This dramatic view into the caldera of the Cascades’ largest volcano exemplifies the beauty and uniqueness of Newberry National Volcanic Monument. Taken from the Paulina Peak trail, the image shows Paulina Lake (one of the deepest lakes in Oregon with depth reaching 249 feet) in the foreground, East Lake in the distance, and the edge of the stunning Big Obsidian Flow (youngest lava flow in Oregon at 1,300 years) pushing through the lush forest in between. Up the trail at the Paulina Peak Viewpoint (7,984 feet), visitors are treated with the biggest view in Oregon accessible by car. On a clear day, the Cascade Range is visible extending into California (Mt. Shasta) and Washington (Mt. Adams).

**Useful Contacts**

**What Can I See In...**

**Newberry Caldera:**
- Paulina Visitor Center
- Big Obsidian Flow
- Paulina Falls
- Paulina and East Lakes
- Drive to the top of Paulina Peak (7,984 ft.) for one of the best views in Oregon!

**2 Hours:**
Lava Lands Visitor Center and Lava Butte
Due to limited parking atop Lava Butte, 30 minute parking permits are issued on a first-come, first-served basis. Vehicles longer than 22 ft. prohibited. See page 6 for more information.

**Half-Day:**
Above sites plus explore Lava River Cave
Allow 2 hours, round trip, to see entire cave. Lava River Cave site gate closes at 4pm. See page 7 for more information.

**Full Day:**
Above sites plus Lava Cast Forest
Drive gravel road 9720 (9 miles one way). Pick up a brochure at one of the NNVM visitor centers or download a PDF from Deschutes National Forest website.

**2-3 Days:**
See ALL of Newberry National Volcanic Monument!
Visit all of the above sites plus the following sites within Newberry Caldera:
- Buy a 3-Day Monument Pass for $10!

**Newberry National Volcanic Monument**
- Current Information Hotline
  541-383-5700
  EMERGENCY 911

**Deschutes National Forest**
- Bend Fort Rock Ranger District: 541-383-4000
- www.fs.usda.gov/centraloregon

**Discover Your Forest**
- www.discoveryourforest.org

**Crater Lake NP Information**
- 541-594-3000
- 800-720-6339
- www.nps.gov/cr Different contact numbers provided for various services.
Newberry National Volcanic Monument! Be sure to ask your parents to find out more about Junior Forest Ranger programs at Lava Lands Visitor Center and at the Newberry Caldera.

I Spy, You Spy: Scout It Out!

Cross these off as you see them anywhere on the Newberry National Monument! Be sure to ask your parents to find out more about Junior Forest Ranger programs at Lava Lands Visitor Center and at the Newberry Caldera.

I Spy, You Spy: Scout It Out!

Cross these off as you see them anywhere on the Newberry National Monument! Be sure to ask your parents to find out more about Junior Forest Ranger programs at Lava Lands Visitor Center and at the Newberry Caldera.

Word Search!

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<tr>
<td>WOLF</td>
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</tbody>
</table>

Can You Track an Animal?

Draw a line from the animal to the track it leaves.

1. Owl
2. Skunk
3. Mouse
4. Chipmunk

Do your part to protect the Monument

Be sure to Leave No Trace.
(Bigfoot’s been doing it for years!)

Practice these seven principles:
1. Know Before You Go
2. Choose The Right Path
3. Trash Your Trash
4. Leave What You Find
5. Be Careful With Fire
6. Respect Wildlife
7. Be Kind To Other Visitors

For the Greener Good

The Deschutes National Forest continues to be an innovative leader. The Forest has reduced fossil fuel usage in operations through E-85 fuel, hybrid and electric vehicles, and ‘off-grid’ facilities at Lava River Cave. Newberry National Volcanic Monument is also planning to test shuttle options in the Lava Lands area. Construction of a multi-use path in 2014 will connect key Monument attractions and nearby communities. These alternative transportation improvements will provide opportunities for visitors to reduce their own carbon footprint while visiting Newberry. An alternative transportation feasibility study has been initiated to take an even closer look at how the Forest can continue taking positive strides toward a greener good.

RECREATION FEES ARE REQUIRED at designated day use sites on the Deschutes National Forest including sites within Newberry National Volcanic Monument.

