

BUGLER



Tales From the Deep

hen the weather is wild, most folks stay indoors, but some head to the beach! Storm watchers revel in the power of the ocean, with its storm-fed swells crashing ashore, pummeling the sea stacks and arcing spray into the sky. Winter on the Olympic coast can be a front row seat to nature's most dramatic moments!

Hidden Secrets

The interface between land and sea is a dynamic place of give and take. Waves gnaw away the shore but also deliver dinner to intertidal creatures anchored to the rocks. Rivers bring fresh water and protective logs to the beach while salmon—their bodies essentially packets of nitrogen, phosphorous and more—carry ocean nutrients upstream to forest communities.

Though we're attracted to this fluid landscape, mesmerized by the hypnotic rhythm of waves, wheeling eagles and racing fog, its story is relatively unknown to us terrestrials. If the sea were a mystery novel, some chapters would still be unwritten, others would celebrate exciting successes and some would tell cautionary tales.

Given the human desire to build at the beach, the existence of Olympic National Park's wilderness coast is a success. The designation of Olympic Coast National Marine Sanctuary, and the islands and sea stacks of offshore national wildlife refuges, extends that protection out into the

ocean. This means that complex coastal food webs connecting tiny invertebrates to 40-ton humpback whales are also protected. The reintroduction of sea otters to the Washington coast in the 1970s and their increase to over 1,500 by 2014 is another successful chapter. So is the rebound of eastern north Pacific gray whales, which were removed from the Endangered Species List in 1994. Look for them feeding and migrating along the coast in spring.

Changing Waters

Lately, researchers are penning a cautionary chapter in this ocean saga. Sea water is acidifying. As humans pump greenhouse gases into the air, a large portion of the carbon dioxide is absorbed by the ocean. Thus far, this has helped terrestrial species dodge even greater warming. But it has changed ocean chemistry for the worse—a problem compounded by upwelling of carbon dioxide-rich, cold, deep water along our coast. So much sea life depends on shells—think of mussels, clams or corals. The acidifying ocean is corrosive to many species' shells, especially in early life stages. This has forced some regional shellfish growers to shift nursery operations elsewhere.

The tale of the sea is still being written and we are all co-authors. If you explore the park's beaches this winter, consider ways to protect this priceless resource from threats like pollution, marine debris and the burden of increasing carbon dioxide. Together we can craft a masterpiece to honor the powerful oceans of our blue planet.



Here were creatures so exquisitely fashioned that they seemed unreal, their beauty too fragile to exist in a world of crushing force.

Rachel Carson The Edge of the Sea

Tisiting Olympic National Park's mountains, coast and forests in winter can be magical, but it takes planning as fewer services and facilities are available. Many areas of the park are open and accessible 365 days a year, but roads and facilities may close due to snow, high water, downed trees or reduced staffing. Call (360) 565-3131 or see www.nps.gov/olym/planyourvisit/current-conditions.htm for road and weather updates.

Emergencies

Dial 911 for emergencies or to report a crime. For non-emergency help call (360) 565-3000 ext. 0 from 7:00 a.m. to 5:00 p.m. Sunday through Tuesday, 7:00 a.m. to 10:00 p.m. Wednesday through Saturday, or (360) 417-2459 after hours.

Entrance and Other Recreation Fees

Entrance fees apply year-round in main spur road areas (Elwha, Heart O' the Hills, Hoh, Ozette, Sol Duc, Staircase). A single visit pass (1-7 days) is \$25 per private vehicle or \$10 per person (age 16+) entering by bus, bike or foot. The Olympic National Park Annual Pass is \$50. The America the Beautiful-National Parks and Federal Recreational Lands Annual Pass is \$80 and is honored at national park, national forest, U.S. Fish and Wildlife, Bureau of Reclamation and Bureau of Land Management lands. A \$10 lifetime pass for U.S. seniors (age 62+), and a free lifetime access pass for those with permanent disabilities are also available, as well as a free annual pass for certain military personnel and their dependents. Additional recreation fees apply for overnight camping permits. The Senior and Access passes provide a 50 percent discount on these fees.

Park fees provide critical funding for projects such as road, trail and sign repair; printing brochures; and staffing entrance station and wilderness permit locations. This year fees are also being used for new exhibits for the Hoh Rain Forest Visitor Center. Your support of the fee program is very important. Thank you!



General Park Information

For information see the park website www. nps.gov/olym or call (360) 565-3130. Park information, maps, wilderness permits, bear cans and information on wilderness fees are available year-round at the Olympic National Park Visitor Center/Wilderness Information Center at 3002 Mount Angeles Road in Port Angeles. For a park audio tour, call (360) 406-5056 and make selections for information about different areas.

