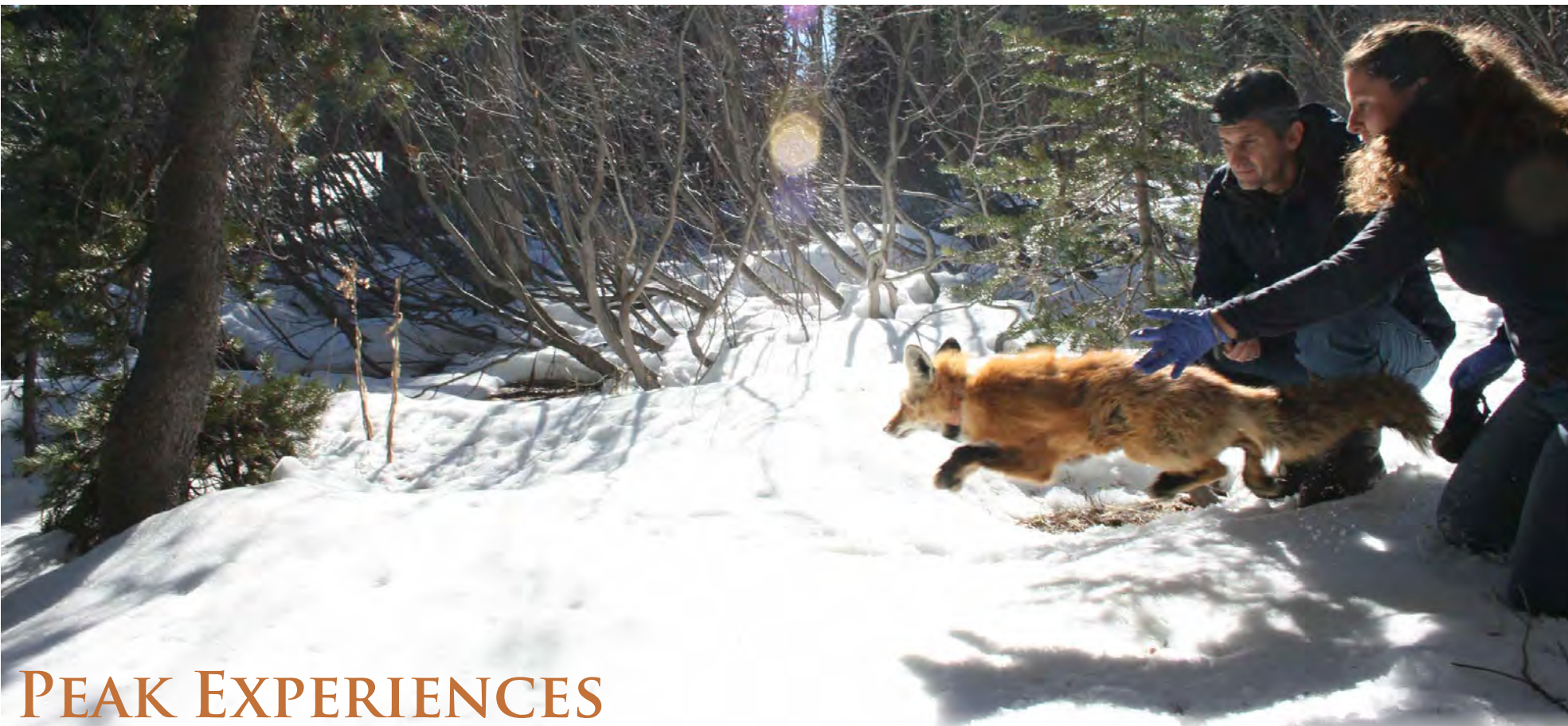




PEAK EXPERIENCES

November 2018 - May 2019

Pete Figura (left) and Deana Clifford of California Department of Fish and Wildlife release a male red fox back into the wild on February 13, 2018. CDFW photo by Corrie McFarland.

Conservation through Science

Sierra Nevada red fox (SNRF) populations have declined since the 1930s. When Berkeley biologist Joseph Grinnell began an intensive statewide wildlife survey, he hoped to provide future scientists with "access to the original record of faunal conditions in California."

Today, the observations Grinnell recorded are the baseline for our limited understanding of this native mountain fox.

Lassen Volcanic National Park and the surrounding Lassen National Forest (referred to as the Lassen area) are home to one of only two known SNRF populations. This makes the Lassen area a unique living laboratory for understanding and conserving one of California's rarest mammals.

The National Park Service and Lassen Volcanic exist in part to preserve natural and cultural resources. The SNRF is one of more than 1,050 plant and animal species found within the park. Scientific study is key to understanding and conserving all species. For threatened species like the SNRF, it offers its best chance of conservation and recovery.

The park cannot complete such a large scale of scientific research on its own. Only through partnership with federal, state, academic, and non-government entities can we deepen our understanding of the natural and cultural resources we protect.

Success in recent SNRF survey efforts by California Department of Fish and Wildlife has energized efforts to track this notoriously elusive species. As we continue to uncover the mystery of the SNRF's decline, we can also celebrate the confirmation of its persistence—more than 80 years after Grinnell's initial observations.



-Jim Richardson, Superintendent

Tracking One of California's Rarest Mammals

In winter of 2018, California Department of Fish and Wildlife (CDFW) biologists began an intensive camera survey effort in and around Lassen Volcanic National Park. By March, they had captured and collared one male and two female Sierra Nevada red foxes. These three foxes are the first of their kind captured in over a decade and offer hope of better understanding this state-listed threatened species.

Data collected from the GPS tracking collars will provide significant insights into the ecology of the Sierra Nevada red fox (SNRF). This includes the size and characteristics of its home range, how it uses habitat, where it dens, and its reproductive biology.

CDFW Environmental Scientist Jennifer Carlson discussed data gathered from the first collared fox, "we have already been surprised by the large area the fox has been using and the distance it has traveled—it has averaged over seven straight-line miles per day in very rugged terrain."

SNRF is a genetically and geographically distinct subspecies of red fox that prefers to live at high elevations, usually above 5,000 feet. A handful of subtle adaptations aid its survival in harsh, winter conditions. Dense fur on its toe pads provide insulation and snowshoe-like float. An unusually dense winter coat provides warmth and insulation against the elements.

Three of North America's ten red fox subspecies reside in high elevation areas: Sierra Nevada (*V. v. necator*), Cascade (*V. v. cascadenis*), and Rocky Mountains (*V. v. macroura*). In California, the Sacramento Valley red fox occupies portions of the Sacramento Valley and other non-native red foxes are widespread in low-elevation habitats.

Although once found throughout the Sierra Nevada and Southern Cascade mountain ranges, the SNRF is now one of the rarest mammals in California. The subspecies' abundance and distribution had declined dramatically in the last century. Today, the only known populations reside in Lassen Volcanic National Park and the surrounding Lassen National Forest (known as the Lassen area) and Sonora Pass area, near Yosemite National Park.

Continued on page 5

Two Decades of Survey

The first contemporary study of Sierra Nevada red fox (SNRF) in Lassen Volcanic National Park and the surrounding Lassen National Forest began in the 1990s. Until last winter, scientists have had limited success in learning more about this elusive and rare animal.

1992-2002

- Motion-triggered cameras detect SNRF in the Lassen Area
- 1 male and 4 females fitted with radio telemetry collars; radio components fail shortly afterward

2008

- Scat detecting dogs detect one SNRF in the park and one in the Caribou Wilderness
- Motion-triggered cameras capture SNRF along trails in and east of the park

2010

- Motion-triggered cameras reveal a SNRF near Yosemite National Park.
- Additional SNRF detected north of and within Yosemite.

