



Liberty Ridge



NPS photo

Official In-Depth Route Description

Liberty Ridge

Stats	
Approximate Elevation Gain	11,500 ft, 3500 m
Approximate Length	10-12 mi, 16-19 km
Average Time to Climb Route	3-4 days
Typical Hazards	Crevasse Falls, Avalanche Prone Terrain, Steep Icy Slopes, Weather
Attempts Per Year	98 Climbers
Average Summit Success Rate	53%

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*Produced by Mount Rainier National Park
Climbing Rangers, 2018*

Cover image: Ranger high atop Liberty Ridge with the Carbon Glacier below, NPS Photo



Liberty Ridge gained much of its fame when it was named one of the “Fifty Classic Climbs” in 1996 by Steve Roper and Allen Steck. The route along the ridge follows an aesthetic line between Liberty Wall and Willis Wall all the way to the summit of Liberty Cap. Due to the committing nature of the route, its remote location, and its sustained steep angle, Liberty Ridge has the reputation of being the hardest and most-dangerous regularly climbed route on Mount Rainier.

DEDICATION

We want to acknowledge and remember the climbers involved in the tragedy that took place on Liberty Ridge in 2014. Our mountain community lost six climbers, two guides and four clients, when, what's believed to be an avalanche, swept down the ridge. There are news articles, reports and analysis of the incident available online and we encourage climbers considering this route to read, study, and hopefully learn from them. Both of the guides, Matt and Eitan, had spent years on Mount Rainier and climbed and guided in major mountain ranges throughout the world. They were well liked and respected by both fellow guides and rangers alike. What stands out about this incident compared to others is that a capable team making good decisions still ended up in a dire situation. There's no post-incident review that points to a critical mistake this team of climbers made and for other climbers to avoid. Liberty Ridge poses significant threats to all climbers who choose to attempt it, not just the inexperienced or least-fit, and the decision to climb it should be a whole-hearted one. In the memory of Eitan and Matt, we hope to encourage climbers to seek out their passions and spend each day making conscious and deliberate decisions to follow them.



History

A steep cleaver rising out of the Carbon Glacier from 8,000 feet to over 13,000 feet, Liberty Ridge hides between Curtis Ridge to the east and Ptarmigan Ridge to the west. Due to the prominence of the neighboring

ridges, Liberty Ridge never defines Mount Rainier's skyline from afar, but has a striking appearance when viewed head-on. It was first climbed by Ome Daiber, Will Borrow, and Arnold Campbell in September of 1935. Ome Daiber published an account of his arduous climb that started at the Carbon River and finished in Paradise. They summited almost 52 hours after leaving their car and spent the night in the crater rim.

There wasn't another recorded ascent until 20 years later.

Dave Mahre, Marcel Schuster, Mike McGuire, and Gene Prater made another late-season ascent in August of 1955. Their account includes many instances of rockfall and hard water-ice which is consistent with today's late-season conditions and why most parties climb earlier in the year.

Statistical Route Use

Just about 100 climbers attempt Liberty Ridge each year. Though the first ascent was made in September, climbers now try to ascend the ridge earlier in the year before too much snow melts and exposes the loose rock on the ridge. It's a balance between the early season winter-like weather and the late season melted-out rockfall. Both storms and rockfall have injured climbers on the ridge. Timing an ascent is key to avoiding both of these hazards. From the first 'closing snowfall' around mid-November until sometime in late-April or May, Highway 410 is closed



Sun above the summits. NPS photo

at the north park boundary. It is about twelve miles from that closure at the north park boundary to the White River Campground. This means that approaching Liberty Ridge before Highway 410 reopens in the spring adds 24 miles to the climb!

From April to late May, as the road crew begins to plow the highway and remove winter snow, the access begins to get easier, but please check the [park's road status webpage](#) to get up-to-date information regarding travel restrictions. Snowmobiles are allowed in certain zones inside the park and can be used to access the White River Campground in the winter. Snowmobiles must stay on established roadways. Visitor use beyond road closures cannot interfere with snow removal in the spring. It's best to call or visit a ranger station ahead of time to figure out the current road conditions. Due to the added mileage most climbers wait until the road opens all the way to White River Campground before attempting to climb Liberty Ridge.

