



Reflections

Visitor Guide
Summer/Fall 2011



Cleetwood Cove Construction Project to Limit Lakeshore Access in 2011

This summer, access to the shore of Crater Lake will be limited. A construction project near the bottom of the Cleetwood Cove Trail will restrict swimming and fishing to a small area and cause delays for hikers passing through the construction zone.

The project's purpose is to replace an aging bulkhead (retaining wall). The current one is 50 years old, rusted and worn, and can no longer be counted on to hold the park's boat docks securely in place. The new bulkhead will allow tour boats and lake research vessels to dock safely for decades to come.

Early in the summer, the Cleetwood Cove Trail may be closed for several weeks. Helicopters will be transporting heavy equipment and materials to the shore. After that, the trail will stay open, but expect delays when construction crews are on site. Park rangers will escort hikers through the work zone when it is safe to do so. There may be an extended wait to access the water, tour-boat dock, and restrooms.

Only a small, rocky segment of the shore (west of the restrooms) will be available for swimming and fishing. Instead, consider taking a boat tour to Wizard Island or driving 5 miles (8 km) north of the park to scenic Diamond Lake. Boat tours on Crater Lake will operate as scheduled. Thank you for your patience and understanding as we undertake this inconvenient but necessary improvement to the park's infrastructure.

Welcome!

Thank you for visiting your national park! Here at Crater Lake, you'll find opportunities to refresh your spirit, awaken your senses, and connect with the natural world. In this age of economic uncertainty, I know that your time and money are more precious than ever. On behalf of our staff, I promise we'll do our best to ensure that your enjoyment of the park exceeds your investment in traveling here.

The National Park Service protects nearly 400 special places, saved by the American people so that everyone can experience our heritage. We at Crater Lake are proud to be stewards of this national treasure. Park rangers and maintenance staff are here to assist you in making your visit safe, rewarding, and fun. If there is anything we can do to help, please ask. Enjoy your park!


Craig Ackerman
Superintendent

Hike to a Hidden Waterfall

Plus 10 Other Ways to Enjoy Your Park

There's a brand new trail at Crater Lake! It's called the Plaikni Falls Trail, and it leads to a lush waterfall that, until recently, few people knew existed. The trail is an easy walk, wheelchair-accessible, and can be completed in an hour—but you'll want to linger to enjoy the serenity of the surrounding forest and the beauty of the wildflowers that flourish near the water. The trail is located along the Pinnacles Road, just off the East Rim Drive. It will open sometime in July, as soon as the road opens to the trailhead. See pages 4-5 for trail details and a map.



The honor of naming the falls was given to the Klamath Tribes, whose traditional homeland includes Crater Lake and who have strong cultural ties to the park to this day. The word "Plaikni" means "from the high country." The falls, which tumble over a glacier-carved cliff, originate at a spring some 7,000 feet (2,134 meters) above sea level. As you enjoy them, please stay on the trail to protect fragile streamside vegetation. Looking for other things to do in the park? Here are 10 more ways to make your visit meaningful, memorable, and fun:

Drive Around the Lake

Rim Drive is a 33-mile (53-km) road that encircles Crater Lake. More than 30 pullouts offer dramatic views of the park's volcanic scenery. Allow 2 to 3 hours (*see page 5*).

Hike a Trail

From easy walks to challenging hikes, the park has something for everyone. Explore pristine forests, flower-filled meadows, and rocky peaks (*see page 4*).

Attend a Ranger Program

Discover the wonders of Crater Lake with those who know the park best. Talks, walks, kids programs, boat tours, and trolley tours are offered daily (*see page 3*).

Watch the Park Film

The park's rich human history is the topic of an 18-minute film shown throughout the day at the Steel Visitor Center. Learn how the lake has affected those who've seen it (*see page 2*).

Visit the Pinnacles

Formed during the same eruption that gave birth to the lake, these colorful volcanic spires are tucked away in the park's southeast corner (*see page 5*).

Tour Crater Lake Lodge

For a glimpse into an earlier era, check out the history exhibits—and walk through the Great Hall—of Crater Lake Lodge, renovated in the 1990s but first opened in 1915 (*see page 2*).

Visit the Sinnott Memorial Overlook

With panoramic views and fascinating exhibits, this is the place to learn about the park's geologic story and history of scientific investigation (*see page 2*).

Have a Picnic

The viewpoints and picnic areas along Rim Drive are perfect for outdoor eating (*see page 5*). Stop by the Rim Village Café for grab-and-go sandwiches, salads, and snacks.

Relax

Find a peaceful spot and attune yourself to the sounds and rhythms of the park. The Lodge veranda and the quiet pullouts on the lake's north side are favorite spots to unwind.

Gaze at the Sky

With clean air and unobstructed views, Crater Lake is a great place to watch the sun go down, the moon rise up, and the stars twinkle in the sky (*see page 3*).

- 2... Camping, Lodging, Food
- 3... Ranger Programs
- 4... Hiking Trails
- 5... Park Map
- 6... Park Weather
- 7... In the News: Noisy Parks
- 8... Recommended Reading

Look Inside! →

Park Profile

Crater Lake National Park protects the deepest lake in the United States. Fed by rain and snow (but no rivers or streams), the lake is considered to be the cleanest large body of water in the world. The water is exceptional for its clarity and intense blue color.

The lake rests inside a caldera formed approximately 7,700 years ago when a 12,000-foot-tall (3,600-meter) volcano collapsed following a major eruption. The eruption may have been the largest in North America in the past 640,000 years. Later eruptions formed Wizard Island, a cinder cone near the southwest shore.

Today, old-growth forests and open meadows blanket the volcano's outer slopes, harboring a variety of plants and animals, including several rare species. The area is central to the cultural traditions of local American Indian tribes, and the park provides unique opportunities for scientific study and public enjoyment.

- Park established: 1902
- Size: 183,000 acres (74,060 hectares)
- Visitors per year: About 500,000

- Lake depth: 1,943 feet (592 meters)
- Lake width: 4.5 to 6 miles (7 to 10 km)

- Annual snowfall: 44 feet (13.3 meters)
- Last time the lake froze over: 1949



Artist Paul Rockwood's conception of Mount Mazama, the volcano that collapsed to form Crater Lake. If you gathered up the ash from Mount Mazama's catastrophic eruption and spread it evenly across the state of Oregon, it would form a layer 8 inches (20 cm) thick.



Snow plow at Rim Village

When is the Park Open?

Crater Lake National Park is open year-round, 24 hours a day. Some roads, trails, and facilities, however, are closed seasonally due to snow. Much of the year, the park's North Entrance Road and Rim Drive are closed to cars. They close with the first significant snowfall, typically in late October or early November.

Crews begin plowing these roads in April, but opening dates vary. The North Entrance and West Rim tend to open in early June. The East Rim Drive typically opens in early July. This summer, roads will likely open late due to last winter's heavy snows (*see page 6*). Highway 62 and the road to Rim Village are open year-round.



Happy hikers



Rim Visitor Center



Bicyclist on East Rim Drive



Exhibits at the Sinnott Memorial Overlook



Sunset over Crater Lake



Boat tour on Crater Lake



Trolley tour on Rim Drive

National Park Service
U.S. Dept. of the Interior

Crater Lake Visitor Guide
Summer/Fall 2011

This is the official trip-planner and newspaper of Crater Lake National Park. It is published twice a year and funded by the Crater Lake Natural History Association through sales made in the visitor center bookstores.

Park Mailing Address
Crater Lake National Park
P.O. Box 7
Crater Lake, OR 97604

Phone: 541-594-3000
Website: www.nps.gov/crla
E-Mail: crla_information_requests@nps.gov

Services & Facilities

Camping

There are two campgrounds in the park. Both are situated in forests south of the lake.

Mazama Campground (213 sites) is located 7 miles south of Rim Village near Highway 62. In 2011, it will be open from June 10 (conditions permitting) through September 25. 75% of the campsites are reservable in advance by calling 1-888-774-2728. The rest are available on a first-come, first-served basis. Typically, there are sites available until late afternoon or early evening. The campground offers tent sites (\$21 per night) as well as RV sites (\$27). Some of the RV sites have electric hookups (\$29). There are many pull-through sites; some can accommodate RVs as long as 50 feet (15 meters).

Accessibility
With the exception of the Sinnott Memorial Overlook, developed areas in the park are generally accessible to individuals with mobility impairments. Wheelchair-accessible paths include the Rim Village promenade, the Godfrey Glen Trail, the Pinnacles Trail, and the Plaikni Falls Trail. Multiple scenic pullouts on Rim Drive have wheelchair-accessible wayside exhibits. Some ranger programs are accessible to people with impairments (see page 3). A brochure with more detailed information is available at park visitor centers and entrance stations. We are working hard to improve our level of accessibility for all park visitors. We welcome your comments.

Lost & Found
Contact a ranger at either visitor center or call the park dispatch office at 541-594-3060.

Phones
Cell phone coverage in the park is unreliable. Reception depends on your location and provider. Pay phones are located outside the Mazama Village Store and inside Crater Lake Lodge.

Picnic Areas
Picnic areas are found throughout the park (see page 5). The Rim Village picnic area has fire grates. Most picnic areas have vault toilets but no running water.

ATM
The Mazama Village Store has an ATM.

Drinking Water
Water faucets can be found at Rim Village, Mazama Village, Lost Creek Campground, and the Steel Visitor Center. Bottled water is available for purchase at the Rim Village Café, the Mazama Village Store, and the top and bottom of the Cleetwood Cove Trail (when boat tours are operating).

Emergencies
Dial 911 to report any emergency, 24 hours a day. First aid is available at visitor centers and at the ranger station at Park Headquarters.

Entrance Fee
The entrance fee for Crater Lake National Park is \$10 per family car, good for 7 days. The rate is higher for commercial vehicles. Your fees are put to work improving visitor services and facilities. Thank you for supporting your national parks!

