Welcome to the North Cascades

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TO:

North Cascades National Park (National Park Service)
Mt. Baker Ranger District (U.S. Forest Service)
2105 State Route 20
Sedro-Woolley, WA 98284
Wilderness: The Geography of Hope

More than 150 years ago the great nature writer and philosopher Henry David Thoreau stated, "in wilderness is the preservation of the world."

Perhaps Thoreau was telling us that raw, untamed wildernesses are more than just features of the landscape; they are also points of connection between an urbanized, modern human population and the land we once lived so much closer to.

You are in the North Cascades ecosystem, one of the largest and most intact wild areas in the contiguous United States. The North Cascades still contain all of the plant and animal species known at the time Europeans first settled here.

Eagles roost in trees along icy rivers; bears feed on the spawned-out carcasses of salmon; bobcats pad softly across snowfields and forest floors as they stalk their prey; alpine meadows blaze in a glory of color.

These things are the heart of wilderness. It is to preserve them now and forever that Congress passed the Wilderness Act in 1964, which required land-managing agencies to set aside some areas "untrammeled by man" for preservation.

Passing the act was, in a sense, a way of recognizing that Thoreau's wilderness is fundamental to the human spirit; to extinguish the last vestiges of wilderness from the country would be to extinguish something vital within ourselves.

For thousands of years the region's Native Americans understood wilderness in a different way: wilderness was not "somewhere else" — it was home.

The recreational value of protected wilderness areas is manyfold: hiking, fishing, canoeing, camping or simply appreciating the natural beauty around you are all part of the wilderness experience.

Another great conservationist, Wallace Stegner, wrote, "we simply need that wilderness available to us, even if we never do more than drive to its edge and look in. For it can be a means of reassuring ourselves of our sanity, a part of the geography of hope."

Here in the North Cascades...

The Cascade Mountain range runs 500 miles from Northern California to British Columbia, but it is not until it reaches Northwest Washington that the mountains are at their most breathtaking. The Cascades are higher in other parts of the range, but nowhere are they as dramatic. Jagged, rocky peaks of up to 10,000 feet give way precipitously to near-sea level valleys; glaciers clung dizzyingly to the sides of fording slopes; everywhere waterfalls tumble down from the mountains, the characteristic that gave the Cascades their name.

Many millions of years ago, before it bumped into North America, this region was an itinerant land mass drifting in the Pacific Ocean. The mountain-building forces at work before and since that unification — accumulation of sediment from pre-historic seas, colliding tectonic plates and volcanic activity — have combined to create one of the fastest growing mountain ranges in the world. Indeed, the North Cascades would be even taller if the counteracting forces of water and glaciers did not conspire to keep the mountains at more modest heights.

Still, the elevational distance from valleys to summits throughout the North Cascades can exceed 5,000 feet — a relief as great as any other range in the United States. The steep and imposing North Cascades presented a formidable barrier to early white explorers and the names they gave some of the mountains are an indication of the effort required land.

One of the most striking features of the North Cascades is the fantastic number of glaciers in the region. These mountains are home to more than 300 of them — more than half of the glaciers in the contiguous United States. Glaciers are formed when more snow accumulates than melts or evaporates. The weight of this continuous buildup of snow is immense and causes the snow to compact into ice, which then slowly moves downhill. As glaciers move, they gouge and scrape the land and redefine landscapes. Mountains may appear to be in suspended animation but, like everything else, they are in a continuous state of change.

The reason the North Cascades contain such an abundance of glaciers is because Western Washington receives a lot of snow, especially in the mountains. Weather moves from west to east across North America, so clouds that pick up moisture in the nearby North Pacific must rise to get over the mountains. As the clouds gain altitude the temperature drops, causing the water vapor to condense and fall to earth as rain and snow.

By the time the clouds cross into the rain shadow of the eastern side of the range, they are mostly spent and contain significantly less moisture. The average precipitation on the western slope is 280 cm (112 in.), but the Pasayten Wilderness on the east side averages only 30 cm (12 in.).

Water is the life force of the North Cascades. It falls from the sky, trickles off mountains, replenishes lakes and flows to the sea. Within the Puget Sound watershed, the Skagit is the largest and most bounteous river. With its 2,900 streams, the Skagit River accounts for 20 percent of the water that empties into Puget Sound.

All five species of salmon and two species of anadromous trout (trout that go from fresh water to salt water and return to spawn upriver) begin life in the cool gravel bottoms of the Skagit River system. In odd-numbered years, as many as one million pink salmon spawn in the Skagit. In 1996, 152,000 Chum salmon — a ten year high — also returned to the Skagit.

Because of the healthy salmon runs, the Skagit hosts one of the largest wintering bald eagle populations in the lower 48 states; spawned-out carcasses of Chum salmon are the eagles' most important source of food during the winter months. In some years, as many as 500 bald eagles spend the winter along the Skagit River.

Between the craggy peaks and the cool rivers, lush, temperate rain forests blanket the lowlands on the western side of the North Cascades. These forests, which are home to some of the nation's most extensive stands of remaining old growth, produce trees of exceptional size and age. Some Douglas-firs, for example, grow to 250 feet and live up to 1,000 years.

Western slope forests also produce an amazing quantity of vegetation. In terms of sheer plant volume, the forests of the Northwest are unbeatable; they contain more accumulated biomass than any other forests in the world.

From rivers to glaciers, valleys to summits, the North Cascades is one of the most extraordinary ecosystems in the world. North Cascades National Park and the Mt. Baker Ranger District invite you to step into the wild to experience this magnificent wilderness for yourself.
Whose Home is This?

The temperate forests of the North Cascades are home to a remarkable variety of plant and animal life. Many life zones and habitats straddle these mountains, changing with elevation and distance from the ocean. More than 1,700 species of flowering plants have been identified and collected in the national park's herbarium. The abundance of non-flowering plant species, including mushrooms, mosses and lichens, rivals any other ecosystem on Earth. They have not been fully inventoried and many may not have even been discovered yet.

Which animals live in the North Cascades and how many are there? This question has also yet to be fully answered. Baseline studies and inventories are still underway, and biologists are discovering new species as they look beyond animals at the top of the food chain.

Bald eagles, wolves, grizzly bears and other top predators require a rich diversity of plants and animals lower on the food chain to survive. As biologists look more closely at the complex connections between different species they are discovering more and more about the North Cascades ecosystem.

We do know that seventy-five species of mammals are native to the North Cascades; more than 200 birds either breed in or pass through the region; and 11 species of fish are indigenous to the lakes and rivers on the west side of the Cascades. Some plants and animals are considered "indicator" species, because they are sensitive to problems in the ecosystem. Salmon, for example, use a variety of habitats and are thus good indicator species; they require healthy watersheds, from forests to streams to oceans.

As you explore the North Cascades you may be lucky enough to see some of the wildlife that live here. Wildlife sightings cards are available at all ranger stations to report animals you may see. Books and other resources to help you identify and learn about plants and wildlife are available through all National Park and Forest Service visitor centers (or order by mail on page 15). Rangers lead guided walks most weekends and provide other naturalist services.

The animals below require large amounts of habitat to survive. Protecting the resources they need also protects the resources for thousands of smaller, less wide-ranging animals. Remember that these charismatic "mega-fauna" share habitat with many other animals, both large and small — including humans.