Summit success rates vary substantially more on this route compared to the other standard routes. Some years as many as 60% of climbers succeed, other years the success rate falls to around 30%. This is partly due to the lower

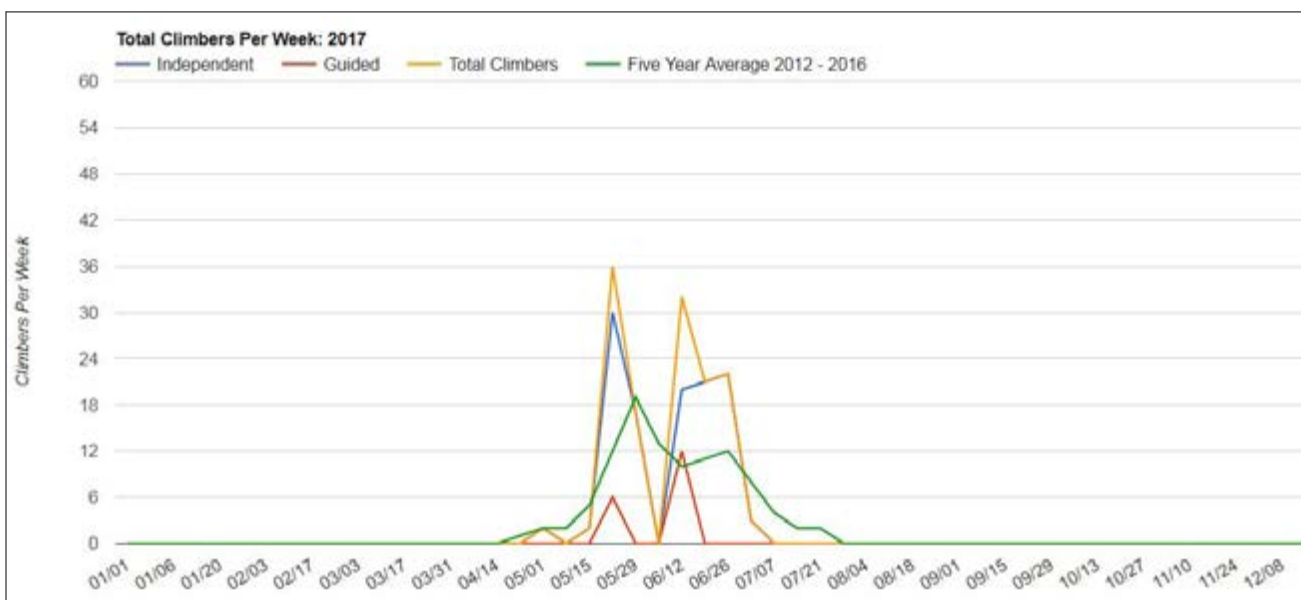
sample size, the relatively short climbing season due to snow conditions, and the relatively longer good-weather window necessary to attempt such a committing climb.

Skill Level And Experience

Liberty Ridge has a reputation of being tough. It's easy to underestimate the climb by looking purely at the statistics and a map. Mount Rainier is not just another fourteener and it's difficult for climbers who've only explored other peaks within the lower 48 states to grasp the magnitude of Mount Rainier's terrain. Add in the difficulty of a non-standard route to an already challenging peak makes for an extremely strenuous adventure. Some of the factors which challenge every climber on the ridge include:

- **A broad repertoire of climbing techniques.** Liberty Ridge demands many different techniques (glacier travel, simul-climbing steep snow, short-pitching in alpine terrain, pitched out climbing on the bergschrund, etc.) and the ability to transition between them efficiently.
- **Post-holing.** When ascending and then descending over 10,000 vertical feet of terrain there's bound to

Total Climbers Per Week on Liberty Ridge in 2017, NPS Graphic.





The westside of Liberty Ridge. NPS photo

be thousands, yes, thousands, of feet where the snow conditions make for slow and tedious travel.