2018

- Camera survey detects SNRF in two areas of the park
- 1 male and 2 females (one pregnant) fitted with GPS tracking collars
- Likely den site located and one pup observed



Motion-sensor camera image



Camouflaged Trap



Sierra Nevada red fox in a box trap





GENERAL INFORMATION

Snow Camping in Southwest Walk-in Campground

Contact Us

Visitors are encouraged to contact the park via email during the winter season. Recorded information is available by phone.

Email Address
lavo_information@nps.gov

Website
www.nps.gov/lavo

Information Line
Phone: (530) 595-4480

Mailing Address
Lassen Volcanic National Park
P.O. Box 100
Mineral, CA 96063-0100

Social Media
LassenNPS
Facebook · Twitter · Instagram · Flickr · YouTube



Road Closures

Lassen Volcanic National Park Highway usually closes by mid-November for the winter season due to snow. Butte Lake, Warner Valley, and Juniper Lake roads close to vehicle traffic for the season due to snow around late October and usually reopen in late June or early July. Plowing on the park highway usually begins in early April and continues through late June. See more about spring road clearing on page 8.

Lost & Found

The park's lost and found is located in the Kohm Yah-mah-nee Visitor Center. Please call (530) 595-4480.

Gasoline

There is no fuel in the park during the winter season. The nearest gas station from the Southwest Entrance is in Chester, 30 miles east on SR-36. There is no gasoline in Mineral, 8 miles west on SR-36. The nearest gas stations from the Manzanita Lake entrance are in Shingletown, 17 miles west on SR-44, or in Old Station, 13 miles east on SR-44.

Food

Lassen Café is open on limited hours on weekends and selected holidays only. See page 4 for more information. The nearest areas for food and supplies from the Southwest Entrance are Mineral and Chester and Shingletown, and Old Station from the Manzanita Lake Entrance (see above for additional distances).

Phones

Cell phone coverage in the park is spotty. An emergency phone is located in the 24-hour vestibule of the Kohm Yah-mah-nee Visitor Center (911 only).

Entrance Fees

Entrance fees are required year-round. The 1-7 day vehicle fee is \$10 between December 1 and April 15. This fee changes to \$25 between April 16 and Nov 30. Display your fee receipt, Lassen Annual pass, or Interagency Pass on your vehicle's dashboard.

Firearms

Visitors are responsible for understanding and complying with all applicable State of California, local, and federal firearms laws. Federal law prohibits firearms in certain facilities in this park identified by posted signs at public entrances. For more information, visit oag.ca.gov/firearms or contact the chief park ranger at (530) 595-6100.

Pets in the Park

Activities with pets are limited at Lassen. Pets must be restrained at all times and are not permitted in the park backcountry (including over snow), or inside visitor centers or other facilities. Vast public lands nearby offer outdoor opportunities with pets. Email us for more information.

Winter Safety

Winter adventure at Lassen involves risk. **Sled with caution; sledding is the number one cause of visitor injury in the winter season.** Learn more about how to prepare for a safe winter visit below.

Accessibility

The 24-hour vestibule in the Kohm Yah-mah-nee Visitor Center and its restrooms are wheelchair-accessible. The Loomis Ranger Station and restrooms in the Loomis Plaza are also wheelchair-accessible.

Weather

With elevations from 5,650 feet to 10,457 feet, a wide variety of weather conditions occur in Lassen Volcanic. Expect a 5° temperature decrease for every 1,000 foot increase in elevation. Prepare for your visit; bring layered clothing, snow boots, a hat and gloves.

Manzanita Lake Average Temperatures (5,850 ft)			
Month	High/Low	Month	High/Low
November	56/21 °F	February	51/13 °F
December	50/14 °F	March	53/16 °F
January	50/13 °F	April	61/23 °F

Camping

The Southwest Campground is open year-round. Fires and fire pans are not permitted in the winter, however self-contained barbecues are allowed in the paved parking area. The fee for snow camping or camping in a vehicle is \$10 per night. Overnight vehicles must park between islands to allow for snow plowing operations. Please self-register at the entrance station. Wilderness permits are required for backcountry camping.

Snowmobiling

Snowmobiling is not permitted anywhere within the boundaries of Lassen Volcanic National Park. Email us about snowmobile areas/trails outside the park.

Hydrothermal Areas

Sulphur Works is accessible to visitors year-round (snow travel required). For your safety, do not travel or camp near hydrothermal areas. The snow in these areas can look solid but may actually be a weak snow layer hiding pools of acidic boiling water. **Walking too close to these areas has resulted in severe injuries for previous visitors.**

Emergencies

If you have an emergency call 911. If phone service is not available, contact a park employee, go to the Loomis Ranger Station, or use the emergency phone in the 24-hour vestibule of the Kohm Yah-mah-nee Visitor Center.

Explore Safely

Safety is Your Responsibility

- Bring water
- Carry waterproof gear
- Pack layers for warmth
- Be avalanche aware
- Check the weather forecast
- Carry a map and compass
- Tell someone where you are going and when you will return

Lassen Ski Patrol Here to Help

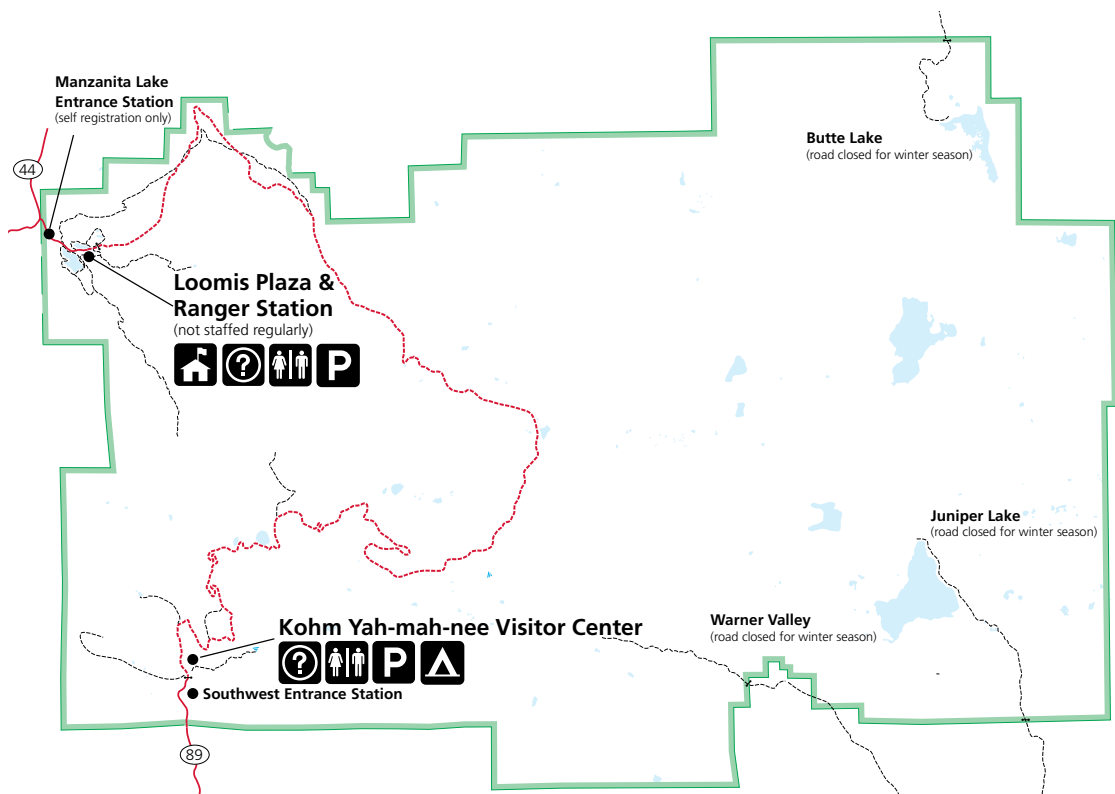


Volunteer ski patrol members wear the universal first aid symbol and nametags. They can provide emergency assistance as well as information about winter safety, avalanche equipment, routes, weather conditions, and general information. Look for them throughout the Southwest Area.