Valid Recreation Passes include: National Forest Recreation ePass ($5), National Forest Recreation Day Pass ($5), Annual Northwest Forest Pass ($30), Interagency Annual Pass ($80), Interagency Senior Pass ($10), Interagency Access Pass (FREE with documentation), Interagency Military Pass, and the 3-day Monument Pass ($10). The 3-day Newberry National Volcanic Monument Pass is sold only at Monument Welcome Stations (see below) and is good only for sites within the Monument.

Passes are available at Newberry National Volcanic Monument Welcome Stations (Lava Lands Visitor Center, Lava River Cave, Paulina Visitor Center and Newberry Welcome Station), East Lake Resort (Day Passes only), Forest Service offices throughout Washington and Oregon, and online at: http://www.fs.usda.gov/detail/centraloregon/passes-permits/recreation

Benefits: 95% of the revenue from Recreation Passes stays in the local area for facility maintenance, interpretive services, and ecosystem protection. These passes are your opportunity to care for our public lands and pass on your natural legacy. Thank You!
Welcome to Newberry National Volcanic Monument!

Please note: During construction Lava River Cave will close. Call the Monument Hotline at 541-383-5700 to get up-to-date access information for Lava River Cave and other Monument sites.

New Accessible Pathway Connects Gems of the Monument

We're also pleased to highlight another major improvement beginning this season. Stemming from Lava Lands and making connection with Benham Falls East Trailhead and the resort community of Sunriver, construction of a 5.5 mile, accessible multi-use paved path is underway! Upon completion of this project in the fall of 2014, Central Oregon visitors and residents will find alternative means to travel between gems of the National Forest and Monument, as well as make a direct connection from Sunriver to the Newberry National Volcanic Monument. Providing visitors with this opportunity to reduce fossil fuel consumption, while getting physically active will have a positive influence on climate change and an individual’s carbon footprint, as well as the wellness of visitors and residents of Central Oregon.

Newberry National Volcanic Monument 25 Year Celebration

A motivated local citizen action group championed the designation of portions of the Newberry Volcanoes complex as a National Volcanic Monument on November 5, 1990. We invite you to return to celebrate 25 years through recreation, art, discovery, and fun starting in 2015.

Leave No Trace

Finally, we ask you to please remember that the choices you and your group make while traveling and camping on public lands can leave an impression. To ensure that impression on the land and those around you is positive, please practice the Leave No Trace techniques highlighted on page 2.

We truly hope that you enjoy this remarkable National Monument!

Scott McBride, Monument Manager
Deschutes National Forest
for the greatest good

Newberry’s Volcanic Glass: Obsidian

What is it? Obsidian is a natural volcanic glass, remarkably similar to the glass in your windows. Unlike most rocks, obsidian is formed with minimum crystal growth and has a disordered internal structure similar to liquid.

Don’t Be a Rock Raider!

Why Can’t I Take a Piece Home? Newberry National Volcanic Monument was established by the U.S. Congress on Nov. 5, 1990. As stated in legislation, its purpose is to “preserve and protect for present and future generations Newberry’s remarkable geologic landforms.” Each of us plays a vital role in caring for our National Monument. Damaging or removing even a small sample of rock degrades the resource and it’s illegal (36 CFR 211.9 a and b). Please report any violations you see to a Forest Service ranger.

How Can I See Obsidian and Learn More? Travel to the Newberry Caldera and hike the Big Obsidian Flow trail to observe this unique volcanic rock. To learn more or to obtain a sample of obsidian, visit the Paulina Visitor Center or Lava Lands Visitor Center.

Black Bear (Ursus americanus) courtesy U.S. Fish and Wildlife Service

Black Bear tracks

Quick Fact: Newberry Volcano’s oldest lavas are about 400,000 years old.

Be Bear Aware!

Newberry Caldera is not only part of a National Monument but is also a wildlife refuge. Leave no trace and always keep a clean camp to prevent wild animals from obtaining human food and garbage.

- Store all food and food-related items in a closed, hard-sided vehicle or suspended at least 10 ft. off of the ground and 4 ft. from any supporting tree or pole.
- Ice chests, coolers, boxes, cans, tents and soft-sided campers are not bear-resistant!
- Store pet food and livestock feed the same as human food, out of reach from bears and other animals.
- Deposit all garbage in wildlife-resistant trash containers.
- Remove all food and garbage from your campsite before you leave.
- Never approach or feed any wildlife.