Mountain Lion

Screaming across high cliffs and remote peaks, casually edging along precipices inaccessible to other animals, the mountain goat is the ultimate mountain climber. This remarkable animal is actually not a goat at all, but a type of antelope. Their hooves have slightly curved pads that extend beyond the outer shells, which provide them with greater traction and maneuverability than other hoofed animals. Mountain goats have true horns that continually grow and which they never shed. Their pelage (the hair or fur that covers mammals) is white or yellowish-white, with a dense undercoat of soft wool. During the summer mountain goats are very conspicuous as they stand out against the rocky terrain, but during the winter they blend in with the snow and are nearly invisible. The pelage keeps the mountain goat warm in cold, dry weather, but it is not as effective when it is cold and wet; during heavy rains mountain goats often seek shelter under rock ledges or trees. Mountain goats choose to spend most of their time above timberline near rocky outcrops, where they can withdraw to safety in case of danger. When the snow is deep, however, mountain goats will head for the relatively balmy environment of lower elevations.

Black and Grizzly Bears

Whether they are regarded as monsters lying in wait or cute, bumbling teddies, bears are often misunderstood. Maybe we are so fascinated with bears because they have so much in common with us. Bears standing on their hind legs look human; they eat the same foods people do; and bears are very intelligent. Black bears are fairly common in the North Cascades, but grizzlies are much rarer. The two species are different in some ways, but they also share some traits.

Both are omnivorous — like people, they eat everything. A recent study determined that ten percent of the scat material from 120 North Cascades bears was animal parts, mostly ants. The rest consisted of berries, leaves, seeds (including pine nuts) and flowers. Bears also eat foods left out by people, including camping supplies, horses' oats and dog food. And what we see as garbage, bears see as an easy meal. Bears need to eat a lot, because they have to eat a whole year's worth of food in seven or eight months. During the winter they enter into a highly specialized and unique form of hibernation. While they are in the den, bears do not eat, drink, urinate or defecate. Cubs can even grow while "sleeping" in the den; a person's bones begin to deteriorate after only 96 hours in bed. Black bears typically den under fallen trees or in other existing nooks just large enough for a bear to crawl into or under. Grizzly bears typically dig a new den each year. That's why they have those big fore-claws and shoulder muscles: grizzlies are like animated bulldozers.

Wolf

Groups (packs) of between two and 12 members. The pack is headed by an alpha pair, which is usually the only breeding couple. There are very strong bonds between the pack members; without these bonds, each individual wolf would go his or her own way and the pack would disintegrate. Wolves primarily eat large mammals such as deer and elk. Wildlife researchers believe that by killing the sickest and weakest of the herd, wolves are helping maintain the vitality of the prey species. Many people form their notions about wolves from story characters such as "The Big Bad Wolf" but in reality wolves do not attack humans. Graceful, intelligent and wild, the wolf is truly a symbol of the North Cascades.
The wild and rugged Mt. Baker Ranger District includes several designations of national forest lands that accommodate a variety of uses. Those seeking a remote backcountry experience can trek into federally designated wilderness areas; water lovers will enjoy the Skagit Wild & Scenic River System; and everybody from hikers to snowmobilers will love the Mt. Baker National Recreation Area.

The Mt. Baker Scenic Byway (State Route 542) delivers visitors to the high country of Heather Meadows. Winter recreationists enjoy the world-reknowned slopes of the Mt. Baker Ski Area. Campers may stay in developed campsites at Baker Lake and along the Mt. Baker Scenic Byway (check page 9 for camping chart).

Over two hundred miles of trails lead hikers and stock parties into the Mt. Baker Ranger District’s backcountry. Backcountry camping does not require a permit. Most stock trails are open to use from August 1st to November 1st. Llamas are allowed year-round on all stock trails.

The Mt. Baker Ranger Station and the Glacier Public Service Center offer a full range of guide books and detailed hiking maps. Visitors are encouraged to take the time to plan for their outing, get current conditions and be well prepared.

**Mt. Baker National Recreation Area**

8,600 Acres; established 1984

**Skagit Wild and Scenic River System**

Remarkable fisheries, wildlife and scenic qualities led to the designation of segments of the Sauk, Stuitte, Cascade and Skagit Rivers in the Federal Wild and Scenic Rivers System in 1978. Winter on the Skagit River has a special kind of magic—the magic of salmon returning from the ocean to spawn and die, followed by the return of one of the largest populations of wintering bald eagles in the Pacific Northwest.

During the winter months of the eagles’ visit to the Skagit, Eagle Watcher Volunteers staff sites along the Skagit River between Rockport and Marblemount. Volunteers help manage visitor use along the river by distributing handouts about eagle watching etiquette, monitoring spotting scopes and sharing reference materials. Interpretive programs are also offered at several locations on eagles and ecology of the Skagit River. The Eagle Watcher Program is sponsored by the Forest Service and North Cascades Institute.

**Mt. Baker Ranger District Fee Information**

The help offset the rising costs of administering trails and facilities in the national forest system, Congress initiated a three-year pilot program authorizing the Forest Service to charge fees for certain kinds of recreational use. Eighty percent of the money will be devoted to maintaining the areas where the fees are collected, instead of returning the money to a general fund in Washington, D.C. Under the Recreational Fee Demonstration Program, the Mt. Baker Ranger District has proposed to charge a fee for parking in the Heather Meadows Area. A parking pass would cost $5 and be valid for three days. A seasonal parking pass would cost $15. Visitors holding a Golden Age or Golden Access Passport would receive a 50 percent discount. Vehicles carrying more than nine people would be charged $1 per person.

The Mt. Baker-Snoqualmie National Forest may also participate in a Regional Trail Park Program in which fees will be charged on a daily or seasonal basis for parking at most national forest trailheads. The proposed cost for a Trail Park Permit is $3 per day and $25 for a seasonal permit.

Visitors are encouraged to check with the local ranger district for the current status of the fee program during 1997.

**POPULAR TRAILS ALONG STATE ROUTE 20**

<table>
<thead>
<tr>
<th>Trail #</th>
<th>Name</th>
<th>Trailhead</th>
<th>Miles</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>603</td>
<td>Park Butte</td>
<td>Road 13</td>
<td>3.5</td>
<td>Enters wilderness, no fires</td>
</tr>
<tr>
<td>603.1</td>
<td>Scott Paul</td>
<td>Road 13</td>
<td>6.0</td>
<td>No camping</td>
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<tr>
<td>603.2</td>
<td>Railroad Grade</td>
<td>Trail 603</td>
<td>1.0</td>
<td>Camp at designated sites, no fires</td>
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<tr>
<td>604</td>
<td>Blue Lake</td>
<td>Road 1230</td>
<td>0.5</td>
<td>Easy trail for children</td>
</tr>
<tr>
<td>606</td>
<td>Baker River</td>
<td>Road 1168</td>
<td>3.0</td>
<td>Enters national park</td>
</tr>
<tr>
<td>610</td>
<td>East Bank</td>
<td>Road 1107</td>
<td>14.0</td>
<td>Moderate trail with steep side slope; stock use</td>
</tr>
<tr>
<td>611</td>
<td>Waton Lakes</td>
<td>Road 1107</td>
<td>2.0</td>
<td>Wilderness, no fires</td>
</tr>
<tr>
<td>612</td>
<td>Anderson Lakes</td>
<td>Road 1107</td>
<td>2.0</td>
<td>Non-wilderness</td>
</tr>
<tr>
<td>623</td>
<td>Shadow of Sinetines</td>
<td>Baker Lake Road</td>
<td>0.5</td>
<td>Universal access; storm damage</td>
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**State Route 20/Cascade River**