WINTER ADVENTURE



Winter Services

Manzanita Lake Area

The Loomis Plaza is accessible year-round and provides access to the Loomis Ranger Station and an accessible restroom facility. The Loomis Museum is closed during the winter. The ranger station is not staffed regularly and does not offer information services. Call 911 in case of an emergency.

Southwest Area

The Kohm Yah-mah-nee Visitor Center is accessible year-round. See page 4 for winter hours and dates. A vestibule is open 24 hours and provides accessible restrooms, drinking water, an emergency phone (911 only), and a backcountry permit station.

Sulphur Works

Follow the park highway route one mile north from the Kohm Yah-mah-nee Visitor Center to reach this steamy spot that is visible year-round. Snowshoes or skis are the easiest method of travel, although it is often possible to walk on a packed trail. *Please be courteous and do not walk in ski tracks.* For your safety, traveling or camping in or near hydrothermal areas is prohibited. Snow surrounding these areas can look solid but, may actually be a weak layer hiding pools of acidic boiling water. **Walking too close to these areas has resulted in severe injuries for previous visitors.**

Nordic Skiing

Nordic skiers delight in the sweeping views from the park highway route and the gentle climb along Manzanita Creek. Be sure to bring equipment; rentals are not available in the park.

Backcountry Skiing/Snowboarding

Backcountry skiers and snowboarders will agree that Lassen offers spectacular terrain with an uncommon solitude. The southwest area offers the most challenging routes. Lassen's backcountry is recommended only for experienced backcountry skiers and snowboarders.

Snowshoeing

If you are new to snowshoeing, consider joining a ranger-led snowshoe walk (see page 4). For those more familiar with walking on snow, opportunities abound at both the north and south entrances. The Manzanita Lake area and the park highway route offer gradual climbs. Numerous routes out of the southwest area offer trails of greater difficulty, many with spectacular views. See pages 6-7 for route information.

Sledding

Excellent sledding hills can be found in the southwest area. Smaller hills can be found in the Manzanita Lake area, however sledders often head to Eskimo Hill snow play area located 1.5 miles east on Highway 44. **Sled with caution; sledding is the number one cause of visitor injury in the winter season.**

Winter Backpacking

Experience the splendor of Lassen's winter by snow camping. Enjoy unimpaired night sky watching and a silence and peace only a snowy park can offer. Wilderness camping permits are required. Self-registration is available outside the Loomis Ranger Station and in the Kohm Yah-mah-nee Visitor Center 24-hour vestibule.

Additional Information

Be sure to bring snowshoes or skis; equipment rentals are not available in the park.

Snowshoes are provided for ranger-led snowshoe tours only.

There are no fuel services in the park during the winter season.

Avalanche Safety

Lassen is avalanche country. Each year avalanches claim more than 150 lives worldwide. Knowledge, information, and equipment are key to preventing and surviving avalanche accidents.



Before you enter the winter wilderness, ensure that you have a solid understanding of avalanche awareness and carry avalanche gear including a shovel, probe, and transceiver (beacon).

Be especially cautious during and after a snow storm. Spring road opening also warrants extra caution, as avalanches and rock slides can occur on plowed sections of the highway at any time.

A Lassen avalanche awareness guide is available at the Kohm Yah-mah-nee Visitor Center and online at go.nps.gov/winter_safety.

Thanks Partners!

Lassen Association is a non-profit partner that supports and assists Lassen Volcanic National Park in research, interpretation, and conservation programs. Lassen Association promotes the discovery of Lassen Volcanic, enriches the experience of visitors, and supports the preservation and protection of the park for future generations.

During the winter season, the Lassen Association bookstore, located within the Kohm Yah-mah-nee Visitor Center, offers books, maps, trail guides and videos about the natural and cultural history of the park. The bookstore also offers a large selection of educational gift merchandise to enhance your park experience and take home as memories. All profits go directly to the park.



Lassen Association
(530) 348-2670
lassenassociation@yahoo.com
www.lassenassociation.org

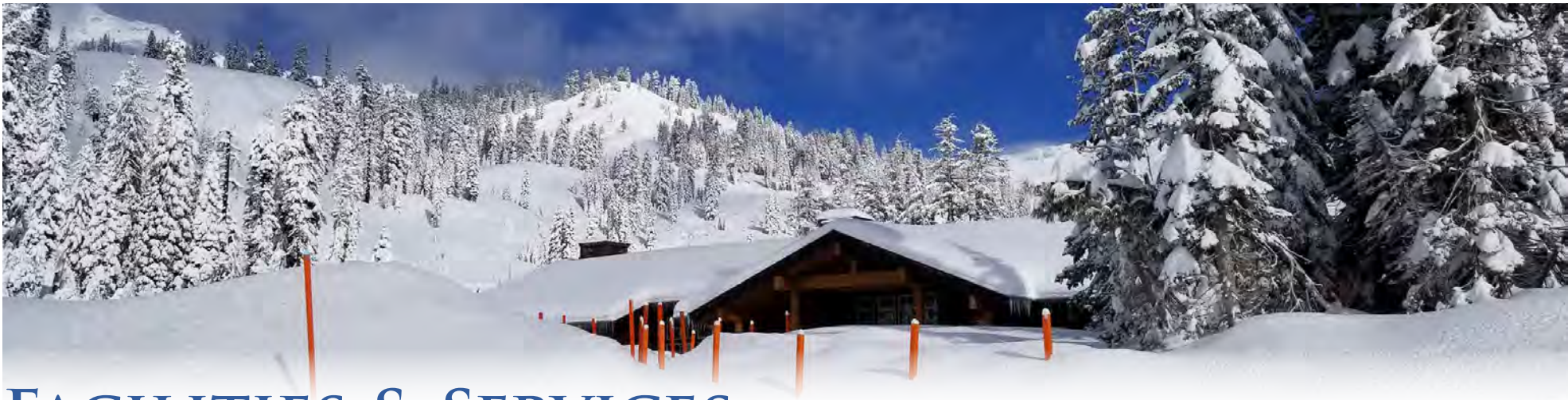


Lassen Park Foundation
(530) 378-2600
info@lassenparkfoundation.org
www.lassenparkfoundation.org

Lassen Park Foundation provides support to preserve and interpret the special natural and cultural resources of Lassen Volcanic National Park and its environs for future generations.

With the generosity and dedication of our supporters, the non-profit Park Foundation has provided funding for projects including the Volcano Adventure Camp and Youth Camping program, Lassen Peak trail restoration, the Kohm Yah-mah-nee Visitor Center, the Lassen Crossroads interpretive area, and the winter snowshoe education program.

Please become a Friend of Lassen by contributing to the Lassen Park Foundation! Your donation is tax-deductible.



FACILITIES & SERVICES

Kohm Yah-mah-nee Visitor Center

Kohm Yah-mah-nee Visitor Center

Make Lassen’s year-round visitor center your base camp for your winter visit. Please note that the visitor center may close at any time due to inclement weather.