Don’t be careless with food or garbage when camping. Wild animals, especially bears, may wander through at any time, day or night. Wild animals near a campground are more likely to lose their fear of humans. These animals can often become increasingly aggressive in their attempts to obtain human, pet, and livestock food.

Newberry Volcano's oldest lavas are about 400,000 years old.
NEWBERRY CALDERA

VISIT the Paulina Visitor Center to get maps, information, and shop the Discover Your Forest bookstore. Recreation passes are available for purchase when open. The only Caldera self-service, 24-hour, day-use fee station and information alcove are located in front of the Visitor Center.

WALK the Big Obsidian Flow trail, 1 mile loop trail exploring Oregon’s youngest lava flow offering a panoramic view of the caldera rim from the upper overlook. An accessible paved path leads to a steep set of stairs before crossing the rocky, uneven and sharp surface of the Big Obsidian Flow. Due to the sharp obsidian surface, closed toe shoes are recommended and pets are NOT recommended.

VIEW Paulina Falls, a short accessible path leads to the upper overlook and picnic site to view the 80-foot waterfall. Hikers may choose to walk the 1/4 mile one-way switchback trail to the base of the falls for a different perspective.

DRIVE or HIKE to the top of Paulina Peak, the highest point on the rim of Newberry Volcano. An unpaved 3 1/2 mile road takes vehicles (less than 23 feet in length) to the summit for a view into the Newberry Caldera and surrounding areas. The steep, 2-mile one-way section of Crater Rim Trail begins just after the pavement ends, where it leads hikers to Paulina Peak.

LEARN about the Caldera at a Ranger Program! Inquire at the Visitor Center about program schedules.

HELP PROTECT YOUR MONUMENT RESOURCES

- No camping or campfires outside of developed sites in Newberry Caldera
- 14-night stay limit on the Deschutes National Forest and in Newberry Caldera
- Do not carve, chop, nail, or otherwise damage trees or vegetation. Chainsaws in the campgrounds are prohibited. Limit firewood collection to ‘dead and down’ wood only and to locations outside of visual distance of developed sites.
- Be ‘Bear Aware.’ Please store food properly and keep a clean camp.
- Do not use off-highway vehicles within Newberry National Volcanic Monument.
- Control and clean up after pets
- Do not REMOVE or DAMAGE resources such as Obsidian. Don’t be a rock raider!

SLEEP IN A VOLCANO!

Camping in Newberry Caldera is managed by Hoodoo Recreation. For reservations and information contact Hoodoo Recreation:

Reservations: (7-days): (877) 444-6777
Information: (M-F) 541-338-7869
www.hoodoo.com

Lodging and other amenities are available at:

- Paulina Lake Lodge
  541-536-2249
  www.paulinalakelodge.com
- East Lake Resort
  541-536-2230
  www.eastlakeresort.com

Newberry Area Campgrounds

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<tr>
<th>Campground</th>
<th>Price Per Night</th>
<th>Total Sites</th>
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<tr>
<td>Prairie</td>
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<td>Ogden Group Camp</td>
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<td>McKay Crossing</td>
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<td>Newberry Group Camp</td>
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<td>Cinder Hill</td>
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*Accessible sites may be available
Newberry Caldera

Caldera Trails

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<tr>
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<th>Miles (One Way)</th>
<th>Elevation Change</th>
<th>Use</th>
<th>Difficulty</th>
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<tr>
<td>Parallel Trail #58.3</td>
<td>2</td>
<td>6450-7000 feet</td>
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<td>Paulina Falls Trail #57</td>
<td>0.5</td>
<td>6120-6280 feet</td>
<td>hike only, accessible*</td>
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<td>Paulina Lakeshore Loop #55</td>
<td>7.5 (round trip)</td>
<td>6330-6560 feet</td>
<td>hike only, accessible*</td>
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<td>Paulina Peak Trail #57 (spur trail)</td>
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<td>Peter Skene Ogden Trail #56</td>
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<td>4300-6350 feet</td>
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<td>Silica Trail #58.5</td>
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<td>Crater Rim Trail #57 (loop)</td>
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<td>Obsidian Flow Trail #58.1</td>
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<td>Newberry Crater Trail #3958</td>
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*Segment of trail is accessible

Quick Fact: Paulina Peak is 4,000 ft. above the city of Bend.
LEARN about volcanoes in the Lawrence A. Chitwood Exhibit Hall and orient yourself with the 3-D topographic model of Newberry National Volcanic Monument.