<table>
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<tr>
<th>Trail #</th>
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<tr>
<td>613</td>
<td>Sauk Mountain</td>
<td>Road 1030</td>
<td>2.1</td>
<td>Steep side slopes</td>
</tr>
<tr>
<td>743</td>
<td>Lookout Mountain</td>
<td>Cascade River Road</td>
<td>4.7</td>
<td>Fork enters national park; camp only in designated sites</td>
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<tr>
<td>745</td>
<td>Hidden Lake Peak</td>
<td>Road 1540</td>
<td>5.0</td>
<td>Non-wilderness; enters national park</td>
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Mt. Baker Scenic Byway — The upper 24 miles of the Mt. Baker Highway (State Route 542) is designated a National Forest Scenic Byway and a Washington State Scenic Byway. The highway winds along the North Fork Nooksack River, ending at spectacular Artist Point, elevation 5140 feet, in the Heather Meadows Area. At road's end, trail systems lead into the Mt. Baker Wilderness. During winter months, motor traffic ends at the Mt. Baker Ski Area.

Glacier Public Service Center (milepost 34)
Listed on the National Register of Historic Places. Jointly operated during the summer season by the Forest Service and National Park Service.

Mt. Baker Vista
Dramatic viewpoint at the end of Glacier Creek Road (Forest Road 39).

Horseshoe Bend Trail (milepost 36)
One-and-a-half mile hiker-only trail wanders along a forested ledge above the North Fork Nooksack River bank.

Nooksack Falls (milepost 41)
Dramatic waterfall plummets more than 100 feet over rocky outcrops. Fence-lined pathway leads to viewpoint.

Heather Meadows Area
Subalpine setting between Mt. Baker and Mt. Shuksan. Heather Meadows Visitor Center open summer season. Self-guided interpretive trails, vistas, naturalist programs and picnicking.

### Points of Interest

**Mt. Baker Scenic Byway**
- The highway winds along the North Fork Nooksack River, ending at spectacular Artist Point, elevation 5140 feet, in the Heather Meadows Area.
- Trail systems lead into the Mt. Baker Wilderness.
- During winter months, motor traffic ends at the Mt. Baker Ski Area.

**Glacier Public Service Center**
- Located on the National Register of Historic Places.
- Operated during the summer season by the Forest Service and National Park Service.

**Mt. Baker Vista**
- Dramatic viewpoint at the end of Glacier Creek Road (Forest Road 39).

**Horseshoe Bend Trail**
- One-and-a-half mile hiker-only trail.

**Nooksack Falls**
- Dramatic waterfall.

**Heather Meadows Area**
- Subalpine setting.

### Popular Trails Along the Mt. Baker Scenic Byway

#### Glacier Area Trails

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<thead>
<tr>
<th>Trail #</th>
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<tr>
<td>625</td>
<td>Damfino Lakes</td>
<td>Road 31</td>
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<td>Non-wilderness</td>
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<tr>
<td>630</td>
<td>High Divide</td>
<td>HWY 542</td>
<td>13.0</td>
<td>Wilderness; stock; no fires</td>
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<tr>
<td>671</td>
<td>Church Mountain</td>
<td>Road 3040</td>
<td>4.2</td>
<td>Non-wilderness</td>
</tr>
<tr>
<td>677</td>
<td>Heliotrope Ridge</td>
<td>Road 39</td>
<td>4.2</td>
<td>Wilderness; no fires</td>
</tr>
<tr>
<td>678</td>
<td>Skyline Divide</td>
<td>Road 37</td>
<td>3.5</td>
<td>Wilderness; no fires; stock</td>
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<tr>
<td>687</td>
<td>Horseshoe Bend</td>
<td>HWY 542</td>
<td>1.5</td>
<td>Wilderness; no fires; stock</td>
</tr>
<tr>
<td>673</td>
<td>Goat Mountain</td>
<td>Road 32</td>
<td>4.0</td>
<td>Wilderness; no fires; enters national park</td>
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<tr>
<td>674</td>
<td>Hannegan Pass</td>
<td>Road 32</td>
<td>2.0</td>
<td>Wilderness; no fires; leads to lookout</td>
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<tr>
<td>685</td>
<td>Winchester Mountain</td>
<td>Road 3065</td>
<td>3.5</td>
<td>Wilderness; no fires</td>
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#### Heather Meadows Area Trails

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<tr>
<td>600</td>
<td>Lake Ann</td>
<td>HWY 542</td>
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<td>Enters wilderness; no fires</td>
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<td>615</td>
<td>Purrington Ridge</td>
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<td>Enters wilderness; no fires</td>
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<td>681</td>
<td>Table Mountain</td>
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<td>Enters wilderness; no dogs; no fires</td>
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<tr>
<td>682</td>
<td>Chain Lakes</td>
<td>HWY 542</td>
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<td>Wilderness; no fires; camp in designated sites</td>
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<tr>
<td>735</td>
<td>Picture Lake</td>
<td>HWY 542</td>
<td>0.5</td>
<td>No dogs; universally accessible</td>
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<tr>
<td>684.2</td>
<td>Fire and Ice</td>
<td>HWY 542</td>
<td>0.5</td>
<td>Self-guided interpretive trail</td>
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<tr>
<td>684.3</td>
<td>Wild Goose</td>
<td>HWY 542</td>
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<td>Self-guided interpretive trail</td>
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<tr>
<td>669</td>
<td>Artist Ridge</td>
<td>HWY 542</td>
<td>1.0</td>
<td>Self-guided interpretive trail</td>
</tr>
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### Entering Wilderness

The Mt. Baker Ranger District contains two wilderness areas, Mt. Baker and Noisy-Diobsud, and part of a third, Glacier Peak.

When entering wilderness areas, be prepared for risk and challenge. These lands remain in a wild and natural state, untrammelled and uninhabited by human beings. The terrain can be rugged and the weather unpredictable.

Keeping wilderness intact for future generations requires some regulation. Party size in wilderness is limited to twelve, including packing animals, to preserve the solitude of others; no motorized or mechanized equipment is allowed in wilderness; and campfires are prohibited in many areas.

Please check with the nearest ranger station for current conditions before entering Mt. Baker Ranger District's wilderness areas.
Weather. The enormous weight of that accumulation recrystallizes the contiguous United States. Glaciers form when more snow accumulates each winter than melts and evaporates during warmer weather. The enormous weight of that accumulation recrystallizes the snow into ice, and the glacier begins to flow downhill. Glaciers can flow several feet per year, and it is this movement that distinguishes glaciers from non-moving ice fields.

Glaciers are vitally important to the region’s ecology and hydrology. They influence vegetation growth; move and carve rock; and add minerals to the ecosystem. During times of year when little rain falls, meltwater accounts for all the water in some streams.

Look for these features when you view glaciers in the North Cascades

• U-shaped valley: Semicircular basins sculpted by the massive glaciers of past ice ages.
• Crevasse: Deep cracks in the ice caused by the movement of a flowing glacier.
• Cirque: Semi-circular basin at the head of a glacier.
• Horn-shaped peak: Spire-like peak that is the result of three or more glaciers grinding a mountain summit into a point.
• Arete: A narrow ridge of sharp, sawtooth rock that forms when two cirques on either side of a ridge grow towards each other.
• Col: The low point that forms when two cirques on either side of a ridge break through and meet each other.
• Terminal moraine: Pile of loose rock deposited at the front of a glacier when the glacier begins to retreat.
• Lateral moraine: Loose rock piled up along the sides of a glacier.
• Tarn: Small, deep lake at the bottom of a cirque.
• Hanging valley: Glacier-carved valley that is higher than the larger U-shaped valley it joins.