Pets are not allowed in public buildings, on trails or in winter use areas, and must be on a leash in parking areas or campgrounds. Check at the visitor center for a list of places pets are allowed. Please do not approach or feed any park wildlife, including birds. It is illegal, harmful to the animal and hazardous to you. Violators are subject to a \$100 fine.

Please note, marijuana is illegal in Olympic National Park. While limited recreational use is legal in the state, arijuana and other illegal drugs remains.

possession of any amount of marijuana and other illegal drugs remains illegal on all federal land.

Port Angeles Area

Olympic National Park Visitor Center & Wilderness Information Center: Open 9-4 daily (except Thanksgiving and Christmas) with exhibits, movie, map and book sales and staff to help you plan a visit. Wilderness camping, hiking and permit information, as well as bear canisters, are also available. Most ranger stations do not have regular winter hours; call the main visitor center (360) 565-3130 for general park information or (360) 565-3100 for wilderness trip planning.

Hurricane Ridge Road

Call (360) 565-3131 for a 24-hour recording of current road and weather conditions or follow road condition updates on twitter at: twitter.com/HRWinterAccess.

To improve public safety, all vehicles (including 4WD) traveling above Heart O' the Hills on the Hurricane Ridge Road between November 25 and March 26 must carry tire chains. Weather permitting, the road is scheduled to be open Friday through Sunday and holiday Mondays (December 26, January 2 and 16, February 20) from November 25, 2016 through March 26, 2017 (closed December 25). Weather permitting, it will also be open December 27 through 29, 2016. The road usually opens at 9:00 a.m., but times vary depending on conditions. At 4:00



p.m. the road is closed to uphill traffic at Heart O' the Hills, five miles above Port Angeles. All vehicles must be off the Ridge and below the gate at Heart O' the Hills by 5:00 p.m.

Storms, high winds, drifts or high avalanche conditions may delay or prevent road opening, or force an early closure.

The Hurricane Ridge parkling lot often fills early, causing long delays at the Heart O' the Hills entrance station. To minimize closures due to a full parking lot, please carpool for safety, do not ski or walk

and park close to other vehicles at Hurricane Ridge. For safety, do not ski or walk on roads if plows are working since the operators have limited visibility. Also for safety, vehicle passengers must be inside vehicles or fully inside a pick-up truck bed. After March 26, the Hurricane Ridge Road may open as weather, staffing and road conditions allow. By early May the road is usually open 24 hours a day.

From mid December to late March there are authorized businesses that can provide shuttle service to Hurricane Ridge. Inquire at the Port Angeles Chamber of Commerce Visitor Center (360) 452-2363, **www.portangeles.org** for contact information on reservations, schedules and prices.

Hurricane Ridge Area

Hurricane Ridge Visitor Center: Open with restrooms, exhibits, movie and warming area 9-4 Fridays to Sundays and holiday Mondays (December 26, January 2 and 16, February 20) from November 25 through March 26, 2017; as well as December 27-29. Closed December 25. Information desk staffed 10-4. The building will be closed March 27-April 28, then reopens weekends (with weekdays as staffing allows). Daily hours resume in late May. A foyer warming area and restroom are open 24 hours a day.

Hurricane Ridge Deli & Rental Shop: From December 10, 2016 through March 26, 2017, food and ski/snowshoe rentals are available at Hurricane Ridge 10-4 weekends and holiday Mondays, as well as December 23 through January 2; closed December 25. Closed March 27 through April 28. Starting April 29, 2017, gift shop/deli hours will be 10-6 weekends only through May 21, then daily starting May 26.

Hurricane Ridge Downhill Ski, Snowboard & Tubing Area is operated by the Hurricane Ridge Winter Sports Club, www.hurricaneridge.com. When fully operating there are two rope tows and a Poma lift for beginner to advanced skiers, and a tubing park. Weather and snow permitting, tows and tubing park operate 10-4 weekends and holiday Mondays (December 26, January 2 and 16, February 20) from December 4, 2016 through March 26, 2017, as well as December 23 to 30, February 10 and March 17. Full day rates are \$34 for all

runs, \$32 half day. For rope tows only, rates for full and half day are \$26 and \$24. *Tube park rate* (including tubes) is \$10 per hour. **Only tubes furnished by the ski area will be permitted in their tube park.** Cross country skiers in the ski area must use ski leashes.