- **Navigation on broken glaciers.** Crossing the Winthrop and Carbon will be challenging especially if it's late in the season or if visibility is at all obscured. Gaining the ridge itself can sometimes turn trips around due to the hazardous and hard-to-find snow bridges necessary to cross to ascend the ridge. And finally, on the descent, downclimbing the **Emmons-Winthrop route** which is always changing as the glaciers break apart throughout the season.
- **Establishing a bivouac in steep terrain.** Selecting a site free from objective hazards, digging a platform, setting up a tent and sleeping gear, and potentially providing for a belay or anchor system the whole time. Wind, darkness, and steep slopes can cause pieces of an overnight "gear-system" to disappear.
- **"Alpine" versus "Siege" tactics.** Deciding on which gear and how much gear to carry up and over the mountain can be dictated both by objective factors like weather and time of year, but also by subjective factors like team fitness level and flexibility with objectives.

Climbers should note that there are no guide services maintaining the route. There is no shoveled trail to walk on

nor are there established fixed anchors, ladders, wands, and rope lines. Also, the route is climbed less frequently (usually less than 100 climbers per year) and other climber's tracks are not necessarily the best or safest option to follow.

Key Techniques:

- Roped Travel / Team Arrest (keep the rope taut without slack between climbers)
- Crevasse Rescue (escaping the self-arrest belay and rigging a haul system)
- Simultaneous climbing with running protection (appropriate in certain terrain)
- Short-pitching (provides security for short, steep sections along the route)
- Pitched Ice Climbing (for long, steep pitches requiring a more secure belay)

Common Challenges:

Comfort on steep snow and steep alpine ice will help climbers move quickly up the ridge. Teams who need to "pitch out" most of the ridge to feel secure while climbing in steep terrain will take days longer. This does not mean that simul-soloing or simul-climbing should be the go to technique. Changes in slope angles, surface conditions, and climber comfort will dictate the best technique to implement.

Rockfall and ice fall from above and small sloughs of snow layers can cause climbers to lose their balance or footing. Be aware that a trip or tumble can be impossible to catch with self-arrest techniques on the majority of the ridge and having some sort of system to catch a climber in case of an event like this should be considered mandatory.

Besides being a true wilderness experience with a remote and rarely travelled location, the climb has many other characteristics of a big route in Alaska. This includes concerns about acclimatization, unknown snow conditions high up on the route, and a commitment point on the route where it's going to be easier to ascend towards the summit rather than downclimb the route.

At a minimum, before attempting Liberty Ridge, climbers should have climbed Mount Rainier at least once and familiarized themselves with the three-summit high points at the top of Mount Rainier, the scale and breadth of the mountain, and the descent off the mountain. Climbers should also have a strong background in climbing multi-pitch, low-angle ice. A great "warm-up" to Liberty Ridge would be the **Kautz Glacier route** on the south side of Mount Rainier. This route offers a long, multi-day experience with some ice climbing pitches, but in a much less committing venue.

Required Skill: Navigation

Map and compass navigation is a necessary foundational skill but cannot be relied upon for navigating

the heavily crevassed and minimally featured terrain on the upper mountain. It also cannot be initiated in a white out once the climbing party has lost their current position. So if it is the primary means for a parties' navigation plan then their position must be known and tracked constantly by having physical landmarks to help identify their location.

GPS navigation is the modern standard and has many advantages over map and compass. The limitations of battery life and exposure of electronics to weather are possibly the only risks associated with relying on a GPS unit as a primary form of navigation, so always take an extra set of batteries. Know at least these functions: how to record waypoints and the format with which you're recording them in, take a tracklog and know how to navigate and follow a track back, and read your current position and altitude. Practice before you need the skill.

Even more important: Know that in a white out or storm, it is nearly impossible for anyone, no matter how experienced, to use 'dead reckoning' to find their way down from the top of Mount Rainier.

Weather And Forecasts

Pay attention to the weather. The weather will be the largest determining factor in whether or not a climb on Liberty Ridge will be successful and is a recurring theme in this route brief. Big storms generally advance with the



Late season choss on the ridge, climb early for best snow coverage. NPS photo



Wild cloud formations above Mount Rainier. NPS photo

prevailing winds from the southwest off of the Pacific Ocean. Due to the committing nature of the route, it's imperative that climbers wait for specific weather patterns before launching. Characteristics of a forecast predicting a good weather pattern include high confidence (the meteorologist believes that the forecast will be accurate), a stable pressure system for the duration of the climb plus an extra 24 hours for contingencies, freezing levels below 14,000 feet (less rock and ice fall) and above 6,000 feet (less prone to cold injuries), wind speeds below 30 mph, and decent visibility (especially important up high and during the descent).