Winter Season	November 1 through April 30
Hours	9 am to 5 pm
Closed	Thanksgiving and Christmas Mondays and Tuesdays, exceptions: January 1, 2019 January 21, 2019 (MLK Day) February 18, 2019 (Presidents’ Day)

Lassen Café & Gift

Shop the Gift Shop for souvenirs including art and crafts from local artists, or enjoy café offerings including self-serve frozen items, snacks, and hot and cold beverages.

Hours	11 am to 2 pm
Days	Weekends only*

*May also be open on selected holiday period weekdays. Visit go.nps.gov/lavo/hours for more details.

You are also welcome to bring your own meal to enjoy in the dining area; a microwave is available.

Lassen Association Bookstore

Browse books, maps, trail guides, and videos about the park’s natural and cultural history at the Lassen Association bookstore. The bookstore also offers a large selection of educational gift merchandise to enhance your park experience and take home as memories. All profits go directly to the park. The bookstore is open during regular visitor center hours.

Delve into Lassen’s Natural Wonders

Stroll through the exhibit hall and learn more about Lassen’s volcanic nature. Make an earthquake or locate the ancient rim of eroded Brokeoff Volcano.

Ranger-led Snowshoe Walks

Dates

Saturdays and Sundays
January 5 through March 31, 2019

Time/Location

1:30 pm - 3:30 pm
Meet outside the Kohm Yah-mah-nee Visitor Center
Space is limited

Cost

Suggested \$1 donation for snowshoe maintenance

Ages

8 years and older. Infants and children in carriers are not allowed for safety reasons

What to Bring

Boots, warm layers, water, lunch/snacks

There is a something truly fantastic about walking on water—the frozen type that is. There is a simple joy in the feeling of floating on a surface that might otherwise engulf you and an unexpected sense of security when you dig your toes into a slippery slope. This man-made adaptation allows us to embrace a new form of freedom, enabling us to explore Lassen’s vast winter landscape.

As it is easier to learn a new skill or activity if someone helps you take the first steps, Lassen offers ranger-led snowshoe walks to introduce you to the sport.

Ranger-led snowshoe walks are an excellent way to learn or practice snowshoeing techniques and explore Lassen in its winter form. As participant experience and fitness level may vary, so too does route and distance. At the beginning of each snowshoe walk, a ranger will demonstrate how to put on snowshoes and how to move around. Once the basic techniques are covered, the group heads out into the snow and the adventure begins.

Snowshoes provide a fun way to experience the wonder of walking on water. Snow creates a smooth surface that just beckons you to wander and explore wilderness in its purest form. Join us for a ranger-led walk and experience the feeling of floating for the first time or bring your own snowshoes and blaze a path all your own.

Entrance Fees

1-7 Day Winter Season

Vehicle Fee - \$10
December 1 - April 15
Valid for six days from date of purchase.

1-7 Day Vehicle Fee - \$25

April 16 - November 30
Valid for six days from date of purchase.

Annual Passes

Annual passes can be obtained at park entrance stations, at the Kohm Yah-mah-nee Visitor Center, by phone, or online. To purchase a Lassen Annual Pass visit www.pay.gov or call (530) 595-6120. To purchase an interagency pass, visit store.usgs.gov/pass or call 888-ASK-USGS ext1.

Lassen Annual Pass - \$50

Valid for one year from month of purchase. Also honored at Whiskeytown National Recreation Area.

Interagency Annual Pass - \$80

Covers all national park units and other federal recreation areas with entrance fees. Valid for one year from month of purchase.

Interagency Access Pass - Free

Free lifetime pass for U.S. citizens and permanent residents who are permanently disabled.

Interagency Senior Pass \$20 (Annual) or \$80 (Lifetime)

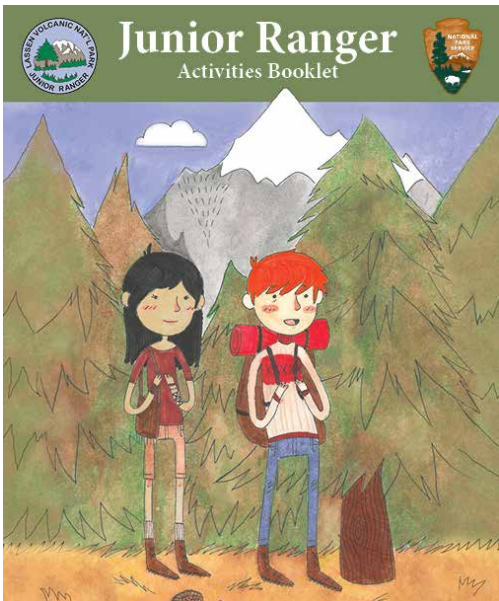
Lifetime pass for U.S. citizens and permanent residents who are 62 years or older.

Military Annual Pass - Free

Free annual pass for active military members and their dependents.

Every Kid in a Park Pass Voucher required to obtain pass

Free annual pass for fourth graders. Covers all national park units and other federal recreation areas with entrance fees. Valid through August 2019. Voucher itself is valid for entrance in lieu of the pass.



Join the Club!

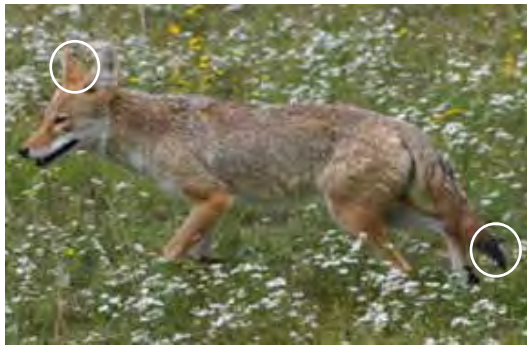
Become a Junior Ranger

Kids between the ages of 7 and 12 are invited to participate in our Junior Park Ranger program. Choose from a variety of activities while learning more about Lassen Volcanic National Park. Kids who complete the Junior Ranger program can earn a badge.

Our younger explorers are welcome to participate in the Lassen Volcanic National Park Chipmunk Club. Kids can learn more about wildlife in the park and earn a Chipmunk Club sticker.

Pick up your Chipmunk Club card or Junior Ranger booklet at the Kohm Yah-mah-nee Visitor Center.





Red Fox
Vulpes vulpes necator

CDFW Photos

Tail tip: **White**
Tail length: **Long**
Back of ear: **Black**
Body color: **Varies**

Gray Fox
Urocyon cinereoargenteus
Tail tip: **Black**
Tail length: **Long**
Back of ear: **Orange**
Back and tail: **Silvery Gray**

Coyote
Tail tip: **Black**
Tail length: **Short**
Back of ear: **Orange**

Long tail: nearly body length | Short tail: much shorter than body length

Tracking One of California's Rarest Mammals

Continued from the front page

The reason for the decline is unknown. Research, which began as early as 1937 under biologist Joseph Grinnell, has proven difficult due to the animals' low density and rugged habitat. Likely impacts include trapping (prohibited in 1974), reduced prey populations resulting from historic meadow over-grazing, competition from coyotes and American martens, and climate change effects such as reduced snowfall.

Success in current survey efforts may provide our best opportunity for understanding and fostering Lassen's native red fox. CDFW researchers Corrie McFarland, Maria Immel, Pete Figura, Jennifer Carlson, and Deana Clifford made a breakthrough last winter in locating what is likely the first identified SNRF den.

In the earlier 1990s studies, collared females did not reproduce during the study period. One of the two females captured and collared last winter was pregnant and appears to have successfully reproduced. GPS tracking data led the team to the southeast flank of Lassen Peak where a single pup was observed near a likely den site. To confirm the den site is in fact the first ever recorded for this species in the park, researchers must witness the female entering or exiting the den and analyze scats collected nearby.