Downhill Skiing/Snowboard Lessons: Hurricane Ridge Winter Sports Club offers lessons for ages four and up. Private lessons are also available. For more ski school information see **www.hurricaneridge.com** or call (848) 667-7669.

Equipment Rentals: Several businesses on the Olympic Peninsula and in the Puget Sound area rent winter recreational equipment. Hurricane Ridge Rental Shop (see hours and dates above) packages include skis, boots and poles. The shop requires a driver's license to rent equipment.

Location	Cross-Country	Downhill	Snowshoes
Hurricane Ridge	\$32/day	\$37/day	\$17/day
(no phone)		\$42/day w/ helmet	\$22 w/ poles

Roads

Some park roads regularly close in winter and others may be closed temporarily by weather conditions. Call (360) 565-3131 or see www.nps.gov/olym/planyourvisit/current-road-conditions.htm for current conditions. Deer Park Road is closed at the park boundary (9 miles from Highway 101, 2,000 feet elevation) from mid October until early summer, depending on snow. Obstruction Point Road is closed mid October until mid summer, depending on snow. Dosewallips Road is washed out 4 miles from the park boundary. Roads in the Staircase, Hoh, Mora, Ozette, Queets and Quinault areas are open year-round, weather permitting. Sol Duc Road will close after the first storm event and reopen in late March 2017. Winter flood damage has closed the Elwha to vehicle access beyond the Madison Falls trailhead this winter, but bicyclists and hikers are welcome.

Other Park Facilities

Hoh Rain Forest Visitor Center is open 10-4 Friday to Sunday through January 1 and also March 3 through May 7. Closed December 25, 2016 and January 2 to March 2, 2017. Open daily starting May 12, 2017. Exhibits, information, wilderness permits, bear cans and books, (360) 374-6925.



National Park Campgrounds

The following park campgrounds are closed this winter: Deer Park, Fairholme, South Beach and Staircase. Altair and Elwha campgrounds in the Elwha Valley are closed indefinitely due to flood damage. Others may be closed by snow, storms, high winds, flooding or downed trees at short notice. Several have primitive winter camping with pit toilets and no running water. Most campgrounds fully open in April or May. Fees at most campgrounds are \$20 a night, but range

from \$15 to \$23 depending on facilities and season. Check at the Visitor Center, see **www.nps.gov/olym/planyourvisit/campgroundstatus.htm**, or call (360) 565-3131 for current status. The following campgrounds usually have some loops open year-round.

Quinault: Graves Creek (primitive)

Kalaloch: Kalaloch Campground. Reservations can be made for Kalaloch campsites for June 21 through September 23, 2017 by calling (877) 444-6777 or at **www.recreation.gov** no more than 6 months ahead.

Hoh: Hoh Campground

Mora: Mora Campground

Hurricane

Ridge earns its

name during

winter storms.

Afterward, huge

drifts often block

the parking lot,

a challenge for

clear the way.

crews working to

Ozette: Ozette Campground (primitive in winter, flooding may limit sites)
 Sol Duc: Sol Duc Campground (primitive in winter; closed if road closes.) Reopens March 24, 2017; spring/summer reservations possible at www.recreation.gov.

Hurricane area: Heart O' the Hills Campground (walk-in if it snows)



Park Concessions

Lake Crescent Lodge: Open through January 2, 2017. Remainder of winter Roosevelt Cabins open weekends (no food service). Lodge fully reopens April 28, 2017 to January 2, 2018 with lodging and food service; (360) 928-3211, www.olympicnationalparks.com.

Log Cabin Resort: Closed in winter. Lodging, RV park, food service and store open May 19 to September 30, 2017; (360) 928-3325, www.olympicnationalparks.com.

Fairholme Store: Closed in winter. Open daily from 9-7, from May 26 to September 4, 2017.

Sol Duc Hot Springs Resort: Closed in winter. Pools, cabins, restaurant and RV park open March 24 to October 29, 2017; (360) 327-3583, www.olympicnationalparks.com.

Kalaloch Lodge: Lodging and food service open all year, (360) 962-2271, www. TheKalalochLodge.com.

Lodging and Services Outside the Park

Local communities offer other services year-round. Contact the Olympic Peninsula Visitor Bureau at (800) 942-4042, **www.olympicpeninsula.org**.



Snowshoe With a Ranger

Join a park ranger at Hurricane Ridge to experience the wonders of winter on snowshoes. If you can walk, you can snowshoe! Snowshoes and instructions are provided. Cost is \$7 for adults, \$3 for youth 6-15 years old, free for children 5 years old and under.