Discover Waterfalls

Water is the essence of the North Cascades. It falls from the sky, melts off of glaciers, rages in rivers and — most dramatically — plunges from high places in spectacular waterfalls.

Waterfalls are so abundant in these mountains that they are the characteristic that gave the Cascades their name. Below are several waterfalls worth checking out.

Ladder Creek: Located at milepost 121 on the North Cascades Highway (SR 20) behind the Gorge Powerhouse in upper Newhalem. Cross a suspension bridge to the powerhouse then follow signs. The trail is a 4 mile loop that takes you to beautiful pools and falls, colored lights and flower gardens. The trail includes some steep steps and handrails. Flashlights are advisable at night.

Gorge Creek Falls: Located between Newhalem and Diablo on the North Cascades Highway (SR 20), Gorge Creek drops 242 feet in a breathtaking plunge. A large parking area is near the falls.

Rainbow Falls (Baker Lake): Located in the Baker Lake Basin, Rainbow Creek cascades down a steep gorge with more than 100 foot drop. On a sunny day you will see a colorful rainbow from the viewpoint on Forest Service Road #1130.

Rainbow Falls (Stehekin): High above Stehekin Valley in the snowfields of Rainbow Ridge, the waters of Rainbow Creek plunge 312 feet in a misty cascade and end their journey in the Stehekin in Lake.

Nooksack Falls: located at milepost 41 on the Mt. Baker Highway (SR 542) near the town of Glacier, the North Fork Nooksack River drops more than 100 feet into a roaring mass of boiling water. One of the first two hydroelectric power plants in Washington uses this drop to generate power.

Visit Ancient Forests

Not so long ago ancient forests blanketed nearly all of the Pacific Northwest. Abundant rain and mild winters create the perfect environment for trees such as Douglas fir and cedar to grow very large and very old. These trees were so big that after loggers carved the first undercut wedge out of one of the old giants, a dozen or more timber workers could crowd into the gaping cut and pose for a picture. Early settlers would sometimes build roofs over hollow stumps to make homes out of them. Most of these ancient trees are gone now, but in the wilds of the North Cascades you can still visit forests that have never been cut and still retain all the characteristics of old-growth forest.

To be considered an old-growth forest at least some trees need to be 200-300 years old; the forest must have a multi-level canopy; and there must be downed logs and standing dead trees, called snags.

Old-growth forests are characterized by a mixture of old and new, large and small, living and dead — all part of a dynamic ecosystem that is growing, evolving and continually changing.

Centuries-old Douglas-fir may tower over the forest floor, while younger shade-tolerant hemlocks struggle upward far below. Even after a tree dies from old age or disease it is still a vital part of the ancient forest ecosystem. Snags provide homes for dozens of birds and mammals. When the snag falls over, the log becomes a haven for insects and many other animals. The downed log slowly decomposes and returns nutrients to the soil.

However, old-growth forests are not defined solely by trees. Complex, symbiotic relationships develop over centuries between all of the organisms present in the old-growth ecosystem. Lichen in the forest canopy pull nitrogen from the air, which is washed down to the soil and used by the forest’s vegetation; symbiotic fungi attached to roots supply plants and tree with water and nutrients and in return take carbohydrates; animals eat tree and plant material and help spread seeds across the forest.

When ancient forests are cut, it takes many years to rebuild all of the severed connections. “When we try to pick out anything by itself,” said conservationist and nature writer John Muir, “we find it hitched to everything else in the universe.” Ancient forests are a magnificent and complex strand in the web of life.

Where you can visit ancient forests

State Route 20 — Happy Creek Forest Walk at mile 134.5. This fully-accessible boardwalk takes you through outstanding western slope, low elevation old-growth forest. For longer hikes, try Thunder Creek and Big Beaver trails.

State Route 542 — Horseshoe Bend Trail across from Douglas Fir Campground at milepost 36. 1.5 mile hike on a forested ledge above the North Fork Nooksack River.

Mt. Baker Lake Area — East Bank Trail follows the east shore of Baker Lake and enters the Noisy Creek drainage at upper end. Shadow of the Sentinels is a barrier-free loop trail through old-growth forest (this trail suffered recent storm damage - check with ranger for current condition).
Travel Tips

Drive
Thousands of visitors drive for pleasure along the scenic roads of the North Cascades. State Route 20 offers east/west access across the mountains (this route closes during the winter at milepost 134). The Mt. Baker Scenic Byway leads visitors to Heather Meadows in the divide between Mt. Baker and Mt. Shuksan where the Mt. Baker Ski Area operates during the winter.

Ask
Forest/Park Service Information Office — Offers year-round visitor services. Located on State Route 20 in Sedro-Woolley.

North Cascades Visitor Center — Provides information, naturalist programs, exhibits and multi-media presentations. Located near Newhalem on State Route 20 across the Skagit River.

Heather Meadows Visitor Center — Showcases the natural and cultural heritage of the Mt. Baker area. Located along State Route 542 at milepost 52. Operates seasonally.

Glacier Public Service Center — Jointly operated (seasonally) by the Forest Service and the Park Service. Located at milepost 34 on State Route 542.

Golden West Visitor Center — Located in remote Stehekin, Golden West provides information about the Lake Chelan National Recreation Area. Ask for information sheets about geology, glaciers, fire management in Stehekin, mushrooms, snags, salmon or natural resource management issues of the North Cascades.

Bike
Many people tour the North Cascades Highway on their own or on a guided bicycle tour. The remote beauty of these routes offers a unique and challenging experience. Be well supplied with water, food and warm, waterproof clothing. Travel single file on the right edge of the road and use reflectors and bright clothing. Hiking trails are not designed for bike use; most trails are closed to motorcycles and bicycles. Most side roads are rugged enough for the most avid mountain biker.

Ride
Stock (horses, mules, donkeys and llamas) are welcome on trails that are maintained to stock standards. Trails in the national park and national forests have different rules and seasons of use. Please check with the ranger station for more detailed information and a listing of stock trails and their current conditions.

Stock in Wilderness:
• Stock on trails is limited to a total of 12 people and stock combined; for example, five people and seven horses. In areas where stock are allowed off-trail, the limit is six.
• Grazing is permitted in Ross Lake and Lake Chelan National Recreation Areas. Grazing permits are required and can be obtained with your backcountry permit.
• Grazing is permitted in national forests (must be at least 200 feet from shoreline of any lake). No permit required.
• Grazing is prohibited in North Cascades National Park.
• Pack in sufficient grain and processed feed pellets for your trip. Hay and hayfeed are prohibited. A list of acceptable feed is available where permits are issued.

Enjoy
Universal Access Trails: (ask for brochure)
• Baker Lake: Shadow of the Sentinels.
• Newhalem: Sterling Mountain, mountain view at North Cascades Visitor Center.
• Trail of the Cedars near town.
• State Route 20 at milepost 134.5: Happy Creek Forest Trail nature trail.
• Rainy Pass: Rainy Lake Trail, paved one mile route to Rainy Lake.
• Heather Meadows: Picture Lake, Fire & Ice, and Artist Ridge.