Successful reproduction is key to SNRF recovery. Researchers estimate the Lassen area population consists of only about 20 individuals, based on survey findings from 2009 to 2011. Such a small number is likely too few to sustain a population under ideal conditions and could lead to in-breeding. Under better circumstances, they would disperse to other areas where they could mate with genetically distinct species.

Analysis of DNA contained in blood, scat, and hair samples is contributing to a gradually growing database that can aid in understanding SNRF genetics and how individuals are related. The continuing challenge is locating and obtaining samples from this elusive species.

The first study of the Lassen population began in the late 1990s, when Lassen National Forest biologists detected SNRF in surveys for medium-sized carnivores including the American marten, fisher, and wolverine. Researchers were able to affix radio telemetry collars to fewer than a dozen SNRF in the following decade. The resulting data highlighted an extremely large seasonal home range and pronounced migration to lower elevations in winter seasons.

Analysis of scat revealed that the SNRF were predominately scavenging on mule deer carcasses and eating pocket gophers. Secondary food items included voles, ground squirrels, birds, insects, berries, and human garbage.

In 2008, CDFW used scat-detector dogs to survey portions of Lassen Volcanic National Park and the adjacent Caribou Wilderness. After initial surveys identified SNRF populations, researchers set out remote cameras along trails in these areas expecting that the foxes would use the easiest method of travel—human trails. The premise proved true when SNRF were detected along trails within the park.

Two years later, the range of SNRF expanded beyond the Lassen area when a motion-activated camera revealed a red fox in the Sonora Pass area near Yosemite National Park. Up until then, the Lassen population was thought to be the sole remnant of the species in California. Additional SNRF have since been detected within the Sonora Pass area as well as within Yosemite National Park.

The three SNRF captured and collared in 2018 represent our newest hope of gaining a deeper understanding of this mysterious animal. New sophisticated, light-weight collars provide location information every three hours and have already generated rich data on the individuals' movements.

CDFW researchers will continue to track the collared foxes and attempt to capture and collar additional SNRF in the Lassen area. You can assist with their efforts by reporting any red fox sightings in the park or in the Sierra Nevada, Southern Cascade, or Klamath mountain ranges above 2,500 feet elevation.

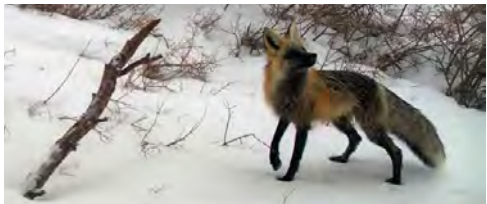
As we continue to learn more about SNRF, the species is afforded some protection in its listing as Threatened by CDFW. The Yosemite population has also been designated a Candidate Species for listing under the Federal Endangered Species Act.

To help manage the SNRF species into the future, Lassen Volcanic National Park has joined other federal, state, academic, and non-government entities in the Sierra Nevada Red Fox Working Group. Through scientific study, the group strives to give the native Sierra Nevada red fox its best chance for recovery.

SNRF Features

Smaller in size than low-elevation red foxes, Sierra Nevada red foxes (SNRF) generally weigh 4.5 to 9 pounds, have a narrow pointed muzzle, large pointy ears, and a slender body and legs.

SNRF are typically yellowish to reddish brown, but, despite their name, can also be black or silver. Handsome dark-brown markings adorn the top of their ears and shins and white covers their chest and stomach. Their bushy fox tail always has a white tip, is long and flowing and carried close to the ground where it adds an additional dimension to their length.



A black and yellow-red Sierra Nevada red fox in the Sonora Pass area, near Yosemite National Park. NPS Photo, Jay Powers

Report a Red Fox Sighting

You can help further research on the distribution of the Sierra Nevada Red Fox. If you observe a red fox in the Sierra Nevada, Southern Cascade, or Klamath mountain ranges above 2,500 elevation, please report your observation by providing:

- ☐ Date and time observed
- ☐ Location
- ☐ GPS (if possible)
- ☐ Terrain (e.g. rocky slope, forest, meadow)
- ☐ Photos

Report at [go.nps.gov/lavo/SNRF](https://www.nps.gov/lavo/SNRF)



These fox prints and scat seen on the snow-covered Lassen Park Highway last winter suggest SNRF use ski and snowshoe tracks to facilitate winter travel and may be sighted in the vicinity.

Spot Some of Lassen's Winter Residents

Can you spot tracks, scat, or these winter residents themselves this winter? These animals have adaptations to survive Lassen's harsh winters, such as storing food and developing thicker coats.



American "Pine" Marten
Martes americana
Cat-sized weasel with a long, slender body, short legs, rounded ears, and a bushy tail. The marten may be active as little as 15% of the day in the winter. Spotted occasionally in the Southwest Area.



Snowshoe Hare
Lepus americanus
Slightly larger than rabbits, with taller hind legs and longer ears. Their large, furry feet help them move atop snow and a snow-white winter coat turns brown when the snow melts each spring.



Mountain Chickadee
Poecile gambeli
Sparrow-sized, small-billed bird often sighted in trees throughout the winter months. Makes two distinctive calls, "chicka-dee-dee-de" and another that sounds strikingly like "cheeseburger!"



Clark's Nutcracker
Nucifraga columbiana
This member of the crow family caches thousands of seeds each year. Easy to spot throughout the park as they swoop from tree to tree. Listen for their frequent long, grating calls.



Steller's Jay
Cyanocitta stelleri
This large, dark jay swoops on its broad, rounded wings. Keep an eye on your winter picnic as they are quick to spot unattended food. Steller's and Blue jays are the only northern American jays with crests.



MANZANITA LAKE ROUTES

Chaos Crag

Northwest Route

Lassen Volcanic Highway opens to skiing and snowshoeing beyond the Loomis Plaza during the winter season highway closure. The route follows the snow-covered highway, with several destinations along the way.

Destinations beyond Lost Creek Campground area are recommended for overnight trips only. Above Kings Creek, the route enters an area that is subject to extreme avalanche danger. Heavy and deep snow and steep terrain require advanced skiing and mountaineering skills. This area is not recommended for the novice skier or snow camper. The summit of the park highway climbs to 8,512 feet in elevation and provides spectacular views of the region. Allow a minimum of three days to cross the park.

Lost Creek Campground

Distance: 4.6 miles one way
Elevation Gain: 200 feet
Estimated Time: 3-4 hours

Hot Rock

Distance: 7.7 miles one way
Elevation Gain: 400 feet
Estimated Time: Overnight

Summit Lake

Distance: 12.2 miles one way
Elevation Gain: 1,200 feet
Estimated Time: Overnight

Road Summit

Distance: 21.6 miles one way
Elevation Gain: 2,700 feet
Estimated Time: 2 days one way

Beginner Routes

Manzanita Lake Snowshoe Loop

This trail is not recommended for skiing

Distance: 1.5 mile loop
Elevation: 5,800 to 5,850 feet
Average Time: 1.5 hours

Begin near the Loomis Ranger Station and circle the lake in either direction. This route provides excellent views of Lassen Peak and Chaos Crag. Please stay off lake ice, it is unstable and shores may be difficult to recognize under snow.

Reflection Lake Snowshoe Route

This trail is not recommended for skiing

Distance: 0.5 mile loop
Elevation: 5,800 feet
Average Time: 30 minutes

Begin at the shore across the highway from the Loomis Museum and circle the lake in either direction. It may be necessary to follow the park highway for a short section of the lake edge closest to the road. Please stay off lake ice, it may be unstable and shores can be difficult to recognize under snow.