Gasoline
A self-serve gas station

at Mazama Village is open May 20 through October 17.

Each site has a picnic table, fire ring, and food locker. Black bears are rarely spotted, but campers are advised to store all food in their locker or in their vehicle. The campground has running water, sinks, and flush toilets. There are coin-operated showers and laundry facilities. The nearby general store sells groceries, firewood, and gasoline. You can contact the campground directly during the summer at 541-594-2255 ext. 3610. Mazama Campground is operated by the park's concessioner, Xanterra Parks & Resorts.

Lost Creek Campground (16 sites) is for tent-camping only (\$10 per night). It is located on the spur road to the Pinnacles Overlook. It opens shortly after the opening of the East Rim Drive, sometime in July, and closes in mid-October. Registration is self-service, and reservations are not taken. The campground usually fills up, so arrive early to secure a site. It offers running water, sinks, and flush toilets. Each site has a picnic table, fire ring, and food locker. Payment can be made by cash or check. Holders of a Senior Pass or Access Pass receive a 50% discount. Lost Creek Campground is operated by the National Park Service.



Crater Lake National Park belongs to everyone. We all share the responsibility of protecting it. Please take a moment to become familiar with these important regulations.

Camping
Camping is limited to developed campgrounds and some back-country areas. Permits are required for backcountry camping. Permits are free and are available at either visitor center or at the ranger station at Park Headquarters.

Driving
Use pullouts to enjoy the views. Do not stop in the road. Observe posted speed limits, and watch for wildlife, bicyclists, and pedestrians. Off-road travel is prohibited.

Showers & Laundry
Coin-operated showers and laundry machines are available at Mazama Campground.

Food & Dining

The park has three restaurants and one store.

The **Crater Lake Lodge** dining room offers fine dining in a casual lodge atmosphere. The menu features Northwest cuisine made with Oregon-grown ingredients. Reservations are required for dinner but are not taken for breakfast or lunch. Reservations can be made by calling 541-594-2255 ext. 3217. In 2011, the dining room will be open from May 20 through October 16.

The **Annie Creek Restaurant**, located in Mazama Village, serves hearty meals, buffet-style. The buffet features a selection of entrees, specialty pizzas, soups, salads, and desserts. A la carte items are also available. The restaurant also offers take-out pizza service, an espresso bar, daily buffet breakfasts, optional patio dining, and a cocktail room with entertainment on selected evenings. The restaurant will be open in 2011 from June 3 through September 18. The restaurant is located adjacent to the park's south entrance station, just off Highway 62.

The **Rim Village Café** serves lighter fare including grab-and-go sandwiches, soup, salads, snacks, breakfast pastries, and hot and cold beverages. The café is open year-round.

The **Mazama Village Store** sells groceries, camping supplies, firewood, and gasoline. It will be open in 2011 from May 27 through September 26.

Lodging

The park has two lodging options. Both are operated by Xanterra Parks & Resorts. For information, call 1-888-774-2728 or visit www.craterlakelodges.com. You can check availability and make reservations online. For a list of accommodations outside the park, ask at a visitor center.

Crater Lake Lodge (71 rooms) is located in Rim Village, overlooking the lake. In 2011, it will be open from May 20 through October 16. Reservations are highly recommended well in advance. **The Cabins at Mazama Village** (40 rooms) are located 7 miles south of Rim Village. Operating dates for 2011 are May 27 through September 25.

Visitor Centers

There are two visitor centers in the park. Rangers are available to answer questions and assist with trip-planning. The Crater Lake Natural History Association sells books, maps, postcards, and other items (see page 8).

The **Steel Visitor Center**, located at Park Headquarters, is open daily from 9:00 a.m. to 5:00 p.m. An 18-minute film is shown throughout the day. It examines the human history of Crater Lake, from the American Indians who witnessed the lake's formation to the prospectors who stumbled across the lake in the 1850s to the citizens who campaigned for the lake's protection in the 1880s.

The **Rim Visitor Center**, located in Rim Village, is open daily from 9:30 a.m. to 5:00 p.m. from June through late September.

Exhibits

The **Sinnott Memorial Overlook**, perched on a rock ledge behind the Rim Visitor Center, features an enclosed exhibit room and an open parapet with spectacular views of the lake. The overlook contains a relief model and exhibits on the park's geologic story and lake research. The overlook is open daily (weather permitting) from mid-June through October. Hours are 9:30 a.m. to 6:30 p.m. in July and August, 9:30 a.m. to 5:00 p.m. in June and September, and 10:00 a.m. to 4:00 p.m. in October. 20-minute ranger talks are given daily from July 1 through September 5. The overlook is located down a steep historic walkway with stairs and is not accessible to people with limited mobility.

Crater Lake Lodge features exhibits on the history of tourism in the park and the history and renovation of the lodge. The exhibits are open daily, around-the-clock, from May 20 through October 16. They are located on the ground floor, west of the lobby.

Gifts & Books

The **Rim Village Gift Shop** is open all year. The **Annie Creek Gift Shop** in Mazama Village is open June 3 through September 18. You can also shop online at www.craterlakelodges.com/shop/. The park's two visitor centers also sell books and gifts.

Activities

Backcountry Camping

Over 95% of the park is managed as wilderness. Although some areas are closed to backcountry camping (for example, there is no camping with a view of the lake), exploring the park's old-growth forests and volcanic landscapes can be a rewarding experience.

All campers not staying in the park's developed campgrounds must obtain a backcountry permit. The only exception is through-hikers on the Pacific Crest Trail, who may instead sign the trail register as they enter the park. Permits are free and are available at either visitor center or at the ranger station at Park Headquarters.

Bicycling

Bicycling at Crater Lake is allowed on paved roads and on the unpaved Grayback Drive. Bicycles are not allowed on park trails, with one exception: the Pinnacles Trail. Park roads are narrow with few shoulders and considerable automobile traffic. Helmets are

Sky Gazing

With clean air, clear skies, and unobstructed views, Crater Lake is a great place to observe astronomical events. Discovery Point is a favorite spot to watch the sunrise. For sunsets and moonrises, try Watchman Overlook or hike to the top of Watchman Peak. Ask at a visitor center for sunrise and sunset times.

Swimming

Swimming is allowed in Crater Lake, but the water is cold! Most people swim for only a few minutes. Swimming is permitted only at Cleetwood Cove and at Wizard Island, which requires a boat tour. The shoreline at both locations is rocky; there are no beaches. Note: lake access will be limited in 2011 due to construction (see page 1).

Fishing

Originally, Crater Lake contained no fish. Between 1888 and 1941, however, 6 species were introduced. Today, only rainbow trout and kokanee salmon remain. Fishing is allowed at the bottom of the Cleetwood Cove Trail, but access in 2011 will be limited (see page 1). Wizard Island, reachable by tour boat, is also open to fishing.

Fishing licenses are not required. There are no restrictions on the size, number, or species taken. Cleaning fish in the lake is prohibited; pack out your catch. To prevent the introduction of non-native organisms, *no organic bait of any kind may be used*. This includes fish eggs, PowerBait, and live or dead fish. Fishing is limited to artificial lures and flies only.

Boat Tours

Join a park ranger for a 2-hour cruise around Crater Lake. See the box below for departure times and ticket prices. Boat tours on Crater Lake are operated by Xanterra Parks & Resorts in partnership with the National Park Service.

Wildlife Viewing

The park is home to many animals, but they can be difficult to spot. The most visible animals are deer and squirrels. Herds of elk are sometimes seen in the meadows along Rim Drive. Bobcats and mountain lions are present but rarely seen. Lucky observers might spot a fox, black bear, marmot, porcupine, grouse, or bald eagle. Dawn and dusk are the best times to look.

Trolley Tours

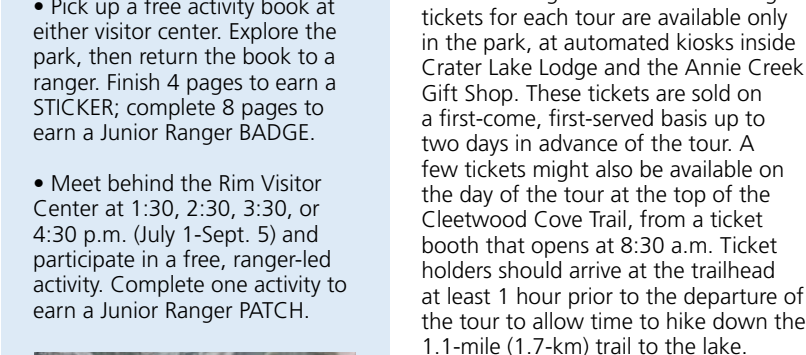
Rim Drive is one of America's most scenic byways, but it's hard to appreciate the views with your eyes on the road. Consider leaving the driving to someone else! Ranger-guided trolley tours circle Crater Lake daily. Tours begin and end at Rim Village, spend 2 hours traveling clockwise around the lake, and stop at a minimum of 4 scenic overlooks. See below for departure times and ticket prices. The buses are enclosed, climate-controlled, wheelchair accessible, and seat 25 passengers. They resemble old streetcars, but they run on modern technology: powered by compressed natural gas, they emit 30-40% less pollution than gasoline-powered vehicles. The trolleys are owned and operated by The Shuttle Inc. of Klamath Falls.

Kids: You Can Become a Junior Park Ranger!

Are you between 6 and 12 years old? Do you want to learn while having fun at Crater Lake National Park? Here are 2 different ways:

- Pick up a free activity book at either visitor center. Explore the park, then return the book to a ranger. Finish 4 pages to earn a STICKER; complete 8 pages to earn a Junior Ranger BADGE.
- Meet behind the Rim Visitor Center at 1:30, 2:30, 3:30, or 4:30 p.m. (July 1-Sept. 5) and participate in a free, ranger-led activity. Complete one activity to earn a Junior Ranger PATCH.