The early-season rush to get up the ridge while there's still snow covering all the loose rock forces teams to decide whether or not the weather will be decent enough to summit safely. Remember that there's no gate that closes or sign that flashes to announce that the weather conditions are becoming too dangerous to climb. Make the decision ahead of time based on a detailed forecast from multiple resources, and also develop decision points along the route to help as a reminder to reevaluate the weather continuously during the climb. Not only does the chance of an accident increase with stormy weather, but the consequences become more dire as well; neither rescue teams nor helicopters can operate in extremely poor weather.

Required Skill: Weather Forecasting

After nearly every accident, the NPS debriefs the party to find out what exactly happened. Parties repeat consistently that above 11,000, "up was down," meaning that ascending the ridge seemed a better option than descending it. Parties are constantly surprised that everything keeps getting harder the higher they ascend on the ridge. The climbing, the weather, the altitude and fatigue-level all increase. **Time and time again**, parties ascend the ridge above

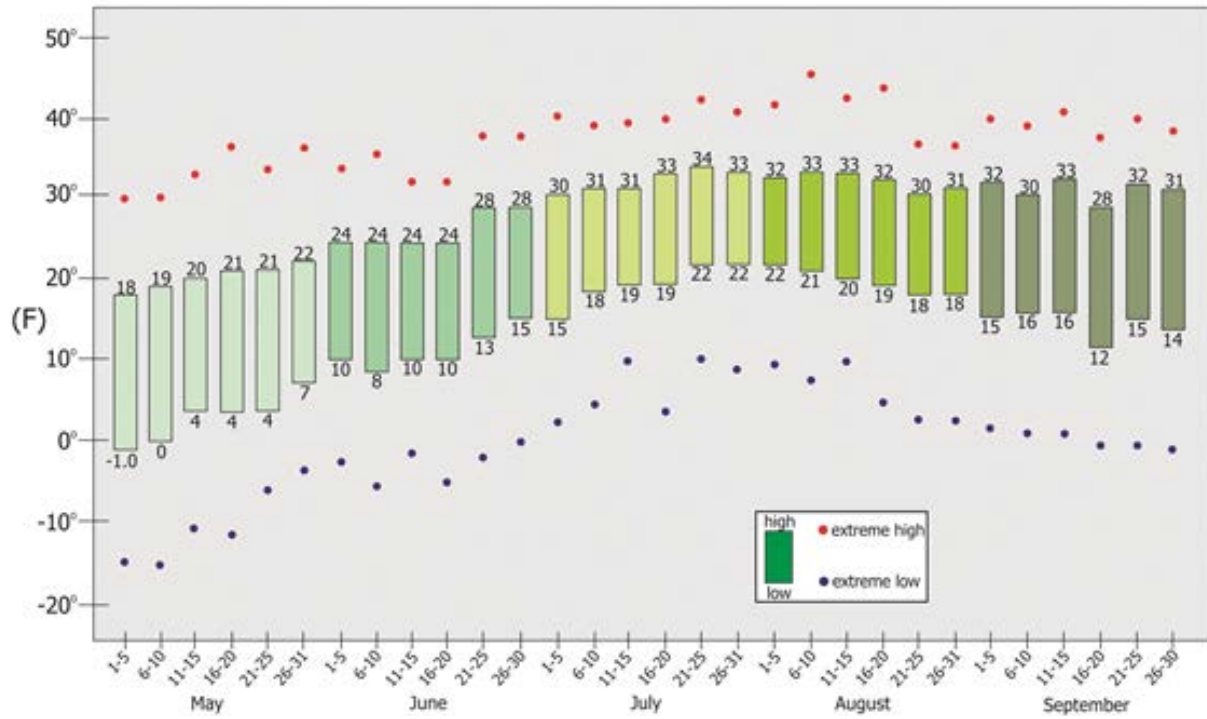
high camp lacking a favorable weather forecast and ascend into harder and worsening conditions.