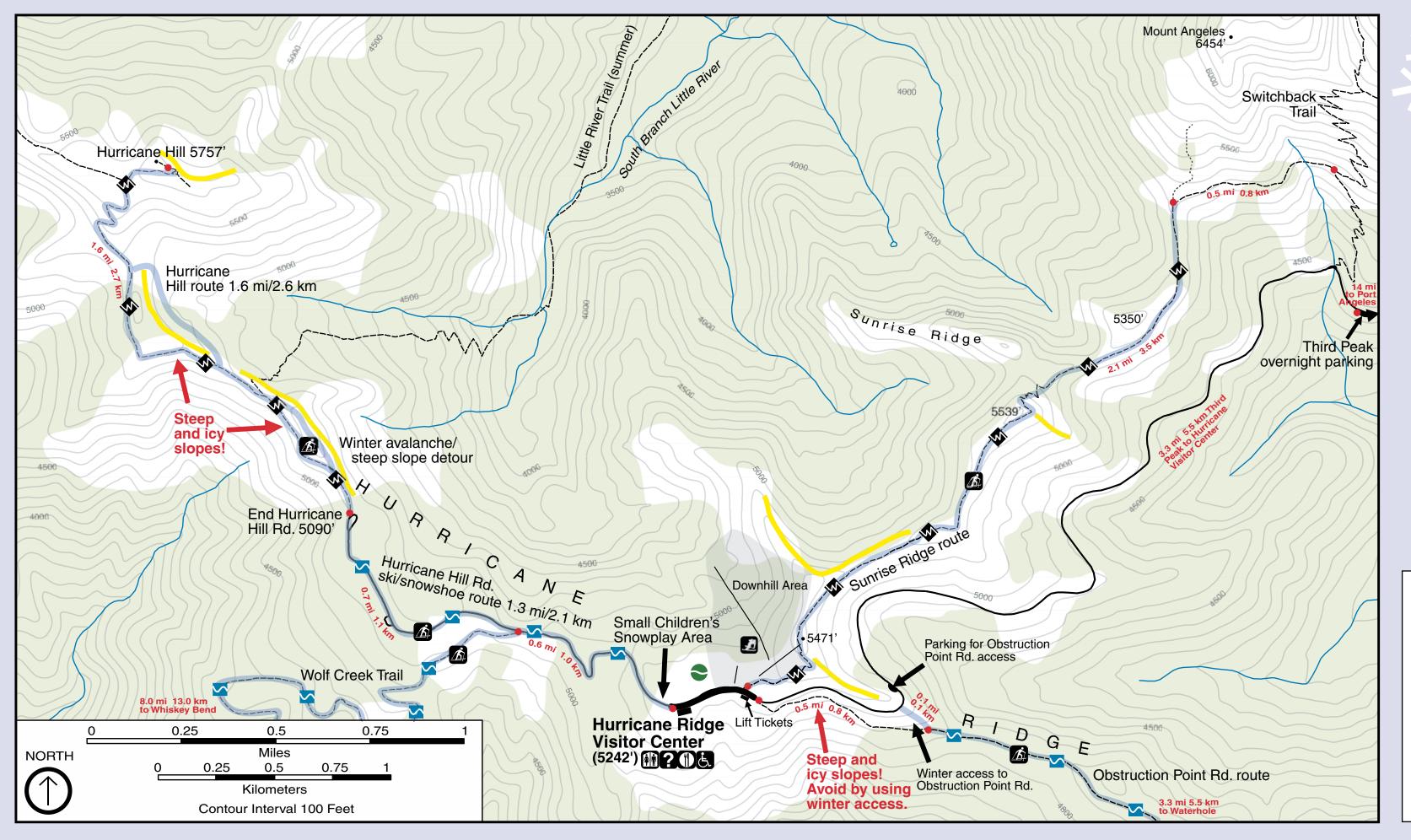
Participants should prepare for wintry weather, with cold, snow, wind or even rain. Dress in layers, wear warm, waterproof boots and bring hats, mittens, sunscreen and sunglasses. If the road is closed, walks are cancelled.