Other Self-Guided Trails:
• Colonial Creek Campground: Thunder Woods Nature trail.
• Hozomeen: Trail of the Obelisk.
• Stehekin: Imus Creek, McKellar Cabin and Rainbow Mist trails.
• Newhalem Creek Campground: To Know a Trail.

Naturalist Programs
• Colonial Creek and Newhalem Creek Amphitheaters — Evening programs on weekends.
• North Cascades Visitor Center — Daily talks and multi-media programs.
• Heather Meadows — Guided Walks.
• Skagit Wild and Scenic River eagle watching— winter weekends. Slide programs and nature viewing.
• Golden West Visitor Center — Daily mini-talks and weekend programs.

Hike & Climb
Hundreds of miles of trail lead into the Cascade mountains. Many enter designated Wilderness. Day hikes do not require a permit. Overnight stays in North Cascades National Park's backcountry do. Know rules and regulations and get current trail conditions at all National Park and Forest Service offices. Obtain complete National Park backcountry information at the Wilderness Center in Marblemount. Climbers should choose experienced partners or licensed guides and fill out Voluntary Climbing Registration Forms at Sedro-Woolley, Marblemount, Glacier or Stehekin. Ask for a Wilderness Trip Planner or a Climbing Notes newsletter for more information.

Stay
Campground options are listed in the centerfold, along with the North Cascades Highway Map. Most vehicle access campgrounds are available on a first come-first served basis. However, both the Forest Service (1-800-280-CAMP) and Washington State Parks (1-800-452-5687) have expanded their telephone reservation systems. Washington State Parks also have an information line (1-800-233-0321). North Cascades National Park does not have individual camping reservations.

Remote accommodations in the North Cascades include: Ross Lake Resort, Rockport, WA 98283, (206) 386-4437; North Cascades Stehekin Lodge, Box 457, Stehekin, WA 98816, (509) 682-4494; and Baker Lake Resort (360) 757-2262.

Many other private accommodations are available in adjacent communities. Listings are available from visitor information or Chamber of Commerce offices.

Boat
Much of the recreation in the North Cascades is water-oriented. For lake recreation, boat ramps are available at Lake Chelan, Baker Lake, Gorge Lake and Diablo Lake, and the north end of Ross Lake at Hozomeen. Boat rentals are offered at Baker Lake, Lake Chelan, and Ross Lake.

Passengers travel to Stehekin by cruising up 55-mile long Lake Chelan. The Lake Chelan Boat Company operates year-round, daily spring to fall. Schedules are available.

River floating is an adventure worth planning. Experienced boaters run the Skagit, Nooksack and Stehekin Rivers.

For boating trips, plan in advance and ask for schedules, plus a list of Accommodations and Services or Outfitter Guides from a Ranger Station.

Fish
The Skagit River (Washington’s second largest after the Columbia) and its impounded lakes are home to many species of trout and salmon. In order to protect spawning fish populations, it is necessary to comply with special regulations including closures, seasons, bag limits and gear restrictions. These are listed in the Washington Department of Fish & Wildlife, game fish regulations and in the Fishing in the North Cascades brochure.

Lake Chelan has fresh water cod and salmon. The Stehekin River gives anglers a good chance at rainbow and cutthroat trout. Boat shops and local anglers are the best sources of information and advice.

Fishing in Washington, including in national parks and forests, requires a valid Washington State game fishing license.

Learn with North Cascades Institute
North Cascades Institute is a nonprofit educational organization dedicated to increasing understanding and appreciation of the natural, historical and cultural landscapes of the Pacific Northwest. The primary focus is field-based, environmental education for children and adults; from Elderhostel for seniors to Mountain School and Camp for school age children.

NCI's Mountain School recently won the first national Wilderness Education Leadership Award presented by the National Park Service. This award recognizes NCI's Mountain School program for educating young people in ways that honor the spirit and values of wilderness. Nearly a thousand people are involved in this program annually and learn to appreciate the wild lands and watersheds of the North Cascades.

For more information or a catalog, write:
North Cascades Institute
2105 State Route 20
Sedro-Woolley, WA 98284
Call (360) 856-5700 ext. 209
CAR CAMPING IN THE NORTH CASCADES

North Cascades Highway

OVER THE NORTH CASCADES ON STATE ROUTE 20

1 Baker Lake Milepost 82 (turn off State Route 20)
   ____________
   Access via Forest Roads 12 and 13 off Baker Lake Highway.
   Mt. Baker NRA trailhead camp available for one night, for hikers.

3 Rockport M.P. 98
   ____________
   Access via Forest Road 1010. Switchbacks up south-facing slope to mountainside.
   Panoramic views.

5 Skagit Wild and Scenic River System
   ____________
   Segments of the Skagit, Sauk, Suiattle and Cascade Rivers.
   Some National Park campgrounds offer ranger/naturalist programs.

10 East Bank Trailhead M.P. 138
   ____________
   Panoramic view platform. Longer hikes to Lake Ann (two miles) or
   around Maple Pass loop (7.5 miles). Not snow-free until late July.

13 Upper Methow Valley M.P. 180
   ____________
   Mazama turnoff to Hart's Pass (22 miles); reaches highest point
   of Cascade Pass trailhead in North Cascades National Park.

For trails information along Route 20, see charts on pages 4 and 12.

Many public campgrounds in the North Cascades are accessible
by road. Most sites are filled on a first-come, first-served basis.
Some private campgrounds and resort cabins provide
and operate on a reservation.

Free campgrounds are primitive, requiring that you bring your
own water and pack out garbage.

Some National Park campgrounds offer ranger/naturalist programs.
Reservations are taken at most National Forest campgrounds; call
1-800-280-CAMP for details. Call Sedro-Woolley (360-856-5700)
to inquire about National Park and National Forest group camp
reservations.

Legend:

FS = Forest Service
SP = WA State Park
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**What You Need to Know**

**Safety**
- At trailheads, safeguard your possessions out of sight. Lock your vehicle.
- Use caution on forest access roads.
- Bring extra water on hikes. A special filter may be necessary, since even clean-looking water can contain disease-causing organisms.
- Water may not be available near camps. Treat and/or boil all water.
- Know your limits and when to turn back.
- Terrain is the primary cause of accidents in the North Cascades. Staying on trails, wearing adequate footwear and possessing a good topographic map can minimize the hazards of this rugged land.
- Be prepared for insects. You may encounter mosquitoes, wasps, bees and biting flies.
- Some stream crossings are not bridged. Cross streams in the morning (when they are lowest), scout for safe crossings, or turn around if the rushing water is unsafe.
- Many trails suffered extreme storm damage this winter; please use caution and notify the park or forest if you encounter downed trees or washed out sections of trail.
- When horses are approaching, hikers should talk to make their presence known and step off the trail on the low side.

**Leave No Trace:**

**Minimizing Impact**
- **Plan ahead.** Prepare mentally and physically. Choose destinations that you are in condition to handle and take suitable equipment (see the 10 essentials). Check with rangers for current conditions.
- **Limit party size.** Keep party size below 12 animals and people. In cross-country zones, travel in groups of six or fewer.
- **Stay on the trail.** Making parallel trails, cutting switchbacks and widening trails cause soil erosion and damage to plants. Wear smooth-soled shoes in sub-alpine settings. Most backcountry camps are in designated Wilderness where regulations designed to protect the resource apply. Visitors are encouraged to contact the Mt. Baker Ranger District before heading out to their backcountry destination.

