others help you explore outdoors. Completion times for the different Quests vary from about thirty minutes to two hours. This summer, we are piloting Quests that can be completed using web-based information before you arrive or after you leave the park

For additional information, or to obtain your Citizen Ranger Quest activity sheets and certificates, inquire at the Longmire, Paradise, or Sunrise visitor centers.

Ranger-led Programs

Since the earliest days of the National Park Service, rangers have shared their knowledge through the presentation of interpretive programs—guided walks, talks, and campfire programs for visitors of all ages. That long-standing tradition continues at Mount Rainier.



Today, our interpretive staff consists of rangers, teachers, student interns, and volunteers from a wide array of backgrounds and expertise. Please join us for a variety of free programs, ranging from informal talks at park visitor centers to junior ranger programs for kids to guided hikes, evening campfire programs, and even winter snowshoe walks. Find out who else has come to Mount Rainier and why. Discover what this mountain really is and what it may become. Meet some other users of the park's resources—from owls to elk—and learn why they are here. Topics vary daily, and may include geology, wildlife, ecology, mountaineering, or park history.

— One Night Only —



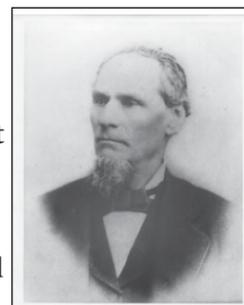
Shadows of the Past

Saturday, August 23

Living History Lantern Tour

Meet the people who explored, settled, climbed, and protected Mount Rainier more than 100 years ago. Historical characters emerge from the darkness along the Trail of the Shadows as you walk the trail with a ranger.

Lantern Tours begin in front of the National Park Inn in Longmire and depart every 20 minutes from 8:30 pm until 9:30 pm. Tour tickets will be available in front



of the NPI starting at 8:15 pm. Tours last 90 minutes. Bring a flashlight and a warm jacket, and wear sturdy shoes.

Park Partners

Who's responsible for protecting Mount Rainier National Park? Everyone! Here are some groups that deserve special thanks.



Mount Rainier National Park Volunteers
www.nps.gov/mora/supportyourpark/volunteer.htm