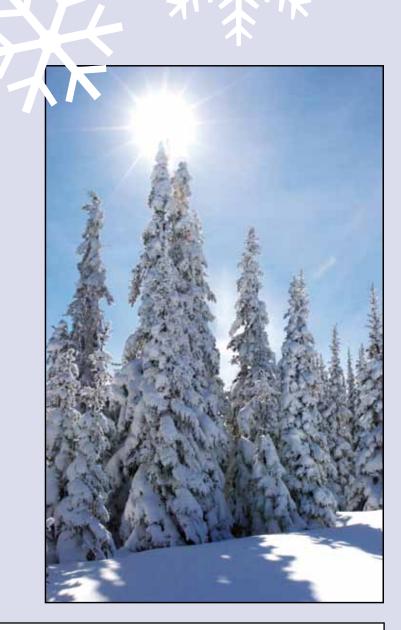
Snowshoe Walk: From December 17, 2016 through March 26, 2017, snow permitting, this easy to moderate walk is offered at 2:00 p.m. on weekends and holiday Mondays (December 26, January 2, January 16 and February 20). The walk lasts 1.5 hours and covers less than a mile. Group size is limited to 25 people. Sign up starts at the Hurricane Ridge information desk 30 minutes before the walk.

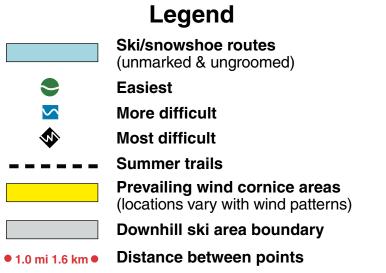
Snowshoe Walks for Community Groups: Clubs, youth groups or schools can schedule a reserved snowshoe walk for groups of 7 to 25 people. From December 17, 2016 through March 26, 2017, walks are offered at 10:30 a.m. on weekends and holidays Mondays ((December 26, January 2, January 16 and February 20), snow permitting. Walks last 1.5 hours and cover less than a mile. Reservations **MUST BE MADE IN ADVANCE** by calling (360) 565-3136.

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Hurricane Ridge Area in Winter







Before heading out, check at the Hurricane Ridge Visitor Center for current avalanche conditions. Wear an avalanche beacon, carry a probe, snow shovel and the 10 essentials (see page 8), and avoid avalanche terrain such as cornices, gullies and steep lee slopes.



Cross-Country Skiing and Snowshoeing

With its easy access and 15 to 20 miles of routes, Hurricane Ridge is the focus of cross-country skiing and snowshoeing in Olympic National Park. Though winter explorers of all abilities can enjoy the area, flat, easy, beginner ski terrain is limited to the meadows above the Hurricane Ridge Visitor Center. Backcountry skiers can explore several slopes and bowls in the area. No trails are groomed or marked; however, two routes use unplowed roads which can usually be navigated.

NOTE FOR SNOWSHOERS, WALKERS, SNOWBOARDERS AND

SKIERS: Do your part to help everyone enjoy this area. Snowshoers, walkers and snowboarders, please stay to one side to avoid damaging ski tracks on trails, and do not snowshoe or walk through the downhill ski area.

Before heading out on any trip remember to register at the Hurricane Ridge Visitor Center and check current avalanche conditions. Below are descriptions of routes in the Hurricane Ridge area.



Easiest

The Meadows

The meadows above the Hurricane Ridge Visitor Center offer gentle, easy terrain for everyone and excellent views in fair weather. Because the meadows are exposed to the sun and wind, they can be icy or wind packed.



More Difficult

Hurricane Hill Road

1.3 mi/2.1 km one way

Beginning just west of the visitor center, this trail first descends steeply, then follows the rolling, moderate ridgeline along the unplowed Hurricane Hill Road. Experienced skiers can use this trail to reach the Hurricane Hill Route (see Most Difficult), as well as several bowls for backcountry skiing. In clear weather there are good views to the north and south, especially at the trail/road terminus at the Hurricane Hill trailhead. Much of this ridgetop trail is sheltered by a subalpine forest, making it a good choice in windy, inclement weather or when there is elevated avalanche hazard.

Wolf Creek Trail 8 mi/12.9 km one way to Whiskey Bend

This route begins 0.6 miles west of the visitor center along the unplowed Hurricane Hill Road (see above) and descends through meadows and forests into the Elwha Valley. There are several south-facing slopes near the beginning which are good for backcountry skiing. The Wolf Creek Trail is seldom snow-covered at lower elevations. Users usually just descend a few miles through forest and several meadows with nice south views, then return the same way.

Obstruction Point Road: To Waterhole

3.4 mi/5.5 km one way

Rather than descend the exposed, steep, often drifted and icy route of the summer Obstruction Point Road, the winter route starts at the sharp curve along the Hurricane Ridge Road, 0.5 miles below the Hurricane Ridge Visitor Center. Park in the pull-off below the curve, cross to the east side of the road and walk the snow bank back uphill to the curve. After descending a steep but short meadow, the route intersects and follows the unplowed Obstruction Point Road.