**Backcountry Camp**

Permits are required for all overnight stays in the park complex’s backcountry. More than 200 backcountry campsites are available for hikers and stock users at North Cascades National Park Service Complex. All camps have toilets; signs along trails indicate their location. Permits are available on a first-come, first-served basis from ranger stations on the west side at Marblemount, Sedro-Woolley, Hozomeen, Glacier or on the east side at Chelan, Stehekin, Twisp and Winthrop. For permit information contact:

**Wilderness Center**
North Cascades National Park
Marblemount, WA 98267
Phone: (360) 873-4500

Camping in the National Forest does not require a permit. Overnight visitors to the Mt. Baker National Recreation Area, Chain Lakes and Watson Lakes must camp at designated sites. Campfires are not allowed in many backcountry areas located in sub-alpine settings. Most backcountry camps are in designated Wilderness where regulations designed to protect the resource apply. Visitors are encouraged to contact the Mt. Baker Ranger District before heading out to their backcountry destination.

**Be Safe in the Backcountry**

Don’t let a pleasurable outing turn into an unexpected tragedy by not being prepared. Entering into a mountain experience (even a day hike) should not be taken lightly.
- **Be well informed; contact park or forest for most up-to-date conditions.**
- **Research maps & trail handbooks.**
- **Carry a well stocked day pack.**
- **Let others at home know your plans.**
- **Make the best decision for your safety, including turning around.**

**The 10 Essentials**

Delays or changes in weather can cause emergencies. Even on short day hikes, each person should take and know how to use the following items:

**Navigation**—Topographic map and compass.

**Food**—Extra food and water. Boiling water can kill giardia, but treatment pills may not.

**Clothing**—Extra clothing, including rain gear, wool socks, sweater, gloves and hat.

**Light**—Flashlight with spare bulb and batteries.

**Fire**—Waterproof matches and fire starter such as a candle.

**Sun Protection**—Sunglasses and sunscreen.

**First Aid**—Aid kit including any special medications you might need.

**Knife**—A folding pocket knife.

**Signals**—Audible and visual; whistle and metal mirror.

**Emergency Shelter**—Plastic tube shelter or waterproof bivouac sack.

**Suggestions for Hiking with Children**

Bring along extra items such as:
- wholesome snacks
- extra water
- sunscreen
- insect repellent

a whistle in case they get lost

**Some Ideas for Keeping children Entertained:** Have them bring along a friend; sing songs; bird watch; identify plants; look for animal tracks.

**Mushroom collection is prohibited** in the North Cascades National Park Complex, but is allowed on some state and national forests. Check with local ranger station for rules.

**Visiting Bear Country**

Once accustomed to human food, a bear may seek it aggressively. You can prevent bear encounters by following basic precautions of proper food storage and camp cleanliness.
- **Cooking.** Try to have your sleeping area and personal gear about 100 yards (90 m) uphill or upwind from your cooking area. Wash dishes after a meal. At frontcountry campgrounds, collect all grey water from cooking and washing in a bucket and deposit it in septic or vault facilities. Do not sleep in the clothing you wore while cooking. Keep sleeping gear and personal items free of food odors.
- **Food Storage.** Store food, garbage, cooking gear and toiletries properly at all times. Lock these items in your car trunk if you are in the backcountry. Otherwise, place them in a bag or backpack and hang it from a branch in your cooking area. The storage container should hang at least 15 feet (5 m) above the ground and at least five feet (1.5 m) out from the tree trunk. Also hang cosmetics, sunscreen, soap, toothpaste or any item with a fragrant or food-like odor. Plastic-coated dry bags are good for hanging food since they seal in odors. Bear-resistant canisters are available commercially and for loan from National Park Service offices where you receive your permit.
- **Hunting and Fishing.** Where hunting is permitted, store game meat the same as food. Dispose of fish entrails by first puncturing air bladders and then dropping them in deep water.
- **Horses.** Store horse pellets the same as your food. For more information about horse safety, trail safety and minimum-impact riding, ask for the Stock Use bulletin from the ranger station or call the Backcountry Horsemens of Washington (360) 876-7739.
- **Bear Sightings.** If a bear comes close to your campsite you may be able to frighten it away by shouting or banging pots and pans. A bear accustomed to campground food may not be as easily discouraged. If you see a bear, report it to agency biologists at (360) 856-5700, or the nearest ranger station.
Walk on the Wild Side!
Multi-day Backpacking Hikes in the North Cascades

Day hikes are a great way to see the North Cascades, but there is nothing like a multi-day trip to really experience wilderness. Below are several ideas for hikes you may want to try (backcountry permits required). Two excellent trail books, Popular Trails and Backpacking From Stehekin, list dozens of other long hikes in the North Cascades. Both are available at all ranger stations.

**McAlester Pass — Rainbow Lake Loop (via Bridge Creek - Pacific Crest Trail)**
- Loop trip: 25.5 miles
- Hiking time: 3 days
- High Point: 6,500 feet (McAlester Pass)
- Snow free: Mid-July to October

**Hannegan Pass — Ross Lake**
- One-way trip: 46 miles
- Hiking time: 5 - 6 days
- High Point: 5,206 feet (Whatcom Pass)
- Snow free: Mid-July to October

On day 3 of this hike you can take a worthwhile side trip to one of the most scenic areas at this elevation in the park. Wildflowers, views of glaciers and about a dozen waterfalls are all part of the upper Little Beaver Valley around Twin Rocks Camp.

**Colonial Creek Campground — Stehekin Valley**
- One-way trip: 29.4 miles
- Hiking time: 3 days
- High Point: 6,040 feet (Park Creek Pass)
- Snow free: Late-July to September

The first ten miles wind through spectacular old growth forest. Terrific views of glaciers and the national park at the upper end of the Thunder Creek Valley. This valley drains 10 percent of all the glaciers in the contiguous United States.

Always check with rangers for more detailed hiking information current conditions.
**ROSS LAKE NATIONAL RECREATION AREA**

State Route 20 is the only east-west driving route across the North Cascades National Park Service Complex. Thirty miles of highway access Ross Lake National Recreation Area, offering much of the region’s camping, hiking and boating opportunities. Three reservoirs provide power for Seattle City Light and recreational activities for visitors. The three dams vary in height: Gorge - 300 feet, Diablo - 389 feet, and Ross - 540 feet.

Diablo Lake’s name is adopted from a Chinook word influenced by early Spanish explorers meaning "devil." Diablo Lake is open year round to fishing and boating. Camping is available at Colonial Creek Campground, or by permit at three boat-in sites.

The uniquely-colored waters of Diablo Lake are due to the high concentration of glaciers upstream. Ten percent of the glaciers in the lower forty-eight states grind rock into a fine powder that stays suspended in the lake. Light reflecting off those rock particles causes the intense turquoise lake color. Thunder Creek is the major stream contributing glacial sediment to the lake.

Ross Lake is the largest of three reservoirs created by the impounded waters of the upper Skagit River. Ross Lake winds and twists almost 25 miles from the dam north to the Canadian border at Hozomeen. Access to the dam and lake from the south is limited to trail and water routes. Diablo Lake, Ross Dam, and East Bank trails provide access for hikers from trailheads off State Route 20. Ross Lake Resort has small rental boats and provides portage over the dam and water-taxi service for trailheads and campgrounds (206) 386-4437.