Discover Your Northwest
www.discovernw.org



Washington's National Park Fund
www.wnnpf.org



Mount Rainier National Park Associates
www.mrnpa.org



Student Conservation Association
www.thesca.org



Washington Trails Association
www.wta.org

Ranger-led Programs

| Paradise | Length | SUN | MON | TUE | WED | THU | FRI | SAT |
|---|--|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| Paradise Ranger Chat Start your day with coffee and a ranger. Join a knowledgeable ranger to find your perfect hiking route or discover the long history of the Paradise area. Look for the ranger inside the lobby of the Inn. Beverages available at the Tatoosh Café. | 25 min | 9:30 am | 9:30 am | | 9:30 am | 9:30 am | 9:30 am | 9:30 am |
| Subalpine Saunter Discover the ecology of the Paradise area. Meet the ranger at the flagpole in front of the visitor center. 60-75 minutes with the ranger. Return time on your own. | 60-75 min 1 mile round-trip | 10:30 am |
| Nisqually Vista Walk Walk to a view of a glacier and explore the geology of Mount Rainier. Meet at the large flagpole outside the visitor center. 75-90 with the ranger. Return time on your own. | 75-90 min 1.5 miles round-trip | 2:00 pm |
| Junior Ranger Program Join a ranger or volunteer for fun and educational activities to earn your Junior Ranger Patch! Ages six to 11, parents must remain with their Junior Rangers. Meet inside the visitor center at the front desk. | 30-45 min | 1:00 pm |
| Paradise Inn Lobby Talk Join a ranger to learn the "inns and outs" of the historic Paradise Inn. Look for the ranger inside the Paradise Inn. | 30 min | 2:30 pm | 2:30 pm | | 2:30 pm | 2:30 pm | 2:30 pm | 2:30 pm |
| Evening Stroll Stroll around this historic area with a ranger or volunteer to explore the nature and/or history of this place called Paradise. Look for the ranger outside the Paradise Inn entrance. | 30 min 1 mile round-trip | 5:00 pm through 8/3 |
| Paradise Inn Evening Program Take a seat in the lobby of the Paradise Inn and enjoy an evening presentation with a park ranger or one of the guest speakers. Topics vary. Inquire at the Jackson Visitor Center or at the Paradise Inn front desk for program descriptions. | 45 min | 8:45 pm through 8/3 |
| Special Programs Check at bulletin boards, visitor centers, or Inns for a schedule. | | | | | | | | |
| Longmire/Cougar Rock Campground | Length | SUN | MON | TUE | WED | THU | FRI | SAT |
| Junior Ranger Program Ages 6 to 11. Join a ranger or volunteer for fun and educational activities! Meet at the Cougar Rock Campground Amphitheater. Parking at the Cougar Rock Campground is limited. If you attend the program but are not camping, please park in the Cougar Rock Picnic Area across the park road from the campground. | 30-45 min | 6:30 pm through 8/31 | 6:30 pm through 8/10 | 6:30 pm through 8/10 | 6:30 pm through 8/10 | 6:30 pm through 8/31 | 6:30 pm through 8/31 | 6:30 pm through 8/31 |
| Evening Program Join a ranger or volunteer for a program that involves, inspires, and explores! Topics vary nightly. Meet at the Cougar Rock Campground Amphitheater. Parking at the Cougar Rock Campground is limited. If you attend the program but are not camping, please park in the Cougar Rock Picnic Area across the park road from the campground. | 45 min | 9:00 pm through 7/27 |
| | | 8:30 pm 7/28-8/10 |
| | | | | | | 8:30 pm 8/14-31 | 8:30 pm 8/14-31 | 8:30 pm 8/14-31 Except 8/23 |
| Take a HIKE! With a Ranger Experience the forest along the Paradise River en route to Carter Falls. Meet at the Carter Falls Trailhead 2.1 miles east of Longmire, just east of the Cougar Rock Campground. Bring water, a hat, and sturdy shoes. | 2 hrs, return on your own 2 miles | | | | | | | 10:00 am 7/9-26 only |
| Sunrise/White River Campground | Length | SUN | MON | TUE | WED | THU | FRI | SAT |
| Junior Ranger Program Children ages 6 to 11 are invited to join park staff for a fun activity about the mountain, glaciers, habitats, and more. Meet at the White River Campfire Circle. | 1 hour | 10:00 am starting 7/19 | | | | | 10:00 am starting 7/19 | 10:00 am starting 7/19 |
| Sunrise Afternoon Guided Walks Learn about the natural and cultural history of the Sunrise area on this easy ramble with a ranger. Meet at the Sunrise Visitor Center flagpole. The trail is not wheelchair accessible. | 45 min | 1:00 & 3:00 pm starting 7/19 |
| Evening Program Take an in-depth look at a special topic of Mount Rainier National Park during a traditional campfire talk. Meet at the campfire circle in the White River Campground. | 45 - 60 min | | | | | 7:30 pm starting 7/19 | 7:30 pm starting 7/19 | 7:30 pm starting 7/19 |
| Ohanapeosh | Length | SUN | MON | TUE | WED | THU | FRI | SAT |
| Junior Ranger Program Ages 6 to 11. Join a ranger or volunteer for fun and educational activities! Meet at the Ohanapeosh Visitor Center. See program bulletin board for additional times. | 1 hour | 10:00 am | | | 10:00 am through 7/30 | 10:00 am | 10:00 am | 10:00 am |
| Evening Program Join a ranger or volunteer for a program that involves, inspires and explores! Topics vary nightly. Meet at the Ohanapeosh Campground Amphitheater. | 45 min | | | | 9:00 pm through 7/19 | 9:00 pm through 7/19 | 9:00 pm through 7/19 | 9:00 pm through 7/19 |
| | | | | | 8:00 pm 7/20-8/3 | 8:00 pm through 9/6 | 8:00 pm through 9/6 | 8:00 pm through 9/6 |
| Check bulletin boards for additional Junior Ranger programs, special programs, and schedule updates. | | | | | | | | |

Visitor Facility Hours

Visitor Centers

| | | |
|---|---|--|
| Longmire Museum (360) 569-6575 | July 1 - September 1 9:00 am - 5:00 pm daily | Ranger programs, exhibits, information, book sales |
| Paradise Henry M. Jackson Visitor Center (360) 569-6571 | July 1 - August 31 10:00 am - 7:00 pm daily September 1 10:00 am - 5:00 pm daily | Ranger programs, exhibits, information, park videos, book sales, food service, gifts |
| Ohanapecosh Visitor Center (360) 569-6581 | July 2 - August 3 Noon - 4:00 pm Wed - Sun August 7 - September 7 Noon - 4:00 pm Thu - Sun | Ranger programs, exhibits, information, book sales |
| Sunrise Visitor Center (360) 663-2425 | July 3 - September 21 10:00 am - 6:00 pm daily | Ranger programs, exhibits, information, book sales |

Wilderness & Climbing Information Centers

| | | |
|---|---|--|
| Longmire WIC (360) 569-6650 | July 1 - October 13 7:30 am - 5:00 pm daily | Wilderness camping & climbing permits |
| Paradise Climbing information Center (Guide House) (360) 569-6641 | July 1 - September 1 6:00 am - 3:00 pm Sun - Thu 6:00 am - 5:00 pm Fri - Sat | Climbing permits, exhibits, wilderness camping permits, information |
| White River WIC (360) 569-6670 | July 1 - October 13 7:30 am - 5:00 pm daily | Wilderness camping & eastside climbing permits |
| Carbon River Ranger Station (360) 829-9639 | July 1 - September 1 8:30 am - 5:00 pm Mon - Thu 7:30 am - 6:00 pm Fri - Sun Open year-round <i>Located on the Carbon River Road 5.5 miles east of the Mowich Lake (SR165) junction.</i> | Wilderness camping & northside climbing permits (including Ipsut Creek Campground) |