Tickets
Half the tickets for each tour (July 14-September 11 only) are available for advance purchase prior to your visit. They can be purchased by calling 1-888-774-2728 or visiting www.craterlakelodges.com. The remaining tickets for each tour are available only in the park, at automated kiosks inside Crater Lake Lodge and the Annie Creek Gift Shop. These tickets are sold on a first-come, first-served basis up to two days in advance of the tour. A few tickets might also be available on the day of the tour at the top of the Cleetwood Cove Trail, from a ticket booth that opens at 8:30 a.m. Ticket holders should arrive at the trailhead at least 1 hour prior to the departure of the tour to allow time to hike down the 1.1-mile (1.7-km) trail to the lake.

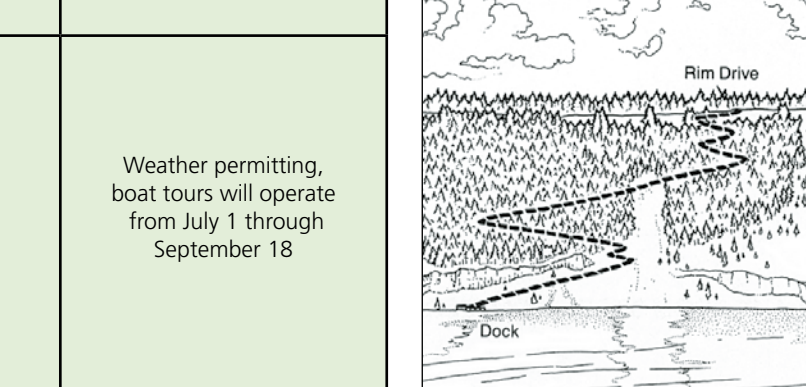


Visiting Wizard Island
Up to 96 tickets each day are available for visitors wishing to disembark at Wizard Island to hike, fish, swim, and explore. Only 2 tours dock at Wizard Island: the 9:55 a.m. and 1:00 p.m. departures. The 5 standard tours do not stop. Most Wizard Island visitors will be dropped off for a 3-hour stay, then picked up by a later boat to complete the tour of the lake. A limited number of tickets (8 per day) are available for visitors wishing to spend 6 hours on the island. See page 4 for information about the island's 2 hiking trails.

What to Bring

- Bring plenty of drinking water. Bottled water is available for purchase at both ends of the Cleetwood Cove Trail.
- Bring a lunch or snack, especially if visiting Wizard Island. Light snacks are available for purchase at both ends of the Cleetwood Cove Trail.
- Sunscreen, sunglasses, and a hat are recommended for sun protection. The boats are not covered.
- Weather on the lake can be windy and chilly. A warm, water-resistant jacket is advisable.
- Wear sturdy footwear, especially if visiting Wizard Island.

Hiking to Cleetwood Cove
The Cleetwood Cove Trail is the only legal access to the shore of Crater Lake (see map on page 5). The hike is steep and strenuous: in 1.1 miles (1.7 km) it drops 700 feet (213 meters) in elevation. Walking back up is equivalent to climbing 65 flights of stairs! The trail is recommended only for those in good physical condition. It should not be attempted by anyone with heart, breathing, or walking problems. It is not accessible for people with mobility impairments. Hikers should wear sturdy shoes and carry water. Vault toilets are located at the top and bottom of the trail. Depending on snow conditions, the trail usually opens in late June and closes in late October. See page 1 for important information about a construction project that will cause delays and restrict access to the water in 2011.



The Cleetwood Cove Trail drops 700 feet (213 meters) to the lake shore. Sketch from Road Guide to Crater Lake.

Ranger-Led Activities	July 1–September 5	May 20–June 30 & September 6–October 16												
Crater Lake Talk Learn about the origins of Crater Lake and discover its special qualities and features. Meet at the Sinnott Memorial Overlook. (20 minutes)	11:00 a.m. 1:00 p.m. 3:00 p.m.	Check posted schedules												
Ranger's Choice Talk A different topic every time! Meet on the back porch of Crater Lake Lodge. For today's topics, check the sign on the Lodge back porch or ask at the Rim Visitor Center. (20 minutes)	2:00 p.m. 4:00 p.m.	Check posted schedules												
Guided Hike Hike with a park ranger to explore and learn about Crater Lake. Check posted schedules for the "trail of the day." Distance, duration, and meeting place will vary depending on the trail.	2:00 p.m.	Check posted schedules												
Junior Ranger Activity Kids participate in a ranger-led activity to learn about Crater Lake and earn a Junior Ranger patch. Meet behind the Rim Visitor Center. Recommended for ages 6 to 12. (20 minutes)	1:30 p.m. 2:30 p.m. 3:30 p.m. 4:30 p.m.	Check posted schedules												
Evening Program Relax under the stars as you learn about the park. Check posted schedules for topics. Meet at the Mazama Campground Amphitheater, between loops D and E. (45 minutes)	July 1-31 9:00 p.m. August 1-21 8:30 p.m. August 22-31 8:00 p.m. Sept. 1-5 7:45 p.m.	Check posted schedules												
Rim Drive Trolley Tour <table border="1"> <tr><th colspan="2">Ticket Prices</th></tr> <tr><td>\$25</td><td>Adult</td></tr> <tr><td>\$22</td><td>Senior (age 60 and up)</td></tr> <tr><td>\$15</td><td>Child (age 6 through 16)</td></tr> <tr><td>Free</td><td>Young Child (under 6 years)</td></tr> <tr><td colspan="2">Ask about Family & Group Discounts</td></tr> </table> Ride around the lake on a ranger-narrated tour of Rim Drive, with stops at 4 or more overlooks. See the top of the page for more information. Tours leave from, and tickets are sold at, the Community House in the middle of Rim Village. Tickets may be purchased the day of the tour, or the day before, from 9:30 a.m. to 3:00 p.m. Tours cover a variety of topics. (2 hours)	Ticket Prices		\$25	Adult	\$22	Senior (age 60 and up)	\$15	Child (age 6 through 16)	Free	Young Child (under 6 years)	Ask about Family & Group Discounts		10:00 a.m. 11:00 a.m. 12:00 p.m. 1:00 p.m. 2:00 p.m. 3:00 p.m.	Check posted schedules
Ticket Prices														
\$25	Adult													
\$22	Senior (age 60 and up)													
\$15	Child (age 6 through 16)													
Free	Young Child (under 6 years)													
Ask about Family & Group Discounts														
Crater Lake Boat Tour For a different perspective on Crater Lake, take a ranger-narrated boat tour. See the right-hand column of this page for detailed information. Note: Taking a boat tour requires hiking down—and back up—one of the steepest trails in the park. Tours cover a variety of topics. (2 hours) <table border="1"> <tr><th colspan="2">Ticket Prices</th></tr> <tr><td>\$29</td><td>Adult</td></tr> <tr><td>\$39</td><td>Adult with Wizard Island Drop-Off</td></tr> <tr><td>\$19</td><td>Child (age 3 through 11)</td></tr> <tr><td>\$25</td><td>Child with Wizard Island Drop-Off</td></tr> <tr><td>Free</td><td>Infant (under 3 years)*</td></tr> </table> *Tours are not recommended for infants due to boat noise, wind, and occasional rough water.	Ticket Prices		\$29	Adult	\$39	Adult with Wizard Island Drop-Off	\$19	Child (age 3 through 11)	\$25	Child with Wizard Island Drop-Off	Free	Infant (under 3 years)*	Standard Tours: 10:00 a.m. 11:00 a.m. 12:00 p.m. 2:00 p.m. 3:00 p.m. Tour with Wizard Island Drop-Offs: 9:55 a.m. 1:00 p.m.	Check posted schedules
Ticket Prices														
\$29	Adult													
\$39	Adult with Wizard Island Drop-Off													
\$19	Child (age 3 through 11)													
\$25	Child with Wizard Island Drop-Off													
Free	Infant (under 3 years)*													

Programs are free of charge except for trolley tours and boat tours. All programs are subject to cancellation due to inclement weather or other unforeseen circumstances.



Hi, I'm Ranger Karen. We have 90 miles (145 km) of hiking trails here at Crater Lake. Our most popular day hikes are listed on this page. If you are visiting in June or July, be aware that some trails might still be closed by snow. Please help us protect this special place by following a few important rules:

- ⚡ No hiking or climbing inside the caldera! The walls are dangerously steep and unstable. The one exception is the Cleetwood Cove Trail. It is the only legal access to the lake shore.
- ⚡ Overnight backpacking requires a permit. Free permits are available at either visitor center or at the ranger station at Park Headquarters. Some areas are not open to backcountry camping.
- ⚡ Leave all rocks, plants, animals, and artifacts undisturbed for the enjoyment of future hikers.
- ⚡ To protect vegetation and prevent erosion, please stay on the trails.
- ⚡ Pets are not allowed on park trails (see page 2).

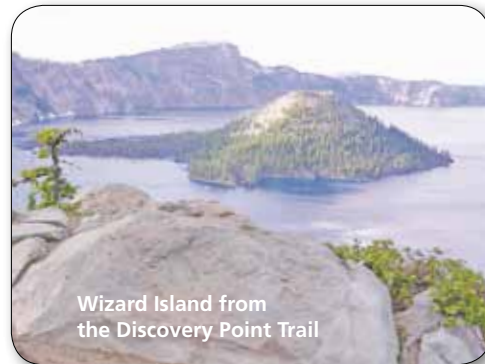
Let's Go Hiking!