Other than the initial descent, the first 1.5 miles are relatively easy and sheltered by forest. After a steep climb, the route crosses below Steeple Rock and onto a short section of exposed slopes which can be drifted, icy and difficult to traverse. After that, the trail flattens and meanders through sheltered subalpine forest. Beyond Waterhole, it climbs steeply (see below).

Most Difficult

Hurricane Hill Route

1.6 mi/2.6 km one way

This route starts at the end of the Hurricane Hill Road route and climbs 700 feet to the summit of Hurricane Hill. There are several very steep sidehills if users follow the summer trail route, so use extreme caution under icy or elevated avalanche hazard conditions. As an alternative, skiers and snowshoers can follow the ridgeline, which has fewer steep sections. Be careful to stay off cornices that build up along the lee side of the ridge. Under good conditions, advanced skiers or snowshoers will find this a rewarding trip with good views and some nice slopes.

Obstruction Point Road: Waterhole to end 4.3 mi/6.9 km one way

(Obstruction Point Road is 7.8 mi/12.5 km one way)

This route begins midway out the unplowed Obstruction Point Road (see description above for the first 3.4 miles to Waterhole). After Waterhole, the route gains 900 feet, climbing steadily for 0.5 miles to open slopes on Eagle Point. In clear weather, views can be spectacular but steep sidehills and exposure to storms make this a difficult route. It is recommended only under good conditions for experienced skiers. Travel beyond Obstruction Point can entail steep terrain with high avalanche potential.

Sunrise Ridge

2.1 mi/3.4 km one way

Begin this route by crossing below the intermediate rope tow and tube park, then climbing to the right of the ski hill (stay right of the trees). After crossing under the top of the ski area's intermediate rope tow, this route follows a narrow ridge toward the south side of Mount Angeles. There are several avalanche prone areas along the way, so check conditions and use caution under unstable conditions. Be especially careful to stay off cornices that form along the ridge and side ridges. Several nice slopes on the east side descend to the Hurricane Ridge Road.

Other Areas

Depending on the snow level, other roads and trails in the park and in Olympic National Forest may be snow-covered. Check at the visitor center for current snow levels. The Deer Park Road may provide opportunities. For safety, this steep, narrow road is closed to cars at the park boundary, 9 miles from Highway 101, at around 2,000 feet of elevation. The road climbs steadily about 9 more miles from the park boundary up to Blue Mountain. If the snow level is low enough, the road may be skiable from the boundary; but users usually need to hike several miles before reaching snow.

For other routes on the Olympic Peninsula, refer to guides such as 100 Best Cross-Country Ski Trails in Washington, by Tom Kirkendall and Vicky Spring, Snowshoe Routes: Washington by Dan Nelson, or Backcountry Ski and Snowboard Routes: Washington by Martin Volken.

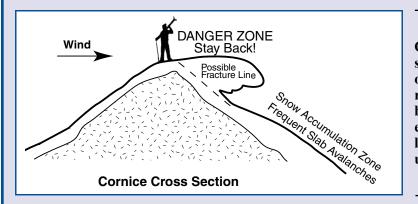


A backcountry skier enjoys fresh snow at Hurricane Ridge.

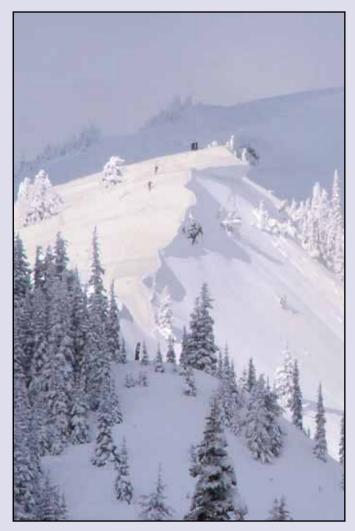
Avalanche!

Olympic Mountain terrain and weather create ideal conditions for avalanches. Before heading out, check the Northwest Avalanche Center forecast at **www.nwac.us**, and check at the Hurricane Ridge Visitor Center for current local conditions. Wear beacons and carry a probe and snow shovel. The hazard levels range from low to extreme. Even in low hazard conditions avalanches can occur on some slopes. With extreme conditions backcountry travel should be avoided. Certain terrain features, for example steep gullies that funnel snow, unstable cornices (see below), or dark cliff faces on warm spring days, can increase avalanche hazard. The survival rate for avalanche victims is extremely low. If you or a group member are caught in an avalanche, take these steps in your rescue attempt:

- * Ensure the safety of survivors.
- * Mark where victims were caught and last seen.
- * Quickly search downslope from the last seen points for clues.
- Search the avalanche debris below the last seen points by probing in a grid pattern with probes, ski tails or poles.
- Keep searching! The victim could be inches away from your boots.
- * Send an extra person for help.
- * If you are caught, make swimming motions and try to keep yourself on top of the snow. As the snow begins to slow down, push the snow away from your face to create an air pocket.