DRIVE to the top of Lava Butte on a paved road 1 3/4 miles one way. Parking is limited to 10 vehicles (less than 22' long), so please ask for a 30 minute time permit from the Ranger as you arrive. Lava Butte permits are issued on a first-come, first-served basis. On busy days show up early, as there are a limited number of permits available.

HIKE the Lava Butte Rim Trail, an unpaved 1/4 mile loop with a panoramic view of Newberry National Volcanic Monument and the surrounding area. Please stay on the trail.

WALK the Trail of the Molten Land, a paved 1 mile loop with a 1/4 mile spur to a viewpoint. Full color interpretive signs provide a self-guided tour. The first 1/3 mile of the trail is accessible.

WALK the Trail of Whispering Pines, a paved 1/3 mile loop. Follow the edge of the Lava Butte flow as it winds through the shady whispering pines. Pick up an Interpretive Botanical Guide to learn about local plants along the way.

SHOP in the Discover Your Forest store for books, maps, snacks, and gifts.

CHECK the Visitor Center front desk for film and ranger program schedule.

Remember, please don’t feed the wildlife!
**LAVA RIVER CAVE**

Discover another world below ground in Oregon’s longest lava tube (almost 1 mile each way). You’ll walk down over 100 stairs as you slowly descend into the darkness. You’ll be amazed at the diversity of wildlife and vegetation that thrives in the cave. Whether you’re a naturalist, a hiker, or simply looking for a unique experience, Lava River Cave is the place to be.

CAVE TOURS: 3:00PM Daily

Join a ranger guided one-hour tour of Lava River Cave to learn more about cave geology and ecology. Tours are limited to 15 people, reservations are accepted day of tour.

Only certified service dogs are allowed in the cave. There is not enough shade in the parking lot to safely leave pets in vehicles.

**CAVE VISITATION GUIDELINES**

Cave Bat Health:
- Visit the Bat Conservation Station at Lava River Cave to help protect Lava River Cave bats and stop the spread of White-nose Syndrome. Get a bat stamp of approval to enter the cave.
- If you have been in a cave or mine outside of Oregon or Washington, no item worn or used in that cave or mine is allowed in Lava River Cave (including clothing, boots, headlamp, cameras, backpack, etc.) Read the article below for more information on White-nose Syndrome.

Comfort and Safety:
- Carry 2 light sources with you into the cave. Only propane lanterns, headlamps, or flashlights please. There is no lighting in the cave, but various light sources are available for rent or sale at cave entrance.
- Wear warm clothing — cave temperature averages 42°F.
- Wear sturdy closed-toe shoes or boots as cave access requires walking on steep stairs and uneven surfaces.
- Watch your head. Child carrier backpacks are not recommended. Ceiling height in the cave is variable with some rock outcroppings.
- Please use restrooms before entering the cave. There are NO toilets in the cave. It is a 2 miles round-trip, and average time underground is 2 hours.

Cave Access:
- The crawl space near the end of the cave is CLOSED to visitors to prevent the potential spread of spores that cause White-nose Syndrome.
- It is important to disinfect your clothing, boots, and gear worn in Lava River Cave before going into another cave on or off the Forest. Contact a ranger for more information or read the disinfecting guidelines on the Deschutes National Forest website. See link below.

**Protecting Bats at Lava River Cave**

From White-nose Syndrome

by Julie York, USFS Wildlife Biologist

White-nose Syndrome (WNS) has killed almost 6 million hibernating bats in the Eastern and Midwestern U.S. since 2006. It now occurs in 25 states and 5 Canadian provinces.

WNS is caused by a cold-loving fungus that thrives in caves and mines. Named for the white powdery appearance around bats’ noses, the fungus may also occur on ears, wings, and forearms or may not be visible at all. The fungus agitates bats, awakening them during winter hibernation. Bats use their water and fat reserves too quickly, reducing their chance for surviving winter. The fungus primarily spreads from bat-to-bat contact but may also be spread by bringing contaminated human clothing or equipment from one cave or mine to another.

There are no known health risk to humans from WNS. However, the impacts to humans from the loss of bats may be devastating. Bats play a crucial role in the health of our ecosystem by consuming many insects, including pest species. Nationally, scientists estimate annual economic losses in the billions of dollars due to an increase in insect pests as a result of the high mortality of bats from WNS and wind powered turbines.