Fluctuating water levels and seasonal snow-pack dictate accessibility. The only road and boat ramp are at the north end of Ross Lake. Vehicle access and boat launching are possible by traveling the 40 mile gravel Silver-Skagit Road south of Hope.

British Columbia, Hozomeen Campground is primitive and it is necessary to pack out all litter and refuse. Ross Lake’s limited access helps protect the pristine quality of the lake and its environment.

Ross Lake has a quality sport fishery of naturally reproducing trout, which opens July 1 each year. The catch limit is three rainbow trout (13 inch minimum) per day. No bait or barbed hooks are allowed. If bull trout and Dolly Varden are hooked, they must be carefully and immediately released. A Washington State fishing license is required.

Ross Lake’s natural fishery is unique, since the pressures of over-fishing have made it necessary to stock other lakes and many creeks with hatchery fish. Natural spawning occurs in the Skagit River above Ross Lake and in the tributary streams like Big Beaver, Lightning, Roland, Dry, and Ruby Creeks. All of Ruby Creek and 1/4 mile upstream from the mouth of Big Beaver are closed to fishing. All other tributaries are closed for one mile upstream.

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**Newhalem Area (milepost 120)**

<table>
<thead>
<tr>
<th>Trails</th>
<th>State Route 20 Milepost</th>
<th>Distance (Round-trip)</th>
<th>Elevation Gain</th>
<th>Difficulty</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thornton Lakes Trail</td>
<td>117</td>
<td>10.4 miles</td>
<td>2300 feet</td>
<td>moderate</td>
<td>Long day hike; permit needed for overnight</td>
</tr>
<tr>
<td>Sterling Munro Trail</td>
<td>120</td>
<td>660 feet</td>
<td>level</td>
<td>very easy</td>
<td>Boardwalk; view into the Picket Range; universally accessible</td>
</tr>
<tr>
<td>River Loop Trail</td>
<td>120</td>
<td>1.8 miles</td>
<td>level</td>
<td>easy</td>
<td>Forested walk to river; universally accessible</td>
</tr>
<tr>
<td>Pyramid Lake Trail</td>
<td>127</td>
<td>4.2 miles</td>
<td>1500 feet</td>
<td>moderate</td>
<td>Steep forest; stream; small lake</td>
</tr>
<tr>
<td>Diablo Lake Trail</td>
<td>128</td>
<td>7.6 miles</td>
<td>400 feet</td>
<td>easy</td>
<td>Trailhead across Diablo Dam</td>
</tr>
<tr>
<td>Thunder Creek Trail</td>
<td>130</td>
<td>1.6 - 38 miles</td>
<td>6300 feet</td>
<td>easy-difficult</td>
<td>Easy 1.6 miles round-trip to suspension bridge</td>
</tr>
<tr>
<td>Fourth of July Pass/ Panther Creek</td>
<td>130</td>
<td>10 miles</td>
<td>2900 feet</td>
<td>moderate</td>
<td>Access trail by hiking 1.8 miles up Thunder Creek Trail; steep to pass</td>
</tr>
<tr>
<td>Ross Dam Trail</td>
<td>134</td>
<td>1.5 miles</td>
<td>- 500 feet</td>
<td>easy</td>
<td>Short but steep trail from State Route 20 to dam</td>
</tr>
<tr>
<td>Happy Creek Forest Walk</td>
<td>134.5</td>
<td>.3 miles</td>
<td>level</td>
<td>very easy</td>
<td>Universally accessible</td>
</tr>
<tr>
<td>East Bank Forest Trail</td>
<td>138</td>
<td>.5 - 34 miles</td>
<td>1500 feet</td>
<td>easy</td>
<td>Trail east (Canyon Creek) or west (Ross Lake)</td>
</tr>
</tbody>
</table>
Stehekin, in the heart of Lake Chelan National Recreation Area, is a remote community situated along the lower few miles of the Stehekin River. No roads connect Stehekin to the rest of the world; accessible only by passenger ferry or private boat, floatplane, hiking or horseback, the beautiful Stehekin Valley is a pleasant escape from life’s frantic pace.

When you arrive at Stehekin, come to the National Park Service’s Golden West Visitor Center for information, exhibits, books, maps, backcountry permits, and programs by ranger-naturalists. In the Golden West Gallery, the Arts and Humanities of Stehekin presents arts, crafts and programs by local and regional artists. Shows change every three weeks from May through October.

There are trailheads and small campgrounds along the Stehekin Valley Road. The date for opening this road from High Bridge to Bridge Creek will depend on the time needed to repair road damage. Repairs beyond Bridge Creek will take the remainder of the 1997 season, preventing shuttle service beyond that point this year. As soon as trail damage is repaired hikers, horseback riders and bicyclists will be able to reach Cottonwood Camp at the road’s end, and motorcyclists will be able to go as far as Flat Creek (3 miles below Cottonwood).

During the summer season the lodge operates a tour bus to beautiful Rainbow Falls, leaving just after the boat arrives and returning approximately one hour before it departs.

**Trails**

<table>
<thead>
<tr>
<th>Trailhead</th>
<th>Distance (One Way)</th>
<th>Elevation Gain</th>
<th>Difficulty</th>
<th>Remarks</th>
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<tbody>
<tr>
<td>Lakeshore Loop Trail</td>
<td>2.6 miles</td>
<td>4.4 miles</td>
<td>1,000 feet</td>
<td>moderate</td>
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<tr>
<td>Purple Creek Trail</td>
<td>7.5 miles</td>
<td>5,700 feet</td>
<td>Strenuous</td>
<td>Hike an additional 1/2 mile to Boulder Butte for a panoramic view</td>
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<tr>
<td>Cascade Pass Trail</td>
<td>22.8 miles</td>
<td>12.6 miles</td>
<td>2,600 feet</td>
<td>Well-used trail through talus slopes and wooded ridge to Cascade Pass</td>
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<tr>
<td>McGregor Mountain Trail</td>
<td>11.1 miles (at High Bridge)</td>
<td>7.7 miles</td>
<td>6,525 feet</td>
<td>Very strenuous</td>
</tr>
<tr>
<td>Agnes Gorge Trail</td>
<td>11.3 miles</td>
<td>2.5 miles</td>
<td>400 feet</td>
<td>Easy</td>
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<tr>
<td>Coon Lake Trail</td>
<td>11.1 miles (at High Bridge)</td>
<td>1.2 miles</td>
<td>600 feet</td>
<td>Moderate</td>
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<tr>
<td>Goode Ridge Lookout Trail</td>
<td>16.1 miles</td>
<td>5.4 miles</td>
<td>4,800 feet</td>
<td>Strenuous</td>
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<tr>
<td>Stehekin River Trail</td>
<td>4.4 miles (at Harlequin Camps)</td>
<td>4.0 miles</td>
<td>Level</td>
<td>Easy</td>
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<tr>
<td>Bridge Creek Trail</td>
<td>15.9 miles</td>
<td>14.3 miles</td>
<td>2,600 feet</td>
<td>Moderate</td>
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Alien Invasion
By Helen Buller

They may be pretty or they may be plain. Either way, exotic plants threaten North Cascades ecosystem integrity. Alien invaders such as knapweed, skeletonweed and scotch broom thrive in areas disturbed by humans. When people excavate soils or build roads they create an ideal environment for alien plants. Usually brought in as seeds attached to vehicles, pets and cargo, alien plants are more successful than natives at colonizing human-disturbed areas. Without controls, such as competing plants and predatory insects prevalent in their homeland, alien species flourish and out-compete native plants.