You might not think of 'weather forecasting' as a mountaineering skill, however, on no other route on Mount Rainier is the weather forecast so important. If you are looking at just one source of weather information, you are really doing yourself a disservice and taking on more risk than you could possibly know.

Adequate mountain weather forecasting consists of cross-referencing several independent types of forecast resources; weather observations and telemetry, general weather forecasts, point matrix mateograms, atmospheric weather models, and temperature/winds-aloft forecasts, among others. Many forecasts are geared towards people in large lowland cities who look 'up' at the weather. There are many occasions when you can be on Mount Rainier in the sunshine, looking 'down' at the weather they are looking up at.

Start with the [Mount Rainier Recreational Forecast](#). Get a general sense of what is going on. Go then to the UW Atmospheric Sciences MM5 models and look at a 36-km Temperature/Pressure/Winds model. Look for low pressure areas dropping down from the gulf of Alaska into our area or pressure lines getting closer together. Next compare the National Weather Service point matrix mateogram and the timing of weather events with the recreational forecast and the model loops. Down farther in the UW models are 'cloud' forecasts at 0-3,000 feet, 3,000-10,000 feet, and 10,000 to 20,000 feet. Look at each of those independently and see at what elevational bands the weather is concentrated. The temperature winds aloft forecast from USAIRNET also delivers a good human-readable forecast for Seattle free winds at incremental elevations.