Overhanging shelves of snow called cornices form on the lee side of windblown ridges. They can be unstable, breaking off far from the edge. Stay back from ridge lines to avoid traveling on unsupported cornices.



Winter 2016-2017

Skiers and snowshoers should stay well to the windward (southwest) side of unsupported cornices along this ridge en route to Hurricane Hill.

PERSPECTIVES

T earn more about your park at the free Perspectives winter speaker series. Talks Lare at 7 p.m.on the second Tuesday of the month, November through April, at the Olympic National Park Visitor Center, 3002 Mt. Angeles Road, Port Angeles. Seating is limited. Refreshments provided by Friends of Olympic National Park.

December 13 - Inevitable and Constant: Monitoring Landscape Change on the Olympic Peninsula

Catherine Copass, Ph.D. Ecologist, National Park Service

How has the vegetation of the park and its surrounding lands changed over the last 25 years? Long-term monitoring and mapping of landscape-scale disturbances like fires, avalanches, windstorms, landslides, etc., provides managers with insights into the park's vulnerability to climate change.

January 10 - Snowpack across the Olympics

Rvan Currier, Ph.D. Student, University of Washington

Measuring snow in the Olympic Wilderness presents challenges. Researchers are testing different technologies to measure snowpack across the landscape, and to provide better information to all of us—the downstream water users.

February 14 - The Elwha Undammed: What's a River For?

Jeff Gersh, Filmmaker, Narrative Labs

The park will premiere a movie on the Elwha River Restoration story—the largest dam removal in U.S. history. The movie chronicles the voices of the many partners that contributed to this historic restoration project. Location may change.

March 14 - Fire in the Olympics

Todd Rankin, Interagency Fire Management Officer; Olympic National Park Fire in the park has been making headlines, from fires in the rainforest to unusually early and active fire seasons. Learn about the history of fire on the Olympic landscape, its ecological benefits, and the park service's options for managing fire.

April 11 - Mountain Goats in Olympic National Park

Patti Happe, Ph.D., Biologist, Olympic National Park

Dr. Happe will present information on the current trends and distribution of mountain goats on the Olympic Peninsula, and provide an update on mountain goat management planning.

Snow Play

now sliding is a favorite pastime for some, but it has also been one of The most dangerous activities at Hurricane Ridge. Serious injuries, even permanent disabilities occurred when people collided with trees, other sliders, or lost control and ended up in the road.

For your safety, sliding/tubing is permitted in only two locations:

- * The Small Children's Snowplay area near the Hurricane Ridge Visitor Center where children eight and under may slide.
- * The tubing park operated by the Hurricane Ridge Winter Sports Club in the downhill ski area.

Sliding is not allowed anywhere else in the Hurricane area or along the Hurricane Ridge Road.

If conditions are too icy to allow safe sliding, the sliding areas may be closed. For the safety of participants, metal or hard plastic runner sleds and wooden toboggans are not permitted. Only tubes provided by the ski area are permitted in their tubing **park.** Compressed air for inflating tubes is not available. To be as safe as possible.

- Slide only in the designated areas
- * Be sure the path is clear before starting your slide. Collisions can result in injuries. Watch for skiers and snowshoers crossing below the areas.





Find Your Park in Winter



Olympic is a park for all seasons. Visitors prepared for unpredictable weather can experience the beauty and solitude of winter without summer crowds. But winter is the wet season. Snow and rain can swell streams overnight, making crossings treacherous and washing out trails. Camp above flood plains. Boardwalks and bridges are very slippery when wet or icy. On the coast, storms push tides higher, creating huge waves that easily move beach logs or trap hikers on rocks. Winter storms can blow down trees, blocking trails and closing roads. Be prepared; always carry the 10 essentials, even for short hikes: extra clothing, extra food and water, map, compass, flashlight, knife, sunglasses, matches, fire starter/candle, first aid kit.



But don't let winter chase you inside! There are always options. Stop at the Olympic National Park Visitor Center/ Wilderness Information Center (WIC) in Port Angeles for maps, tide tables and trail reports or check the park website www.nps.gov/olym. If you plan to camp overnight in the park's wilderness, check the above website for information on bear canisters, wilderness fees and required permits, or call the WIC (360) 565-3100. May through September some popular spots, including the coast, have camping limits. See the website for making reservations. For you and your pet's safety, pets are not allowed on trails in the park. The following options are usually accessible in winter, depending on snow level and storm damage.