Manzanita Campground Loop

Distance: 1.5 mile loop
Elevation: 5,800 feet
Average Skiing Time: 1.5 hours
Cross the footbridge by the Loomis Ranger Station, turn right and follow the road to the campground for approximately a quarter mile to where it turns to the right through a set of large rocks. The trail covers a half-mile loop through several sections of the campground.

Intermediate Routes

Chaos Jumbles Area

Distance, elevation change and times vary
Head up the park highway for approximately a half-mile to an open area of stunted trees. Veer to the right up toward Chaos Crag. Here the undulating topography slopes up into the bowl of the Crag. The terrain is easy to moderately difficult with excellent views at the higher elevations.

Chaos Crag Trail

This trail is not recommended for skiing

Distance: 4 miles round-trip
Elevation: 5,290 to 6,650 feet
Average Time: 3-4 hours

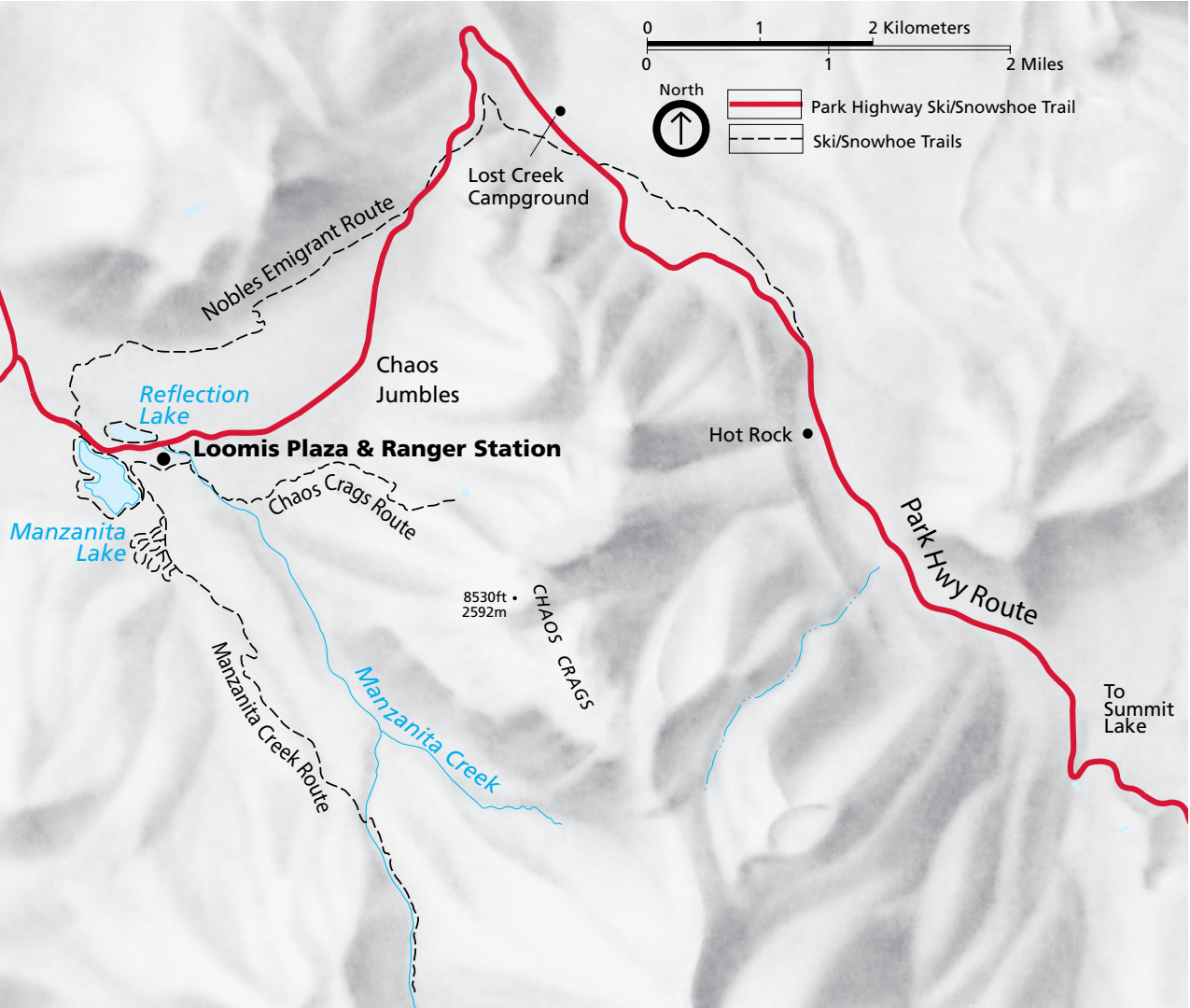
Cross the footbridge by the Loomis Ranger Station, turn left and follow the road to the Chaos Crag Trailhead sign. Follow yellow tree markers as the trail climbs steeply up to a ridge. If you decide to descend to Crag Lake, beware of potential rock falls and high winds.

Nobles Emigrant Trail

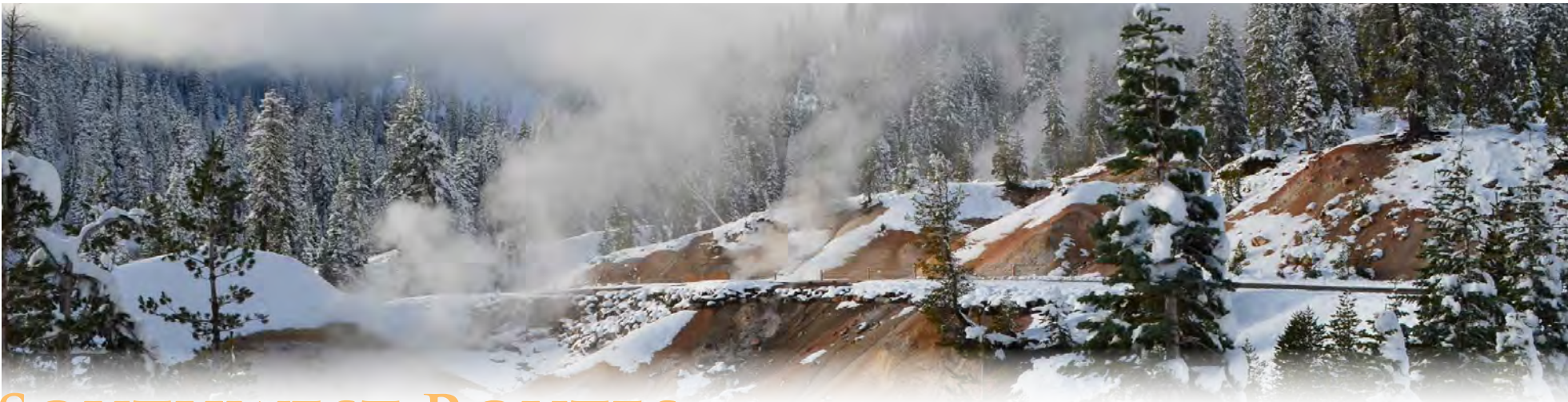
Distance: 7 miles round-trip
Elevation: 5,875 to 6,275 feet
Average Skiing Time: 3-4 hours
Pick up the trail north of Reflection Lake or at the trailhead off a service road west of Reflection Lake. Follow the orange tree markers along the base of Table Mountain. The trail climbs over a flank of Table Mountain into a thick fir forest and rejoins the park highway three miles east of the Loomis Plaza at Sunflower Flat. Return the way you came or via the park highway to make a loop.