Over thousands of years, more than 1,500 plants have adapted to successfully fit specific North Cascades habitats. Though hardy enough to survive natural disturbances such as fire, these native plants do not fare as well in areas disturbed by humans. Native plant communities have the toughest time in disturbed habitats at dry, low elevations and high, cold elevations.

To preserve the native landscape, the National Park Service (NPS) and Forest Service use a range of techniques to control alien plant invasions in the North Cascades. These include mechanical, biological and chemical methods. (The Forest Service only hand-pulls; it does not use chemicals). Because the NPS strives to limit environmental damage, the agency prefers to pull, by hand, invaders that do not grow back from broken roots. This mechanical method is extremely work intensive. Seeds can lie dormant for up to seven years and areas must be repeatedly revisited.

Exposing alien plants to predators and diseases from their homeland can also help control their spread. These natural controls do not attack alien species native to the North Cascades ecosystem. In 1994, two species of gall-fly, which feast only on knapweed seeds, were used to help limit an infestation in the Lake Chelan National Recreation Area. Though biological control usually does not eliminate alien species, it can slow down the rate of invasion.

When mechanical and biological attempts to control alien plants such as skeletonweed fail, the NPS may employ chemical controls. Because herbicides can cause unwanted damage to plants and animals, their use is carefully evaluated and administered. Continued efforts to control alien species will help protect natural plant communities in the North Cascades.

North Cascades Environmental Education Center

The North Cascades Environmental Education Center is a new partnership project between North Cascades Institute, North Cascades National Park and Seattle City Light. The partnership is designing a residential environmental education center to be built on the shore of Diablo Lake in Ross Lake National Recreation Area. The learning center will be constructed on the site of the old Diablo Lake Resort and is targeted for completion in 1999.

Seattle City Light will build the environmental education center as part of the relicensing agreement for three dams the utility operates on the Skagit River. The National Park Service will dedicate the land for environmental education and provide additional support. The learning center will include dorms, classrooms, labs, staff housing, cafeteria, library and trails. North Cascades Institute (NCI) will be responsible for educational programming and operations at the center. NCI is a nonprofit environmental education organization dedicated to promoting ecological literacy to citizens of the Pacific Northwest.

The learning center will provide a wonderful opportunity to reach a wider audience and build new partnerships in support of environmental education in the Pacific Northwest.

Helping Hand Extends to North Cascades N.P.

Washington State’s national parks (Mount Rainier, North Cascades and Olympic) are its crown jewels. Drawing millions of visitors each year, they face increasing pressures from high visitation and tightening budgets.

The Mount Rainier, North Cascades & Olympic Fund aids and supports the three national parks of Washington State. Founded in March, 1993, the Fund leads private conservation efforts to support National Park Service goals of preservation and protection.

The Fund helps ensure visitors have a high quality, memorable experience through sponsoring educational projects, trail improvements, vegetation restoration, vegetation theft prevention and fish and wildlife projects. By securing financial contributions from individuals, corporations, foundations and businesses, the Fund supports projects that are recommended by the various Parks.

Thanks to a grant from the Fund, North Cascades National Park staff were able to provide evening naturalist programs in the park’s busiest campgrounds throughout the summer of 1996. This year, the Fund is supporting the construction of a fully accessible interpretive boardwalk trail at an archeological site. The project, which will be completed in 1998, will help park visitors learn about how people lived in the North Cascades for thousands of years.

For more information about how you can help give nature a helping hand, call (206) 621-6565 or look for the Fund’s brochure in any of the visitor centers located at all three Washington national parks.

Skagit Relicensing Agreement

In 1995 the Federal Energy Regulatory Commission approved a new 30-year license for the Skagit River Hydroelectric Project. The project includes the three dams and their related reservoirs, powerhouses and transmission lines along the Skagit River owned by Seattle City Light. The utility company is owned by the City of Seattle. All three dams are within Ross Lake National Recreation Area, one of the three National Park Service areas comprising North Cascades National Park Service Complex. All three predate the establishment of the complex in 1968.

The new hydropower license includes settlement agreements designed to mitigate the effects of the dams in five categories: fisheries, recreation and aesthetics, wildlife, erosion and cultural resources. The agreements were negotiated among Seattle City Light, tribes, conservation groups and various state and federal agencies, including the National Park Service.

Under the settlement agreements, Seattle City Light will fund a wide variety of projects over the 30 years of the license. An example is the North Cascades Environmental Education Center. North Cascades Institute, a non-profit educational organization, will operate the center with oversight from Seattle City Light and the National Park Service. Construction will begin in 1998 and the center will open in 1999, offering classes to school groups, adults and Elderhostel participants.

Another major mitigation project is an interpretive trail and other improvements at the Gorge Falls parking area along the North Cascades Highway. Wildlife monitoring, studies of salmon in the Skagit River, the propagation of native plants in a greenhouse to revegetate impacted sites and preparation of a plan to protect archeological sites around Ross Lake are examples of other settlement agreement projects beginning this year.

Unprecedented in their scope and in resulting from willing negotiation among so many parties, the settlement agreements provide funding of more than $100 million over the 30 years of the license. Visitors and the natural and cultural resources of Ross Lake National Recreation Area will be the beneficiaries of this innovative approach.
Books and Maps to Introduce the North Cascades!

Offered by the Northwest Interpretive Association for your benefit and enjoyment. Northwest Interpretive Association is a nonprofit organization. Money received through sales, memberships and donations is used to help study and interpret National Park Service and U.S. Forest Service areas for visitors.

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**Membership Discount-15%**

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**Adjusted Subtotal**

**Sales Tax 7.8% (WA residents)**

**Ponage and Handling**

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**Membership Fee**

**Donation**

**Total Amount Enclosed**

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Park & Forest Information Stations
Cascade Loop—Summer Hours
The times listed are subject to change.
Please call in advance for more information.

North Cascades National Park;
Mt. Baker Ranger District;
Mt. Baker-Snoqualmie National Forest
SEDRO-WOOLLEY
2105 State Route 20, 98284
Sat. - Thurs., 8:00am-4:30pm
Fri., 8:00am-6:00pm
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Ross Lake National Recreation Area (NPS)
Backcountry Information/Permits
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(360) 873-4500 (ext. 37 or 39)

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*Daily, 8:00am-6:00pm
(206) 386-4495

STEHEKIN
Lake Chelan National Recreation Area (NPS)
Golden West Visitor Center
Daily, 8:00am-4:30pm
(360) 856-5700 x-340 then 14
* July & August

Okanogan National Forest;
Methow Valley Ranger District
WINTHROP Methow Valley Visitor Center
8:00am-5:00pm daily
(509) 996-6000

TWISP Office
Mon. - Fri., 7:45am-4:30pm
Closed Saturday and Sunday
(509) 997-2131

Wenatchee National Forest
LEAVENWORTH Ranger District
Mon. - Sat., 7:45am-4:30pm
Sunday morning permits only
(509) 782-1413
LAKE WENATCHEE Ranger District
Mon. - Sat., 8:00am-4:30pm; closed Sundays except for holidays
(509) 763-3103

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(206) 470-4060

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1-800-627-0062 or TDD 1-800-272-1215

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