Low-Elevation Hiking

Elwha Valley: The road is closed to vehicles this winter due to areas vulnerable to flood damage, but hikers and bicyclists can still access the valley. Nearby trails

include Madison Falls, Smokey Bottom, West Elwha, Griff Creek, and Cascade Rock. Or walk the road to the stunning views from the Glines Canyon Spillway Overlook.

Lake Crescent: Marymere Falls, Barnes Creek and the west end of the Spruce Railroad trail.

Ozette: Cape Alava or Sand Point trails.

Mora and La Push: James Pond, Second, Third and Rialto Beaches. Kalaloch: Short trails to beaches, beach hikes and the forest nature trail. Hoh: Hall of Mosses and Spruce Nature trails, or lower Hoh River trail.

Quinault: Maple Glades and Kestner Homestead trails at the national park ranger station, Irely Lake trail or lower parts of the North Fork and Graves Creek trails. There are also several nature trails in Olympic National Forest along the South Shore Road.

High Country Trips

Snow camping requires preparations, but offers a glimpse into a season that few truly experience. Weather changes quickly. Places like Hurricane Ridge and Blizzard Pass earn their names, and whiteout conditions can occur any time!

Hurricane Ridge has the easiest high country access. For safety, observe these rules:

- ***** Overnight campers must get a permit at the WIC, and register and check with a ranger at Hurricane Ridge for camping and parking locations.
- Plan trips for weekends since the road is usually closed Monday through Thursday. If a storm forces a road closure, you may need to use tire chains and have a shovel in case of a snowy descent. Use caution as plow operators may not see you! If you are locked in uphill from the gate, call park dispatch at (360) 565-3000 ext. 0 or (360) 417-2459 after hours.
- Because of the risk of sudden storms, winter overnight parking is not allowed at Hurricane Ridge. You must park 3.3 miles below the Ridge at Third Peak (see map on pages 4-5). Check with rangers at Hurricane Ridge to see if a car shuttle is available.
- * Camps must be 1/2 mile away from the Hurricane Ridge parking lot and out of sight of ski/snowshoe trails. Check with a ranger for suggestions.
- * Use a camp stove. Campfires are prohibited.
- * Share the trails—avoid walking or snowshoeing in ski tracks.
- * In emergencies, dial 911 from the Hurricane Ridge Visitor Center foyer.
- * Check avalanche conditions and carry beacons (see page 7).

A River Reborn

The largest dam removal project in history was completed in 2014 and the Elwha River flows freely once again. After over 100 years, salmon have access to over 70 miles of habitat protected within Olympic National Park. In 2016, biologists documented adult Chinook, coho, sockeye, steelhead and bull trout swimming in the upper reaches of the Elwha River after passing through both the former Elwha and Glines Canyon dam sites. Biologists have also seen adult pink and chum salmon, and Pacific lamprey upstream of the former Elwha Dam site.

As fish recolonized upstream habitat, sediment and logs that had been trapped behind the dams headed downstream. All the stored sediment that researchers expected to erode downstream has now been released.

Along the way it is creating a more braided, meandering river and restoring spawning habitat. Of the millions of cubic yards of sediment, 90 percent has reached the ocean, adding over 80 acres to the river's estuary. There, it is replenishing beaches and creating critical habitat for marine life including juvenile salmon and forage fish such as smelt, eulachon and red-sided shiners.

With the dams gone, natural revegetation and crews planting hundreds of thousands of seedlings are greening the once barren reservoirs. Ten-foot alders, thickets of cottonwoods and willows, and carpets of other plants are helping to stabilize slopes and control erosion. Roosevelt elk, black-tailed deer and black bears are feeding in the rich new habitat.

The Elwha River restoration saga is ongoing. Though the road is currently closed to cars due to flood damage, you can walk or bike in the Elwha Valley. It is 3.4 miles to exhibits and stunning views at the Glines Canyon Spillway Overlook. In early winter, look for coho spawning in tributaries near Madison Falls or the Elwha Ranger Station; in spring look for winter steelheard in the same spots. To learn more, visit Olympic National Park's website www.nps.gov/olym.

Sockeye salmon colonizer seen above both former dam sites during a summer 2016 snorkel survey. Bottom, sediment delivered by the reborn river is restoring the Elwha River estuary (August 2016).