Pinnacles Trail	Godfrey Glen	Trail	Castle Crest	Lady of the Woods
1 mile (1.6 km)	1 mile (1.6 km) loop trail	Total Distance	0.5 miles (0.8 km) loop trail	0.5 miles (0.8 km) loop trail
10 feet (3 meters)	50 feet (15 meters)	Elevation Gain	100 feet (30 meters)	120 feet (37 meters)
30 minutes	30 minutes	Time	30 minutes	30 minutes
Volcanic Spires	Peaceful Forest	Highlight	Flowers, Meadow, Creek	Historic Architecture
Easy walk along the rim of Pinnacle Valley. Great views of volcanic spires. Use caution near cliffs. Trail ends at park boundary. Accessible to wheelchairs with assistance. Open to bicycles.	Easy stroll through an old-growth forest, with some canyon views. Dirt path; accessible to wheelchairs with assistance. Self-guiding brochures are available at the trailhead.	Description	Loop trail through a beautiful meadow. Abundant wildflowers from mid-July to mid-August. The trail is rocky and slippery in places. Self-guiding brochures are available at the trailhead.	Loop trail around Park Headquarters. Self-guiding brochures, available at the trailhead, describe how early park architects integrated their designs with the natural landscape.
End of the Pinnacles Spur Road, 7 miles (11.3 km) southeast of the Phantom Ship Overlook.	2.4 miles (3.9 km) south of Park Headquarters.	Trailhead Location	East Rim Drive, 0.5 miles (0.8 km) east of Park Headquarters. Can also access from the Steel Visitor Center.	Behind the Steel Visitor Center, on the south side of the building.
The Pinnacles are chimneys formed when hot ash cooled after the big eruption.	Trail is named after William Godfrey, a ranger who died in a blizzard here in 1930.	Nature Note	The flowers here are nourished by springs emerging from the hillside.	The trail's name refers to a sculpture of a woman carved into a boulder along the trail.
Easy			Easy	

Plaikni Falls	Sun Notch	Trail	Discovery Point	Annie Creek
2.2 miles (3.5 km)	0.5 miles (0.8 km)	Total Distance	2.2 miles (3.5 km)	1.7 miles (2.7 km) loop trail
100 feet (30 meters)	115 feet (35 meters)	Elevation Gain	100 feet (30 meters)	200 feet (61 meters)
1 hour	30 minutes	Time	1 1/2 hours	
Waterfall, Flowers	Views of Phantom Ship	Highlight	Lake Views	Creek, Canyon, Flowers
Quiet walk through an old-growth forest to the base of a waterfall surrounded by flowers. Dirt path; accessible to wheelchairs with assistance. See page 1 for more info on this new trail.	Short uphill walk through a meadow to the rim of Crater Lake. Walk along the rim path for great views of the Phantom Ship. Use caution near cliff edges.	Description	Mostly level trail along the rim of Crater Lake, connecting Rim Village with Discovery Point. Fine views of the lake and Wizard Island. Use caution near cliff edges.	Moderately strenuous trail through a deep, stream-canyon. Lots of water, wildflowers, and sometimes wildlife. Self-guiding brochures are available at the trailhead.
Pinnacles Road, 1.2 miles (1.9 km) southeast of the Phantom Ship Overlook.	East Rim Drive, 4.4 miles (7.1 km) east of Park Headquarters.	Trailhead Location	West end of Rim Village, where the paved walk becomes a dirt path. Can also start from Discovery Point.	Mazama Campground, behind the amphitheater, located between loops D and E. Limited parking in E Loop.
Snowmelt, not Crater Lake, is the source of Plaikni Falls' water.	This U-shaped valley was carved by glaciers that once flowed down Mt. Mazama.	Nature Note	Gold prospector John Wesley Hillman first spotted Crater Lake from this point in 1853.	The creek provides the park's drinking water, named the best tasting in Oregon in 2004.
Easy to Moderate			Moderate	

Watchman Peak	Crater Peak	Trail	Garfield Peak	Mount Scott
1.6 miles (2.6 km)	6.4 miles (10.3 km)	Total Distance	3.4 miles (5.5 km)	5 miles (8.1 km)
420 feet (128 meters)	765 feet (233 meters)	Elevation Gain	1,010 feet (308 meters)	1,250 feet (381 meters)
1 hour	3 1/2 hours	Time	2 to 3 hours	3 hours
Panoramic Views	Forest, Views, Solitude	Highlight	Panoramic Views	Panoramic Views
Moderate ascent to a lookout above Wizard Island. Spectacular views in all directions. Great place to watch the sunset. Trail may be closed until August due to snow.	Moderately strenuous walk to the summit of a small volcano. No lake views, but fine views of the Klamath Basin to the southeast. A peaceful walk through forests and meadows.	Description	Rocky climb to a high peak. Spectacular views along the way and at the top. Diverse plant life, many wildflowers. Top section may be closed until late July due to snow. Use caution near cliff edges.	Gradual ascent of the park's highest peak. Great views in all directions. Best in morning, when the light is ideal for lake viewing. May be closed until late July due to snow.
3.8 miles (6.1 km) northwest of Rim Village. Park at the viewpoint surrounded by wooden fences.	East Rim Drive, 3 miles (4.8 km) east of Park Headquarters at the Vidale Falls Picnic Area.	Trailhead Location	East end of Rim Village. Walk behind Crater Lake Lodge along the paved promenade.	East Rim Drive, 14 miles (22.5 km) east of Park Headquarters.
Built in 1932, the peak's historic fire lookout is still staffed by rangers today.	Upper Klamath Lake is the largest in Oregon, but its average depth is only 14 feet.	Nature Note	Rocky slopes along the trail are home to American pikas and yellow-bellied marmots.	Mt. Scott is the park's highest peak—8,929 feet (2,721 meters) in elevation.
Moderate to Strenuous			Strenuous	

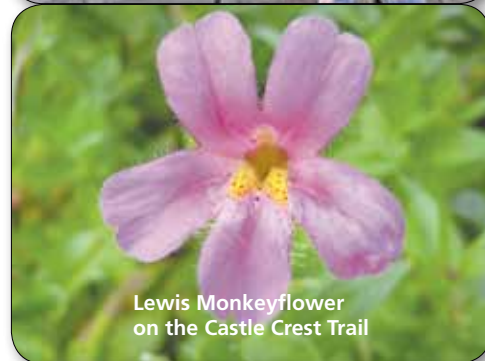
Union Peak	Cleetwood Cove	Trail	Wizard Summit	Fumarole Bay
11 miles (17.7 km)	2.2 miles (3.5 km)	Total Distance	2 miles (3.2 km)	1.8 miles (2.9 km)
1,600 feet (488 meters)	700 feet (213 meters)	Elevation Gain	760 feet (232 meters)	150 feet (46 meters)
5 to 6 hours	1 1/2 hours	Time	1 1/2 hours	1 hour
Panoramic Views	Swim, Fish, Boat Tours	Highlight	Views, Summit Crater	Swimming, Fishing
Long forest walk followed by a very steep climb. Great views from the top and interesting geology, but no view of Crater Lake. Top section may be impassable until late July due to snow.	The only way to reach the shore of Crater Lake. Strenuous trail with a steep grade. See page 3 for full details and page 1 to learn about construction work that will limit lake access in 2011.	Description	Rocky climb to the top of Wizard Island. Spectacular lake views, interesting geology. A path leads around the 90-foot-deep (27-meter) crater at the summit.	Rocky trail along the shore of Wizard Island. Becomes hard to follow after reaching Fumarole Bay. The shallow, clear water is good for fishing and swimming.
Highway 62 at the Pacific Crest Trailhead, 1 mile (1.6 km) west of the Crater Lake road junction.	North side of the lake, 11 miles (17.6 km) from Rim Village if traveling clockwise on Rim Drive.	Trailhead Location	Wizard Island dock, accessible only via a boat tour from Cleetwood Cove. See page 3 for information.	Wizard Island dock, accessible only via a boat tour from Cleetwood Cove. See page 3 for information.
Union Peak is the core of an old volcano eroded by glaciers during the last Ice Age.	Below 200 feet (61 meters), the water in Crater Lake stays 38°F (3°C) year-round.	Nature Note	The dead trees at the summit have been killed by dwarf mistletoe, a parasitic plant.	Abundant lichen on the tree trunks is an indication of excellent air quality.
Strenuous			On Wizard Island	