Food & Lodging

For in-park lodging reservations, call Mount Rainier Guest Services at (360) 569-2275 or go to www.mtrainierguestservices.com

| | | |
|--|---|--|
| National Park Inn at Longmire Open year-round | Front Desk: 7:00 am - 10:00 pm daily Dining Room hours: 7:00 am - 8:30 pm | Lodging, dining room |
| Longmire General Store Open year-round | 9:00 am - 8:00 pm daily | Gifts, snacks, firewood, apparel |
| Paradise Inn Open May 21 - Oct. 6, 2014 | Front Desk: open 24 hours daily Dining Room hours: Breakfast 7:00 am - 9:30 am Lunch 12:00 pm - 2:00 pm Dinner 5:30 pm - 8:00 pm Sun. Brunch 11:30 am - 2:00 pm Cafe hours: 9:00 am - 10:00 p.m | Lodging, dining, gifts, books, apparel, ranger on duty and interpretive programs |
| Paradise Camp Deli and Gift Shop, in the Jackson Visitor Center at Paradise | 10:00 am - 6:45 pm daily | Food, gifts, books, apparel |
| Sunrise Day Lodge Snack Bar and Gift Shop | 10:00 am - 7:00 pm daily Open July 3 through September 7 | Food and gifts. Day use only, no overnight lodging |
| Firewood Sales | Available through September 30 at Longmire General Store and Cougar Rock Campground | |

Gasoline, lodging, dining, recreation equipment rentals, and other services are available in local communities. A list of these services is available at park visitor centers and on the park's website at www.nps.gov/mora. Religious services are available in local communities.
GAS IS NOT AVAILABLE IN THE PARK

Firewood: Buy It Where You Burn It!

Washington forests are in jeopardy from the transportation of invasive insects and diseases in firewood. New infestations of tree-killing insects and diseases often are first found in campgrounds and parks. Here's what you can do to help:



- Buy firewood near where you will burn it—that means the wood was likely cut within 50 miles of where you'll have your fire.
- Wood that looks clean and healthy can still have tiny insect eggs, or microscopic fungi spores, that will start a new and deadly infestation. Always leave it at home, even if you think the firewood looks fine.
- Aged or seasoned wood is still not safe. Just because it is dry doesn't mean that bugs can't crawl onto it!
- Tell your friends not to bring wood with them. Everyone needs to know that they should not move firewood.

More information is available online at www.dontmovefirewood.org.

Camping is permitted only in established campgrounds: Cougar Rock, Ohanapecosh, White River, and Mowich Lake. Backcountry camping requires a backcountry permit, available at wilderness information centers and ranger stations.

Hazard Trees

Like the mountain itself, trees are both beautiful and potentially dangerous, and merit our respect and caution. Even a healthy tree with no defects can present a danger under certain conditions, so stay alert on breezy days for falling limbs and cones, and avoid forested areas during storms when possible. Sudden gusts can do great damage to trees—as well as anything in range of the falling debris.

If you notice something that causes concern about a tree within a developed area—especially if it's in your campsite—please inform a ranger or other park employee, so that it can be evaluated. The park's Hazard Tree Management Program conducts both routine annual surveys and comprehensive evaluations every three to five years to address tree hazards in all developed sites with stationary targets, including wilderness camps.

Drive-in Campgrounds

| Campground | Open Dates | Elev. | Sites | Fee | Group Sites | Group Fees | Toilets | Dump Station | Maximum RV/Trailer Length |
|--------------|--|--------|-------|----------|-------------|------------|---------|--------------|---------------------------|
| Cougar Rock* | May 23 - Sept. 29 | 3,180' | 173 | \$12/15* | 5 | \$40-64 | Flush | Yes | RV 35'/Trailer 27' |
| Ohanapecosh* | May 23 - Oct. 13 | 1,914' | 188 | \$12/15* | 2 | \$40 | Flush | Yes | RV 32'/Trailer 27' |
| White River | June 27 - Sept. 29 | 4,232' | 112 | \$12 | 0 | N/A | Flush | No | RV 27'/Trailer 18' |
| Mowich Lake | Primitive walk-in campground, tents only. 10 sites, 3 group sites (max. group size 12). No fee (must self-register at campground kiosk). Chemical toilets, <i>no potable water</i> . No fires allowed. Elevation 4,929'; generally open July through early October, depending on road and weather conditions. Call 360-829-9639 for information. | | | | | | | | |

***Advance reservations are recommended for individual sites at Cougar Rock and Ohanapecosh campgrounds through the night of August 31. These can be made up to six months in advance. Reservations for group sites are recommended and are available throughout the season. These can be made up to one year in advance. To make a reservation online, go to www.recreation.gov or call 877-444-6777.**