WNS is not known to occur west of the Rocky Mountains, so help us prevent or slow its spread by doing your part to keep this disease out of caves in Oregon.

For more information about white-nose Syndrome, scan this QR code with your smart device or go to: www.whiteenosesyndrome.org

For information about other caves on the Deschutes National Forest, please go to Lava Lands Visitor Center or Paulina Visitor Center.

**Pika: Living on the Lava**

By Karen Gentry, Discover Your Forest Education Program Coordinator

What small mammal living on the lava is more often heard than seen? The American Pika, a small squeaky relative of the rabbit. Their loud sharp, shrill cry can be heard on rare occasions as you travel along the Trail of Molten Land. It will not only take a keen ear to hear the “Eeeep!” of a pika protecting their territory and food cache from an invader, but it will also take a sharp eye to catch a glimpse of this elusive critter on the lava.

Adult Pikas weigh about 4-6 oz., with gray brown fur, rounded ears and no tail. Pika distribution on Newberry National Volcanic Monument is not precisely known, however, they have been documented on lava flows from the summit of Paulina Peak, flows directly adjacent to the Deschutes River at Dillon Falls, and on the Lava Butte flow.

Pikas are thermally sensitive and do not tolerate temperatures over 80 °F. In the heat of the day, pikas will retreat to their lava dens, which stay at a fairly constant temperature of 40–60 °F.

So, what do they do the rest of the day? These industrious little rock rabbits are foraging—constantly gathering food from the surrounding forest and lava flows—clipping, snipping, and gathering plant material creating “hay piles” of vegetation. At low elevations, Pika are active year round on the Monument. Their feeding behaviors on the lava flows shift seasonally, feeding early—midsummer on forbs such as Penstemon, Ocean Spray, Bitterbrush, Wax Curant, and Snowbrush. They have even been documented nibbling Ponderosa Pine needles during the winter.

As you hike along the lava flows at Newberry National Volcanic Monument, remember this cute little rock rabbit could be watching you.

Photo: Kim Boddie

Quick Fact: Newberry volcano has more than 400 volcanic cones and vents.
POINTER OF INTEREST

1. Lava Lands Visitor Center offers information, interpretive exhibits, films, bookstore, water, restrooms, trails, and picnic tables. Get a free 30 minute time permit to drive up Lava Butte for a panoramic view of the Monument and surrounding area. Permits are issued on a first-come, first-served basis.

2. Lava River Cave, at one mile long, is the longest lava tube in Oregon. Cave visitors should wear closed toe shoes, warm clothing and carry at least two light sources. Various cave lighting options are available for rent and sale at the cave entrance.

3. The Deschutes River and Benham Falls are located on the northwest border of the Monument. Picnic, walk, bike, and observe wildlife along this scenic stretch of the Deschutes. Connect to the Deschutes River Trail here on foot or bike. A short interpretive loop trail from Benham Falls East trailhead tells the story of the site’s logging history. Benham Falls is a ½-mile walk from the parking area.

4. Lava Cast Forest offers a one-mile self-guided interpretive trail winding across a 7,000 year old Newberry Volcano basalt lava flow that enveloped a mature forest taking the shape of the trees as it cooled. Check the information board at the trailhead for the latest interpretive materials.

5. Paulina Falls drops dramatically nearly 80 feet over volcanic cliffs. Access the Falls via a short walk from the parking lot off Road 21.

6. Paulina Visitor Center, on the floor of Newberry Caldera, offers information, interpretive exhibits, a bookstore, and a 24-hour information and day use fee station. Stop in to get the ranger program schedule.

7. Paulina Peak is the highest point on the rim of Newberry Volcano at 7,984 feet, offering a 360-degree view of the surrounding landscape. Vehicles less than 23 feet in length may ascend the narrow, unimproved road to the peak when the road is snow-free and the gate is open, typically late June through late October.

8. Paulina and East Lakes may originally have been one large lake, much like Crater Lake. The lakes offer sailing, paddling and fishing.

9. Big Obsidian Flow is Oregon’s youngest lava flow (1,300 years old). Over 170 million cubic yards of obsidian and pumice erupted from a vent within the caldera. A one-mile loop interpretive trail guides you across a corner of the flow.

Quick fact: Newberry Volcano is 1,200 sq. miles in area, about the size of Rhode Island!