Wizard Island from the Discovery Point Trail



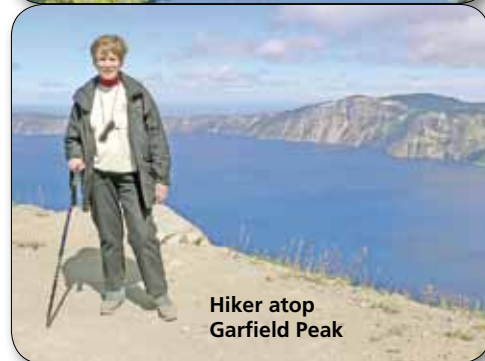
Photographer on Watchman Peak



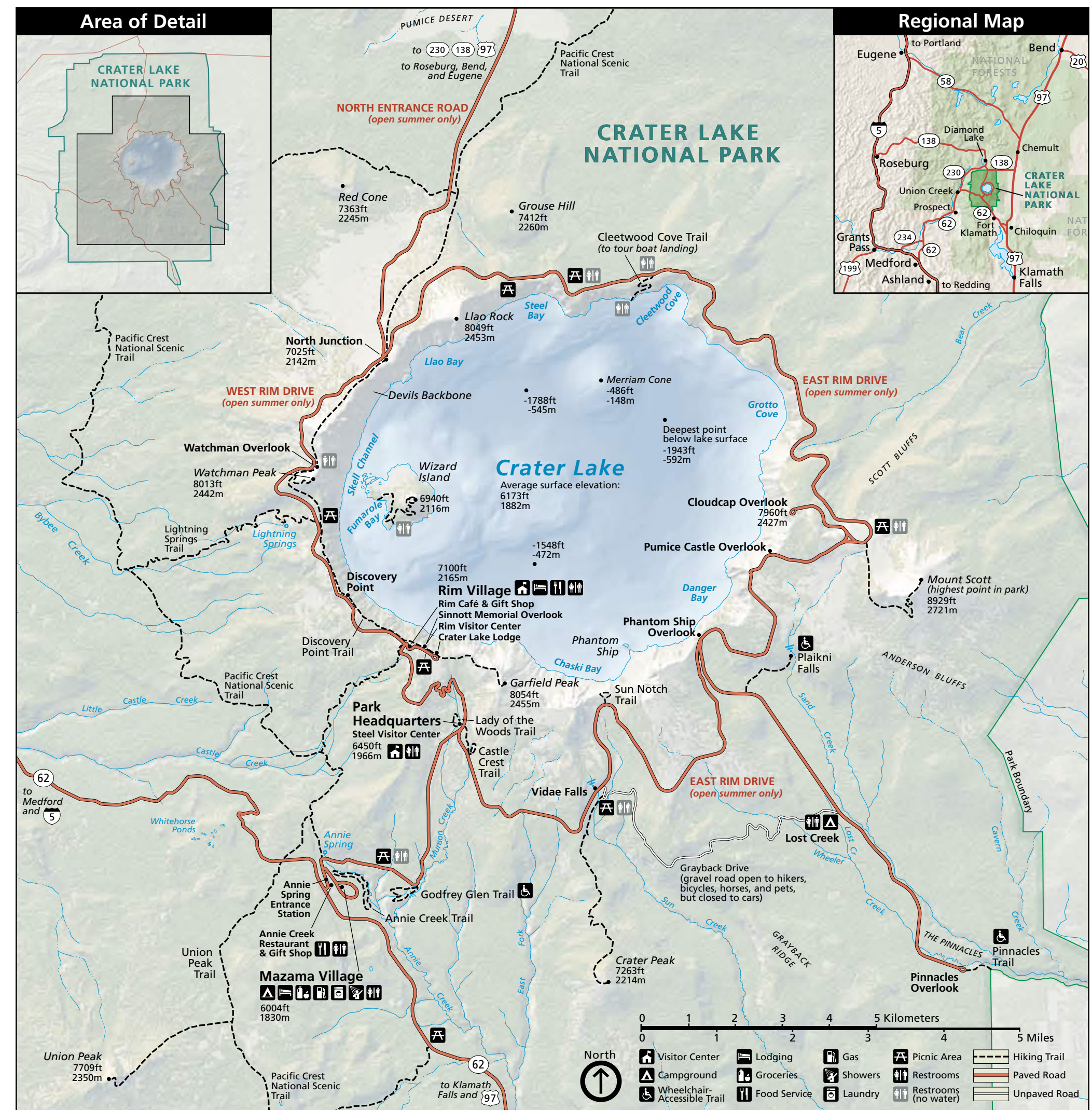
Lewis Monkeyflower on the Castle Crest Trail



The Phantom Ship from Sun Notch



Hiker atop Garfield Peak



Highlights of the Rim Drive

Rim Drive is a 33-mile (53-km) road that encircles Crater Lake. Typically open in its entirety from early July to late October, it provides dramatic views of the lake's most interesting features as well as the jagged peaks, subalpine forests, and open meadows on the caldera's rim. It can be driven in about an hour, but at least 2 to 3 hours are necessary to enjoy the varied sights. There are more than 30 scenic pullouts along the route, many of which have roadside exhibits. Be sure not to miss these 6 "must-see" stops. For more information, pick up the excellent *Road Guide to Crater Lake National Park* (48 pages, \$5.95) at either visitor center.



View from the East Rim Drive

Watchman Overlook
This pullout offers an unmatched view of Wizard Island, a cinder-cone volcano named for its resemblance to a sorcerer's pointed hat. Wizard Island erupted out of the lake around 7,300 years ago and features a 90-foot-deep (27-meter) crater in its rocky summit. To find this unmarked pullout, drive 3.8 miles (6.1 km) west of Rim Village and look for a viewpoint lined with wooden fences.

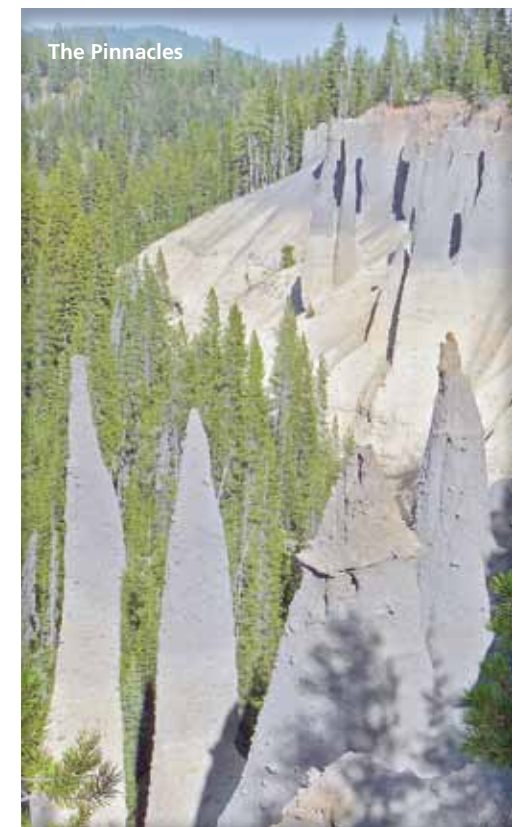
Cloudcap Overlook
Reached by a 1-mile (1.6-km) spur road, Cloudcap Overlook is the highest point on Rim Drive, 1,790 feet (545 meters) above the water. Whitebark pines cling for survival here, dwarfed and contorted by the harsh winds.

Pumice Castle Overlook
Stop here to see one of the park's most colorful and fanciful features: a layer of orange pumice rock that has been eroded into the shape of a medieval castle. Watch carefully for this unmarked viewpoint; it's easy to miss. The pullout is located 1.1 miles (1.8 km) west of the Cloudcap Overlook road junction and 2.4 miles (3.9 km) east of Phantom Ship Overlook.

Phantom Ship Overlook
Nestled against the southeastern shore, Crater Lake's "other island" escapes detection by many park visitors. Though it resembles a small pirate ship, the island is as tall as a 16-story building. It's made of erosion-resistant rock, 400,000 years old—the oldest exposed rock within the caldera. This overlook offers a great view of the Phantom Ship framed through the trees.

Pinnacles Overlook
Located at the end of a 7-mile (11-km) spur road, the Pinnacles are well worth the detour from Rim Drive. A colorful collection of 100-foot-tall (30-meter) spires are being eroded from the canyon wall. The spires are "fossil fumaroles," each marking a spot where volcanic gas rose up through hot ash deposits, cementing the ash into solid rock.

Vidale Falls
Look for this cascading waterfall between Phantom Ship Overlook and Park Headquarters. A spring-fed creek tumbles over a glacier-carved cliff and drops 100 feet (30 meters) over a series of ledges. In summer, wildflowers flourish in the cascade's spray.

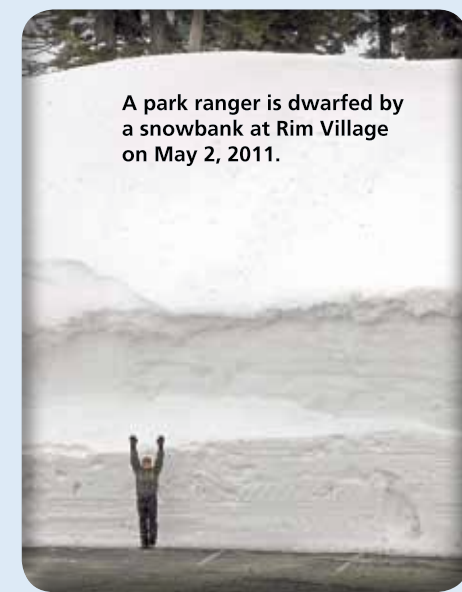


The Pinnacles

Winter Hits Park with 673 Inches of Snow

Crater Lake National Park is one of the snowiest inhabited places in America, a result of its position at the crest of the Cascade Mountain Range. The winter of 2010-11, however, was especially blustery. Storms from the Pacific Ocean dumped more than 56 feet (17.1 meters) of snow at Park Headquarters. To put that number in perspective, it's equivalent to 1.84 inches (4.7 cm) of snow falling every day for an entire year!

Because of the big winter, snow will persist longer than usual in many locations in 2011, causing delays in the opening of roads, trails, and facilities. The last time Crater Lake received more than 600 inches of snow, in the winter of 1998-99, plows needed until July 27 to fully open the Rim Drive.



A park ranger is dwarfed by a snowbank at Rim Village on May 2, 2011.

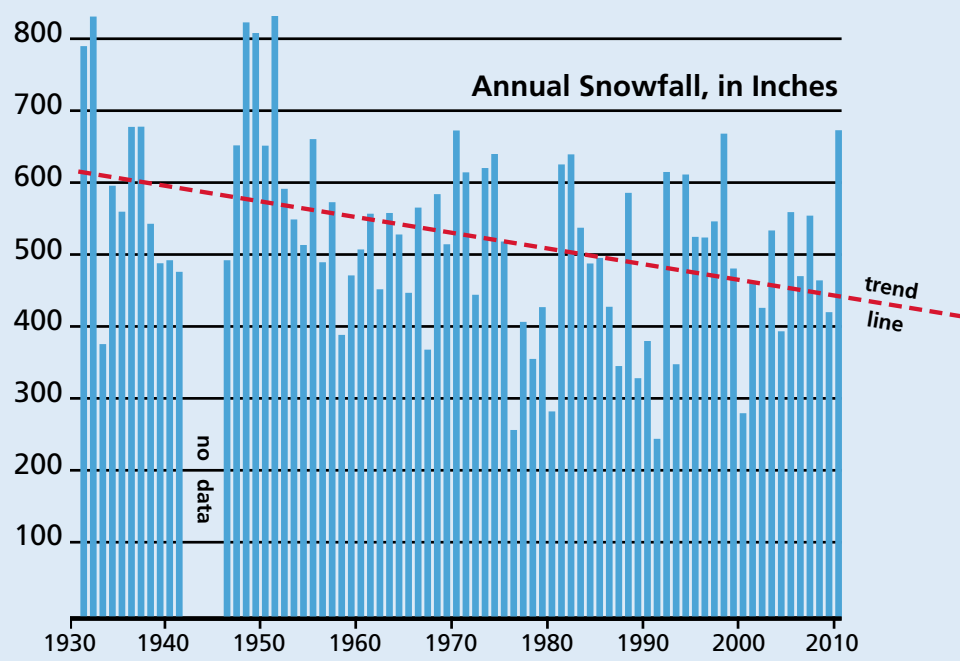
Though causing inconvenience for early summer visitors, winter storms bring many benefits. Snow provides clean water for Crater Lake, considered to be the purest large body of water in the world. And most moisture that falls in the park actually ends up leaving the park to feed the area's major rivers: the Rogue, Klamath, and Umpqua. Wet winters are good news for downstream farmers, ranchers, cities, and wildlife.