Manzanita Creek

Distance: 7.5 miles round-trip
Elevation: 5,850 to 7,400 feet
Average Skiing Time: 6 hours
From the Loomis Ranger Station, cross a footbridge, then turn right onto the Manzanita Lake Campground road. Travel through the campground to the Manzanita Creek trailhead sign. The route is mostly a gradual climb of approximately 1,000 feet. Beware of avalanche chutes off of Loomis Peak that may reach the upper end of the trail.



Manzanita Lake



SOUTHWEST ROUTES

Sulphur Works

Beginner Routes

Sulphur Works

Distance: 2 miles round-trip

Elevation: 6,700 to 7,000 feet

Average Skiing Time: 1 hour

The boiling mudpots and steam vents at Sulphur Works are active year-round. Follow the park highway route northwest from the southwest parking area. The left side of the route is bordered by steep side hills, be aware of avalanche danger. For your safety, do not travel or camp in or near hydrothermal areas. The snow surrounding these areas may look solid, but may actually be a weak snow layer hiding pools of acidic boiling water. Traveling too close to hydrothermal areas has resulted in severe injuries for previous visitors.

Nanny Creek via McGowan Ski Trail

Located in adjacent Lassen National Forest

Distance: 5 miles to Nanny Creek one-way

Elevation: 6,080 to 5,110 feet

Average Skiing Time: 4 hours

The McGowan ski trail is located in Lassen National Forest, 3.5 miles south of the southwest entrance. Marked routes travel across a flat and slightly descending landscape. Follow a loop to the north or ski through to Highway 36 at Nanny Creek. The trail does not go to McGowan Lake, which is on private property. This main route makes for a good one-way ski route if vehicles are available for shuttle.

Intermediate Routes

Ridge Lake

Distance: 4 miles round-trip

Elevation: 7,000 to 8,000 feet

Average Skiing Time: 4 hours

Follow the park highway route from the southwest parking area about ¾ mile and cross the bridge before Sulphur Works. The route begins at the north end of the flat area to the left. The route climbs rapidly along the east side of West Sulphur Creek to the Ridge Lakes basin. Several good camping spots can be found on the north shore of Ridge Lakes. If weather is severe, more protected camping can be found about ¼ mile below Ridge Lakes along its outlet creek. Avoid the area south of Ridge Lakes during periods of avalanche danger.

Diamond Peak

Distance: 4 miles round-trip

Elevation: 6,700 to 8,000 feet

Average Skiing Time: 4 hours

Follow the park highway route from the southwest parking area 1.5 miles to Windy Point. Veer left off the Park Highway Route at the sign for Ranger Cutoff, just beyond the point. The route climbs a gentle slope to a ridge with excellent views of Brokeoff Mountain and Sulphur Works. Stop here or continue along the ridge as it gradually narrows, providing views of Lassen Peak and eventually opening onto a steep slope at the western foot of Diamond Peak. Return using the same route; avoid descending the avalanche-prone slopes above the Sulphur Works area.

Advanced Routes

Brokeoff Mountain

Distance: 7 miles round-trip

Elevation: 6,650 to 9,250 feet

Average Skiing Time: 8 hours

Most skiers access the summit via the southwest ridge. Getting onto this ridge can be difficult as the various routes pass through hazardous canyons. Traditional routes use the Forest Lake route or the summer trail that begins near the park entrance. Numerous avalanche paths exist on all aspects of the mountain. Travelers should use extreme caution. Many skiers reserve travel on Brokeoff Mountain for spring when snow conditions traditionally stabilize. Summit conditions during inclement weather often include high winds with little or no visibility. Be cautious of overhanging cornices at the summit.

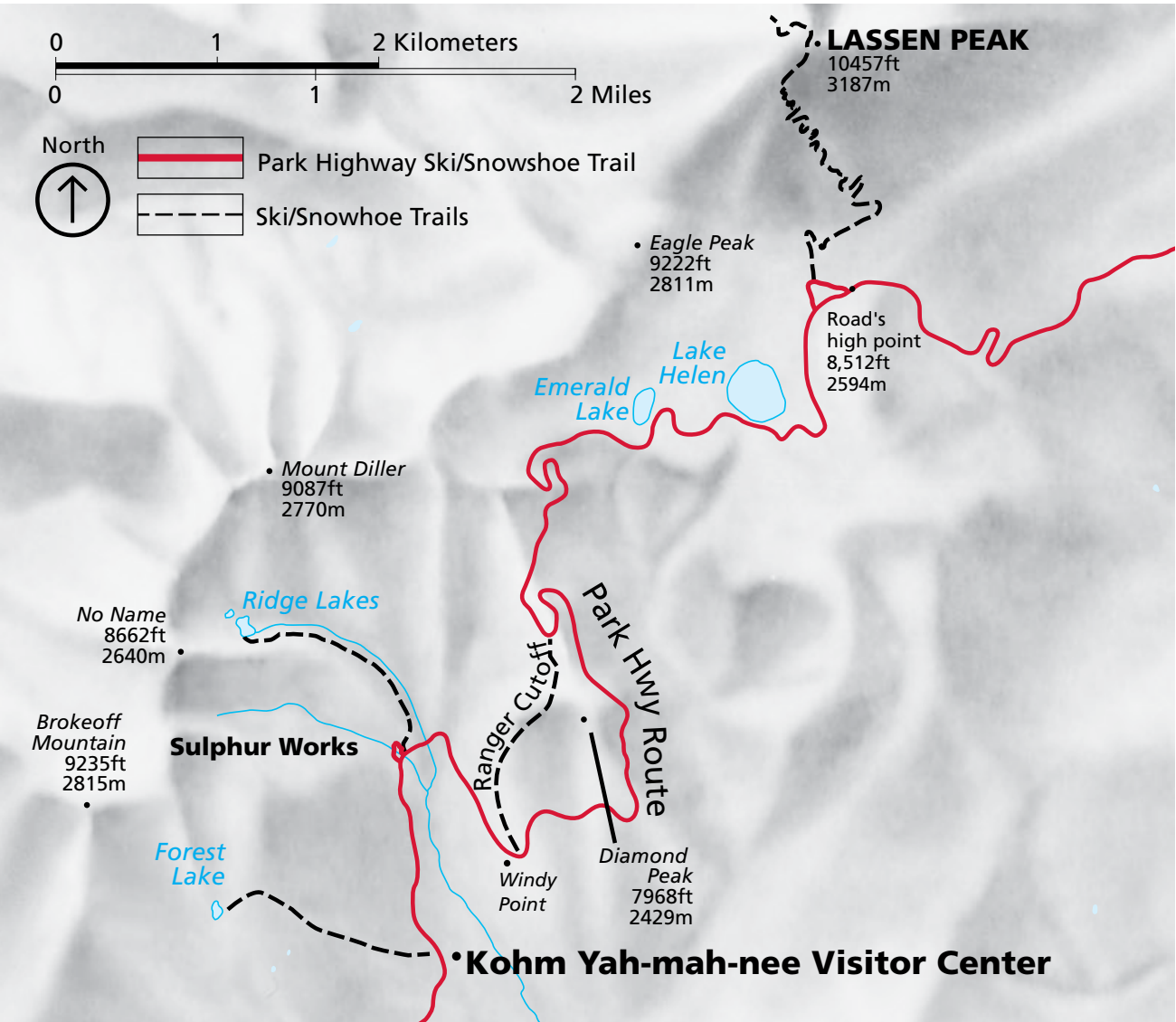
Lassen Peak

Distance: 20 miles round-trip

Elevation: 6,700 to 10,457 feet

Average Skiing Time: 3 days

Most skiers and snowshoers allow three days to summit Lassen Peak in the winter. A possible itinerary includes Lake Helen, summit Lassen, and return. Be prepared for high winds in the Lassen Peak and Lake Helen areas. Conditions on the mountain are most stable in early morning hours; afternoon travel is not recommended. The safest route up the mountain follows the summer trail through the forested section and continues on the southeast ridge to the summit. Weather conditions on Lassen Peak can deteriorate rapidly, creating white out conditions and high winds.