So what's behind all the snow? If climate change is making the Earth warmer, why was the Pacific Northwest last winter so cold and wet? According to meteorologist Shad Keene with the National Weather Service in Medford, it's because we experienced a fairly strong "La Niña." La Niña refers to the cooling of surface temperatures in the central and eastern Pacific Ocean near the equator. It happens every 3 to 5 years or so, alternating with "El Niño" events during which opposite conditions prevail. The cooling of equatorial waters, says Keene, shifts the jet stream to bring increased moisture and cooler temperatures to our area. He cautions, however, that "One cold winter with above average snowfall does not mean that global warming isn't occurring. Shorter-term phenomena like La Niña can mask the broader signal of warming that's happening across the globe."

Next winter, the National Weather Service's outlook calls for a likely return to milder conditions. "Mild" at Crater Lake, however, is a relative term. With 44 feet (13.4 meters) of snow falling in even an "average" year, the park is almost always a great place to make a snow angel, build a snowman, or have a snowball fight—even in the middle of August.

Average Annual Snowfall at Park Headquarters, by Decade:

- 1930s – 614 inches (1,560 cm)
- 1940s – 623 inches (1,582 cm)
- 1950s – 572 inches (1,453 cm)
- 1960s – 507 inches (1,288 cm)
- 1970s – 495 inches (1,257 cm)
- 1980s – 475 inches (1,207 cm)
- 1990s – 493 inches (1,252 cm)
- 2000s – 455 inches (1,156 cm)
- '10-11 – 673 inches (1,709 cm)



Snowfall at Crater Lake varies greatly from year to year. Since 1931, however, when rangers first began keeping track, totals have been trending downward. Despite last winter's spike, climate researchers expect the trend to continue. They predict the Pacific Northwest to experience even less snow and warmer temperatures in the decades to come.

Park Weather

Summers at Crater Lake are short, but generally warm and sunny. Even so, there are occasional days when the lake is completely shrouded by clouds. July, August, and early September are your "best bets" for warm, dry weather. In May, early June, late September, and October, sunny days alternate with periods of rain and snow.

FAHRENHEIT	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average Daily High (°F)	34	35	37	43	50	58	69	69	63	52	40	35
Average Daily Low (°F)	18	18	19	23	29	34	41	41	37	31	24	20
Avg. Snowfall (inches)	105	84	84	45	20	4	0.2	0.1	3	22	64	94
Avg. Snow Depth (inches)	80	104	117	112	77	24	1	0	0	2	17	49
Avg. Lake Surface Temp. (°F)	38	37	37	38	40	45	55	59	57	51	44	40

CELSIUS	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average Daily High (°C)	1	2	3	6	10	14	21	21	17	11	4	2
Average Daily Low (°C)	-8	-8	-7	-5	-2	1	5	5	3	-1	-4	-7
Avg. Snowfall (cm)	267	213	213	114	51	10	0.5	0.3	8	56	163	239
Avg. Snow Depth (cm)	203	264	297	284	196	61	3	0	0	5	43	124
Avg. Lake Surface Temp. (°C)	4	3	3	3	4	7	13	15	14	10	7	4



Pikas spend most of their time foraging for flowers and grasses. When they find food, they eat some of it and stack the rest to dry. They survive the winter by snacking on their stored hay.

Pikas in Peril—Is Climate Change to Blame?

Park Joins Research Effort to Find Out

Hike to Garfield Peak this summer and you may encounter a cute critter harvesting wildflowers halfway up the trail. Actually, you are likely to hear the American Pika (*Ochotona princeps*) before you see it. Its distinctive "eek!" pierces the summer sky, warning other pikas of approaching danger. Typically, danger comes in the form of predators—hawks, weasels, foxes, and bobcats. But scientists are learning that an even bigger threat to the American Pika could be climate change.

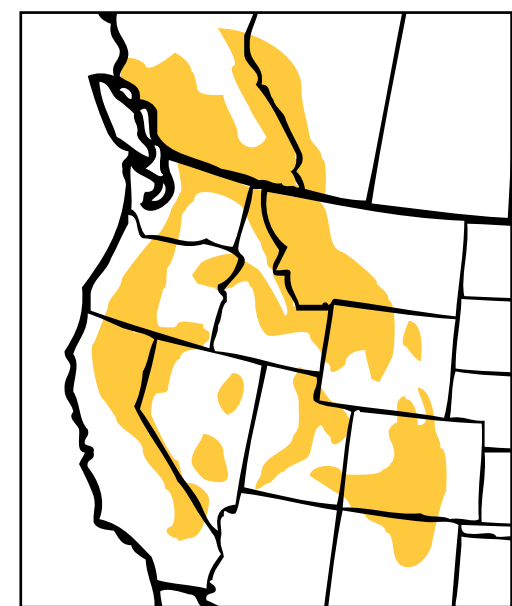
Pikas can't tolerate much heat. A few hours in the sun at temperatures as low as 78°F (26°C) can be fatal, partly because the animal's dense fur limits heat dissipation. To escape the midday sun, pikas seek refuge in the shady voids of rock piles and boulder fields. Even so, warming temperatures seem to be driving some populations extinct. At least 3 Oregon pika communities southeast of Crater Lake have vanished in recent decades. The mechanism of extinction is still unclear. Is hot weather killing the pikas directly? Or is it preventing them from spending enough time aboveground in search of food? Is climate change shrinking the pikas' food supply by altering vegetation patterns? Or is climate change perhaps exposing pika communities to new predators and pathogens?

Surprisingly, research suggests that some individuals might actually be dying from extreme cold. Pikas, which are related to rabbits and hares, do not hibernate. They survive the winter by retreating into rock piles beneath an insulating blanket of snow. As our climate warms and snowpack decreases, pika dens are being exposed to colder air. The fur of the pika may be dense, but it's no match for prolonged periods of freezing weather.

To gain a better understanding of how climate change affects pikas, Crater Lake has joined 7 other National Park Service sites in a 3-year research effort called "Pikas in Peril." Work began here last August, when a team of technicians searched for pikas at 85 locations that seemed to be prime pika habitat. At each location, they established a circular survey plot, 24 meters (79 feet) across. A 5-minute period of silent observation followed, during which the technicians looked and listened for pika activity. Fresh droppings and food caches also qualified as evidence of pika occupation. All told, pikas were found to be inhabiting 55 of the 85 plots.

At a dozen plots, technicians left behind temperature sensors, which began recording air temperature data once an hour. When analyzed, these data may shed light on why certain sites are occupied and others are not. And in the future, if pikas disappear from certain sites, the temperature records may help explain why. Technicians also removed something from a number of plots: pika scat. To determine how closely the park's pika populations are related to each other, they collected 190 fecal samples. Genetic analysis of the droppings' DNA is now underway. The results might provide answers about the pika's ability—or inability—to relocate and repopulate as climatic conditions change. For project updates and the latest findings, visit the "Pikas in Peril" website: http://science.nature.nps.gov/im/units/ucbn/monitor/pika/pika_peril/index.cfm.

This summer, technicians plan to survey 50 additional sites at Crater Lake and revisit half of last year's sites. The goal is to identify 100 locations that are suitable for long-term monitoring. Crater Lake is one of 4 parks that have pledged to establish permanent monitoring plots. In future years, the park may enlist volunteers from the public—"citizen scientists"—to perform follow-up surveys. In the meantime, if you spot an American Pika in the park, savor the experience. Pikas have an innocence, charm, and diligence that is fun to watch. If you sit quietly, they will often proceed about their business, paying you no mind. We can only hope that future generations of park visitors will have the same opportunity to observe this special species on the rocky rim of Crater Lake.



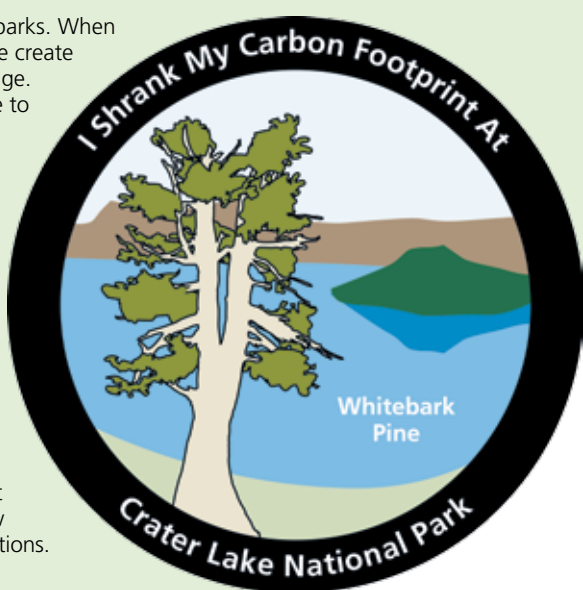
American Pikas inhabit rocky slopes from Canada to New Mexico—including 16 units of the National Park System. Often, they live on isolated peaks. While some mammals can migrate in response to climate change, most pikas probably cannot.

Shrink Your Carbon Footprint for \$2

Climate change is affecting our national parks. When we visit parks in gas-powered vehicles, we create pollution that contributes to climate change. But starting this September, you'll be able to compensate for your vehicle's emissions with a \$2 souvenir carbon-offset sticker!

Your dollars will go toward producing clean energy for America's power grid, displacing energy that otherwise would be generated by fossil fuels. See the back of the sticker, available at either visitor center, for details. Your purchase will offset the CO₂ created by driving 150 miles in an average vehicle.

Species at risk: Whitebark Pines on Crater Lake's rim are under increasing attack by beetles. The park's cold climate once kept the trees safe, but milder winters are now allowing beetles to survive at higher elevations.

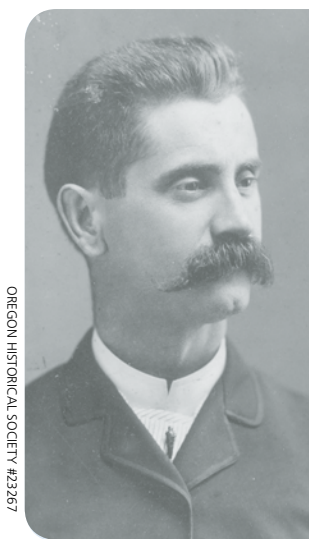


Headlines That Made History

President Cleveland Protects Crater Lake; Crater Lake Found to be America's Deepest

In the 21st century, many of us take the existence of national parks for granted. In the late 19th century, however, the future of the national park idea was still very much precarious—and the fate of Crater Lake entirely uncertain. In 1886, two key events transpired that led to the permanent protection of Crater Lake and our ability to view and visit the lake in an undisturbed state today. 2011 marks the 125th anniversary of these historic events and seems a fitting time to recall and celebrate the efforts of the man most responsible: William Gladstone Steel.

A resident of Portland, Will Steel first visited Crater Lake as a tourist in the summer of 1885. Upon reaching the rim, he stood in awed silence and vowed to do whatever necessary to save the "grand and beautiful" lake from private exploitation. Returning to Portland, he circulated a petition among the city's elite, wrote letters to regional newspaper editors, and rallied the support of Oregon's congressional delegation. In January of 1886, House Representative Binger Hermann asked President Grover Cleveland that Crater Lake be protected from private development while Congress considered the merits of establishing a national park. The president assented. Remarkably, Will Steel had accomplished his goal in less than 6 months, at the age of 31.



Will Steel first saw Crater Lake on August 15, 1885, and dedicated his life to protecting it. Steel predicted: "The time is coming when men of wealth who have looked with pride upon the Alps, will cross the great Atlantic, wonder at the grandeur of Niagara, linger in the valleys of the Yellowstone, gaze with rapture at the fleeting marvels of the Rocky Mountains, and at last, stand on the walls of Crater Lake, overcome with astonishment and mute with an unspeakable admiration of the sublimity of nature as there unfolded."

On February 1, 1886, President Cleveland signed an executive order withdrawing 10 townships (360 square miles) of public land around Crater Lake from settlement or sale. It was a good thing he did, because even though Oregon's representatives immediately introduced bills into the House and Senate calling for the creation of a national park, the bills foundered in the face of opposition from sheep-grazing interests and those who saw parks as a drain on the treasury. It would take Congress another 16 years to pass legislation establishing Crater Lake National Park.

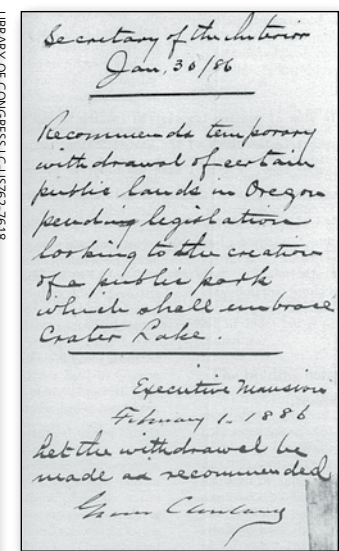
Will Steel's other achievement of 1886 was to help initiate, organize, and conduct a scientific survey to plumb Crater Lake's waters. The lake and its surroundings had yet to be mapped or studied. The expedition consisted of 35 men, mostly soldiers, and was funded by the U.S. Geological Survey. Steel took charge of procuring 3 boats and a depth-sounding device, which consisted of a lead pipe suspended on piano wire wrapped around a spool. Steel's biggest challenge was getting the boats to the lake. Constructed in Portland, they were transported by rail to Ashland, carried by 65 horses and mules to the lake's rim (a trip that took a week), then lowered over the precipice to the shore using thick ropes, wooden sleds, and a full day of human toil.

Here's how Steel described what happened next: "No time was lost in getting our soundings under way. The first was made about 100 yards from shore. It was supposed that we might possibly find as much as 100 feet of water, but, as the lead ran out, our excitement grew with each succeeding 100 feet, until over 1,000 feet were out. At 1,200 feet the machine stopped, and our pent-up feelings exploded in one wild yell of delight." In a 3-week span from mid-July to early August, the crew made a total of 168 soundings, discovering, in places, waters of nearly 2,000 feet (610 meters). Crater Lake had been revealed to be the deepest lake in America, surpassing even Lake Tahoe. For the first time, scientific data was available to back up the claim that Crater Lake was not only grand and beautiful, but a site of national importance.

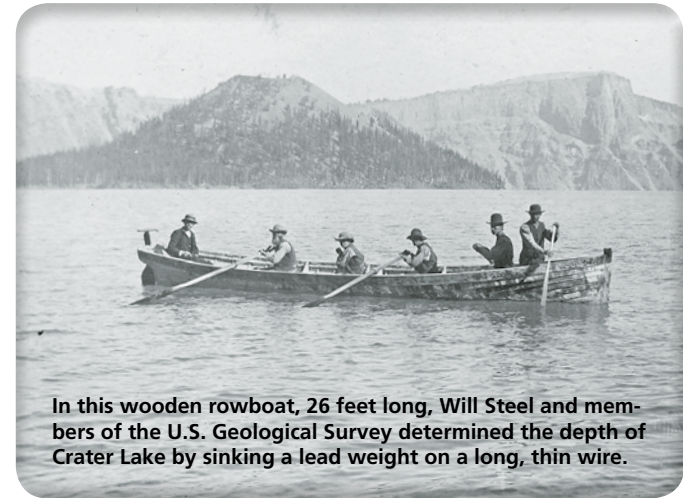
In the years after 1886, Will Steel continued to be Crater Lake's greatest champion and promoter. He campaigned relentlessly for its elevation to national park status, raised funds for the construction of visitor amenities such as roads



Although Theodore Roosevelt signed the bill establishing Crater Lake National Park in 1902, Grover Cleveland (above) provided initial protection for the lake 16 years earlier.



By signing this handwritten executive order on February 1, 1886, President Cleveland forbade the sale and settlement of public lands surrounding Crater Lake.



In this wooden rowboat, 26 feet long, Will Steel and members of the U.S. Geological Survey determined the depth of Crater Lake by sinking a lead weight on a long, thin wire.

and Crater Lake Lodge, and eventually served as the park's second superintendent. If not for his efforts—particularly those of 1886—the lake may never have achieved permanent protection as a public park. In the words of historian Rick Harmon, the life of Will Steel "provides a vivid case study of a single person's powerful impact on the decisions of government and the course of history." Even 125 years later, it's an inspiring reminder of what each of us can accomplish through dedication and hard work.

Noise in Our National Parks

Minor Annoyance or Cause for Concern?

Many of us visit national parks to escape the clang and clamor of everyday life. Crater Lake, in particular, has long been valued for its tranquil setting. But from car alarms to commercial jets, our world is getting louder, and national parks are not immune. Noise is on the rise, even here at Crater Lake. While noise is certainly annoying, does it actually do any harm to our parks? Do human-generated sounds have an impact on natural systems?

To find out, in 2000 the National Park Service established an office in Fort Collins, Colorado, called the Natural Sounds Program (NSP). Its mission is to help parks understand, manage, and protect their "acoustic environment." In 2010 the NSP provided funding and support for a 2-year sound-monitoring survey at Crater Lake. The survey's goal is to assess the park's acoustic environment by measuring and identifying the sounds produced at various locations.

Scott McFarland, a student at the Oregon Institute of Technology, was hired by the park as an Acoustic Technician to deploy and maintain the equipment. It was hard work: last summer, he carried 70 pounds of gear up to 7 miles each way to 12 different sites in the park's remote backcountry. Last winter, he hauled the equipment to an additional 2 locations by snowshoe. At each site, McFarland assembled a temporary monitoring station and left it to record continuous audio data for 30 straight days.

The monitoring stations detected a variety of natural sounds—a virtual symphony. Coyotes howled, insects buzzed, owls hooted, and birds sang. Elk sniffed at the microphone. A tree was heard falling in the forest. And no matter how remote, each station also picked up considerable noise from passing aircraft

and distant motorcycles. Propeller aircraft commonly reached 60 decibels of volume, which, says McFarland, is "like someone having a loud conversation right in your ear."

While intrusive sounds can disrupt our enjoyment of nature, can they also have a negative impact on natural systems? Research from around the world indicates yes, particularly to wildlife. Noise can alter an animal's physiology, elevating its heart rate and blood pressure while suppressing its immune system. Noise can also affect an animal's behavior. To communicate in a noisy environment, for example, a bird might be forced to sing at a higher volume or a different pitch, actions which might require expending extra energy.

Noise can make it harder for an animal to defend its territory, protect its young, and find a mate. Last summer, McFarland observed that male Pacific Tree Frogs at Quillwort Pond (an important amphibian breeding site 4 miles south of Rim Village) suspended their mating calls when the noise from aircraft exceeded 48 decibels. Noise can also interfere with finding food. Predators that hunt using sound—including bats, owls, and dolphins—may have trouble locating prey. Some species abandon noisy locations altogether, which restricts the extent of their habitat.