Southwest Route

Lassen Volcanic Highway is open to skiing and snowshoeing beyond the Kohm Yah-mah-nee Visitor Center during the winter season highway closure. The route follows the snow-covered highway, with several destinations along the way.

The southwest area of the park is primarily composed of steep terrain and sections of the highway are prone to avalanche danger. Travel outside of the road corridor is recommended only for experienced winter travelers.

The Diamond Peak area (including the eastern slope above Sulphur Works) is extremely avalanche prone. This area should be avoided by using the marked "Ranger Cutoff" route just north of Windy Point.

By mid-winter it is difficult to find any trace of the road between the Little Hot Springs Valley and Reading Peak. High winds and white out conditions are common in this area during winter storms.

Destinations beyond Lake Helen are recommended for overnight trips only. Good overnight snow camping areas can be found a short distance from the highway north of Diamond Peak and near Emerald Lake and Lake Helen.



Southwest Entrance Station and Diamond Peak

Lassen Volcanic National Park Highway is closed to vehicles in the winter and early spring. Follow the directions below for travel between the southwest and Manzanita Lake entrances. **RVs and trailers are advised to use I-5 via state routes (SR) SR-44 and SR-36, or travel around the east side of the park.** For directions from Manzanita Lake to the southwest entrance, follow the directions above in reverse—be sure to reverse left and right turns.

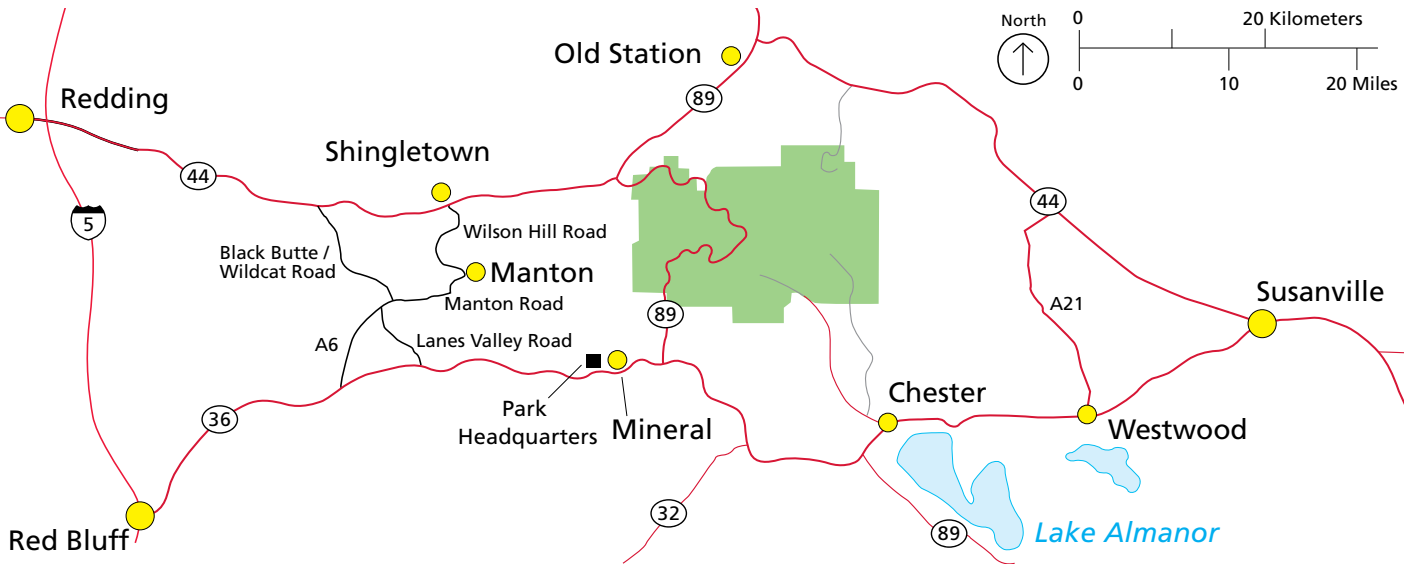
This route is the shortest route around the park. **This windy road is not recommended for RVs and trailers. Average travel time is one hour and 45 minutes.**

1. From the Kohm Yah-mah-nee Visitor Center, head south on Lassen National Park Highway/SR-89 for 4 miles.
2. Turn right (west) on SR-36. Continue for 23 miles.
3. Turn right (north) onto Lanes Valley Road. A large road sign on the north side of the highway marks the turnoff approximately one mile before the town of Paynes Creek. Continue for 7 miles.
4. Turn right onto Manton Road/Co Rd A6. Continue for 7 miles.
5. In Manton, turn left onto Wilson Hill Road. Continue for 1.5 miles.
6. Turn left to stay on Wilson Hill Road. Continue for 6 miles.
7. Turn right (east) onto SR-44. Continue for 17 miles.
8. Turn right (south) into the park. Continue 1 mile to the Manzanita Lake entrance.

Best route for Rvs and Trailers

This route is slightly longer than the west route, however it has fewer curves and is appropriate for RVs and trailers. **Average travel time is two hours.**

1. From the Kohm Yah-mah-nee Visitor Center, head south on Lassen National Park Highway/SR-89 for 4 miles.
2. Turn left (east) on SR-36. Continue 38 miles to CR A21/Mooney Road located in the town of Westwood. Continue for 18 miles. Please note that CR A21 may close during heavy snowfall. In the case of closure, follow SR-36 to the SR-44 junction just west of Susanville.
3. Turn left (west) onto SR-44. Continue for 28 miles.
4. Turn left (west) onto SR-44/89. Continue for 13.5 miles.
5. Turn left (south) into the park. Continue 1 mile to the Manzanita Lake entrance.



National Park Service
U.S. Department of the Interior

Lassen Volcanic National Park
P.O. Box 100
Mineral, CA 96063-0100

Lassen Volcanic National Park Highway between SR-44 and SR-36 is closed through winter and much of spring. The road is plowed to the Kohm Yah-mah-nee Visitor Center from SR-36 and to the Loomis Plaza from SR-44. Visit the website for road status at: go.nps.gov/lavo_current for up-to-date information.

Be prepared for icy or snowy conditions at high elevations during the fall and winter seasons. Conditions can be very hazardous, especially when temperatures drop during the evening and early morning hours. **Carry tire chains in your vehicle from October through May.**

Clearing of the park highway usually begins in April and on average takes about two months before the highway opens to through traffic. Predicting when the highway will open is not possible, even in late spring, because weather in April and even May can affect plowing progress significantly. See the chart below for opening and closing dates for the last ten years.

Year	Date plowing began	Date road opened	Date road closed
2008	Mar 31	May 18	Dec 12
2009	Apr 13	Jun 4	Nov 18
2010	Apr 19	Jul 8	Oct 23
2011	Apr 19	Jul 16	Nov 22
2012	Apr 21	June 1	Nov 19
2013	Mar 21	May 24	Dec 18
2014	Apr 2	May 19	Dec 1
2015	Mar 30	May 3	Nov 8
2016	Apr 18	Jun 12	Oct 30
2017	Apr 4	Jul 26	Nov 10
2018	Mar 30	May 27	