Pacific Tree Frog (*Pseudacris regilla*). Sound monitoring suggests that male tree frogs may halt their mating calls when human-generated noise exceeds 48 decibels.



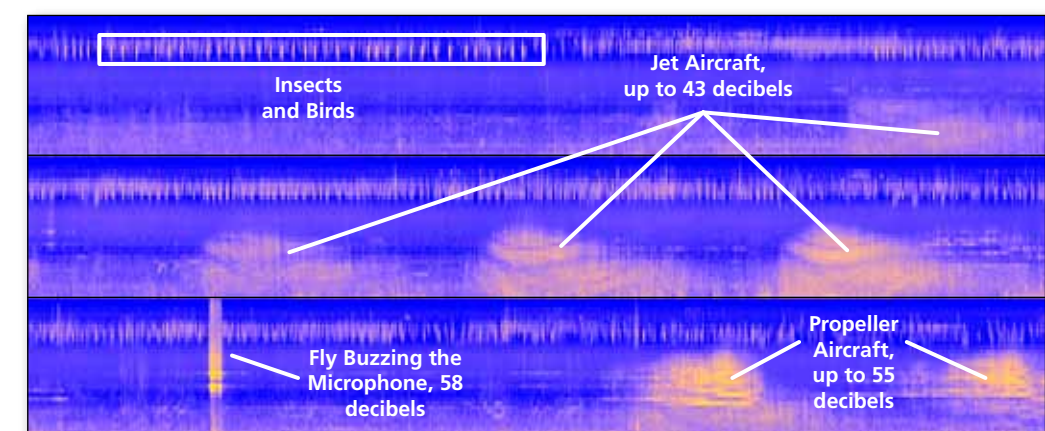
This summer, McFarland will continue his survey of Crater Lake's acoustic environment. He won't need to haul his gear as far; the goal for 2011 is to document the array of sounds produced near the park's roads, trails, and developed areas. In the future, this baseline data will help park managers make informed decisions when evaluating proposed actions that would affect the park's soundscape.

Meanwhile, each of us can take steps to reduce our acoustic impact. Consider disabling your car alarm and the beeps made by electronic door locks. Use the mute option on cameras and cell phones. Keep your car radio at a low volume, turn off your engine when stopped, and drive at posted speed limits (driving



Sound monitoring station. The station records continuous digital audio (mp3) as well as acoustic data.

faster creates more noise). Speak softly when having a conversation, and take time to listen to the rich bounty of natural sounds around you. By protecting our soundscapes, not only do we give other creatures a better chance to survive in the wild, we preserve opportunities for ourselves to find refuge, relaxation, and tranquility in the natural world.



A spectrogram is a visual representation of acoustic data. This spectrogram depicts the sounds heard on Wizard Island from 8:00 to 9:00 a.m. on July 10, 2010. Each row corresponds to 20 minutes. Sounds are shown in orange; the more intense the color, the greater the volume. The frequency, or pitch, of the sound is indicated by its vertical position. Insects and birds produce high-frequency sounds; transportation noise is mostly low-frequency. Despite Wizard Island's remote location in the middle of Crater Lake, its soundscape experienced 6 episodes of aircraft disturbance in this 1-hour period.

Support Your Park—

Buy Crater Lake License Plates

If you live in Oregon, consider choosing Crater Lake license plates for your vehicle. For a one-time charge of \$20, you can outfit your car with these beautiful plates while supporting park projects. You can purchase Crater Lake plates at any time, not just when buying a new vehicle or renewing your registration. Visit any Oregon DMV office or www.oregon.gov/ODOT/DMV for details.

Money from plate sales goes into an endowment that funds the operation of the park's Science and Learning Center. The center opened in 2006 and consists of two renovated historic structures near Park Headquarters: the original Superintendent's Residence and Chief Naturalist's Residence. These buildings now provide living and working space for visiting scientists, teachers, and artists.

The Science and Learning Center draws researchers and educators to Crater Lake from around the world, encouraging them to use the park as an outdoor laboratory and classroom. For more information about the Science and Learning center and its programs, visit www.nps.gov/crla/slc.htm.



Science and Learning Center



Volunteer Your Time

Looking for a hands-on way to help the park? Consider sharing your time and talents as a Crater Lake VIP (Volunteer-In-Parks). Full-time volunteers are needed throughout the year to help staff visitor centers, present interpretive programs, and assist with research and monitoring projects. Opportunities are advertised at www.volunteer.gov/gov. Volunteers are provided free housing in exchange for 3 months or more of service.

To assist with special projects or volunteer periodically, join The Friends of Crater Lake, a non-profit organization founded in 1993. Members remove non-native plants, build and maintain trails, contact visitors, and much more. For more information, visit www.friendsofcraterlake.org.

The Crater Lake Ski Patrol has been assisting winter visitors and maintaining the park's cross-country ski trails since 1983. Members, identifiable by their bright red parkas, receive training in wilderness first aid, survival skills, search and rescue, map and compass use, and avalanche forecasting in exchange for at least 6 days of service each winter. For more information, visit www.craterlakeskipatrol.org.



Volunteer Ski Patrollers

Shop in the Visitor Center Bookstores

When you shop in the Steel Visitor Center or Rim Visitor Center, all proceeds from your purchase are invested back into the park. The visitor center bookstores are operated by the Crater Lake Natural History Association, a non-profit organization established in 1942 to support the park's educational and scientific programs. Money generated from bookstore sales goes to fund a variety of important projects, including the printing of this newspaper!

Some of the bookstores' offerings are described to the right. For a complete list of merchandise and to buy items online, visit www.craterlakeoregon.org. Items can also be purchased by phone by calling 541-594-3111.



Get Involved with the Crater Lake Trust

The Crater Lake National Park Trust is a non-profit organization that raises private funds to support park projects and connect the park with surrounding communities.

The Trust helps fund, for example, the transportation of more than 5,000 grade-school students to the park each year. In a program called "Classroom at Crater Lake," kids engage in hands-on science and learn about wildlife, old-growth forests, and winter ecology. For over half the kids, it's their first visit to the park. The Trust also organizes events for the public at Crater Lake, including free "Family Fun Days" twice annually. And the Trust's lecture series brings "the park to the people" with free public talks in local communities on the park's history, geology, and ecology.

The Trust produces a free, monthly, e-mail newsletter that can help you keep in touch with the park and learn about upcoming events and volunteer opportunities. To sign up, visit www.craterlaketrust.org or send an e-mail to info@craterlaketrust.org. You can also find the Trust on Facebook and Twitter, or write to P.O. Box 62, Crater Lake, OR 97604. Share your love of the park by making a tax-deductible gift.



"Classroom at Crater Lake"

Share Your Comments

Whether you have a compliment, concern, or suggestion, we'd like to hear from you! This is your national park, and we value your input on how best to manage it. You can provide feedback in several ways. Ask for a comment form at a visitor center, send an e-mail to crla_information_requests@nps.gov, or write to: Superintendent, Crater Lake National Park, P.O. Box 7, Crater Lake, OR 97604.

Recommended Reading



Crater Lake: The Story Behind the Scenery
Large photos with detailed captions accompany the text of this popular book. 48 pages, \$11.95.



Crater Lake: Gem of the Cascades
A comprehensive guide to the park's geologic story. 168 pages, \$15.95.



Road Guide to Crater Lake National Park
Consult this handy guide as you drive the park's roads for a deeper understanding of the sights along the way. 48 pages, \$5.95.



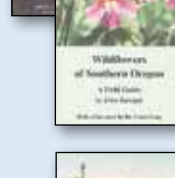
Trails of Crater Lake National Park & Oregon Caves National Monument
A detailed guide to 24 hiking trails. 112 pages, \$14.95.



Exploring Crater Lake National Park: A Family Activity Book
Fun, educational puzzles and activities for kids. 103 pages, \$12.95.



Trees To Know in Oregon
Tree identification is easy and enjoyable with this photo-packed, fact-filled guide. 151 pages, \$12.00.



Wildflowers of Southern Oregon
Detailed descriptions and vivid photos of more than 400 flower species, organized by color and family. 182 pages, \$18.95.



Crater Lake National Park: A History
A thoughtful and thorough account of the park's rich human history. 280 pages, \$19.95.

Other Useful Items



The Mountain That Became a Lake CD
Listen to this CD as you drive the park's roads. Park rangers and American Indians share facts, stories, and insight about Crater Lake. 60 minutes, \$16.95.



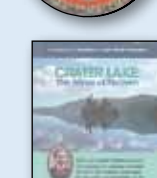
Crater Lake Topographic Map
1:55,000 scale. Waterproof and tearproof. \$11.95.



Plants & Animals of Crater Lake Nat'l Park
This folding, waterproof pocket guide will help you identify the park's most visible species. 11 pages, \$6.95.



Star and Planet Guide
Rotating "planisphere" for locating stars, planets, and constellations in the night sky. \$11.95.



Crater Lake: Mirror of Heaven DVD
Expanded version of the film shown at the Steel Visitor Center. Traces the lake's human history from American Indian narratives to the protection of the lake as a national park. 27 minutes, \$19.95.



Crater Lake Water Bottle
Stainless steel water bottle with Crater Lake logo. 25 ounces (.75 liters), \$17.95.



Crater Lake Cinch Sack
Carry your water, snacks, and sunscreen. Available in blue, red, or green. \$16.95.



Clark's Nutcracker T-Shirt
100% cotton t-shirt with Clark's nutcracker on front and Crater Lake on back. In red or green. \$16.95.

EXPERIENCE YOUR AMERICA™



National Park Service
U.S. Department of the Interior
Crater Lake National Park
P.O. Box 7
Crater Lake, OR 97604

—Thank You!