Mount Rainier: Air Temperatures Near the Summit



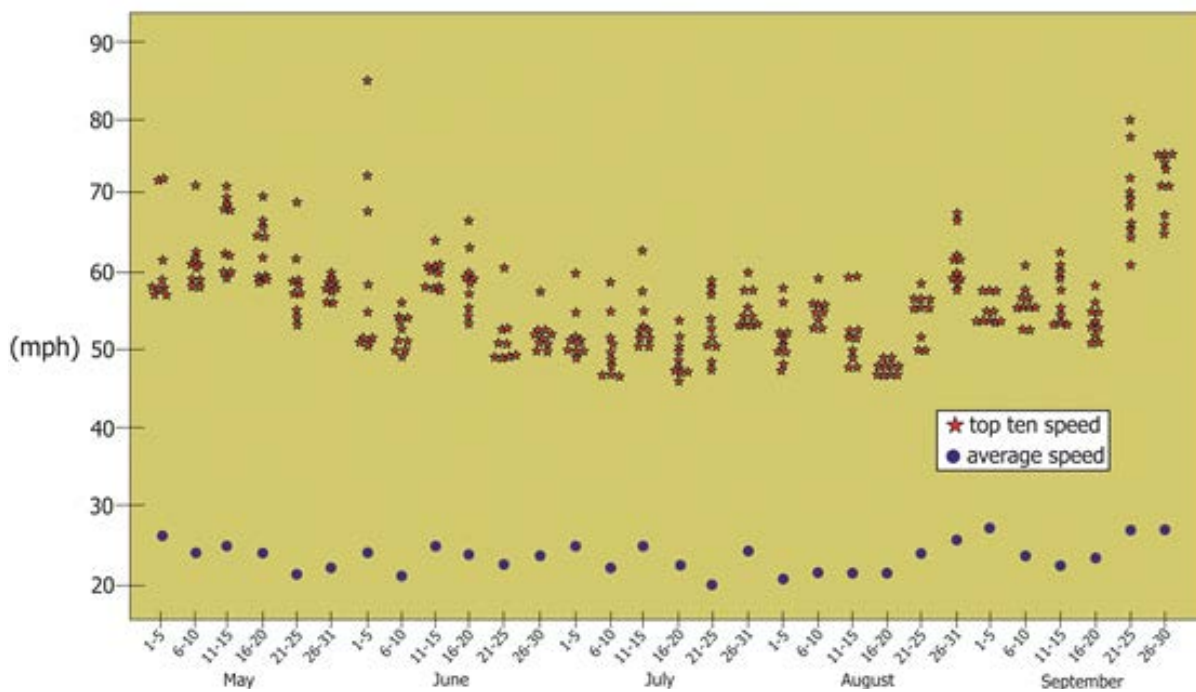
Summit air temperatures, NPS graphic

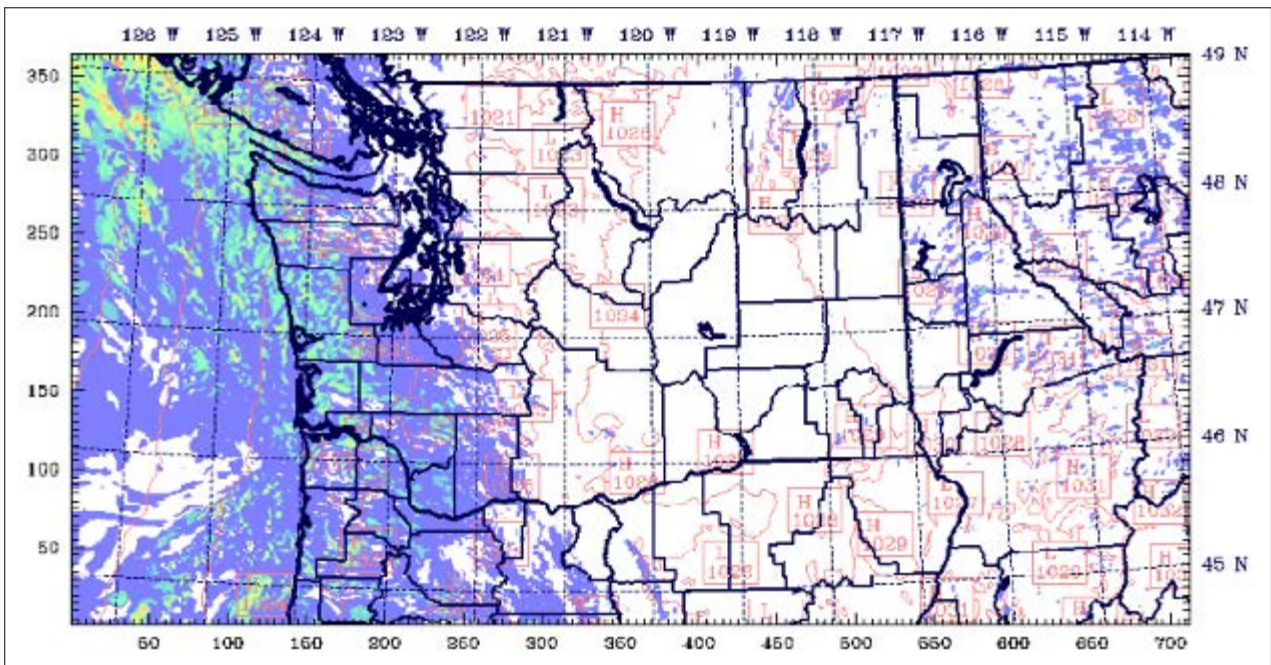
Be tenacious getting detailed weather information. While on your climb, save some battery life so that on the night before your summit attempt you can check the weather one last time. Be prepared for bad news and a decision to turn around. Expect it. In no other case does the old adage

hold more true, “One does not conquer the mountains, the mountains generously allow us access.”

See the charts on this page for seasonal wind and temperature averages.

Mount Rainier: Windspeeds Near the Summit





Presence of clouds from 3000 to 10,000 feet elevation

Using [this wind chill calculator](#) as a reference, the *average* windchill conditions on a summer trip up Mount Rainier range from -5F to 10F. Extremities (hands and feet) are the first to lose perfusion and succumb to cold injuries. Climbers often underestimate the cold in June and find that their toes and hands are so cold that they cannot continue their climb and must turn around. Warm boots (not single layer, thin leather boots) are a must for early-season climbs.

The presence of condensed moisture (surface clouds/fog) in alpine areas is a game-changer. Never underestimate the amount of information that is lost when visibility is restricted. Cold temperatures, high winds, and driving rain/snow can make the experience rather desperate, just because of the simple fact that you cannot *see* where to go. *The route* to the summit is often a thin corridor. If you stray just 10 feet this way or that way, you may wind up on a path that has no exit. Even a well established boot-pack can disappear in minutes with drifting snow.

The following weather models are produced by the University of Washington and are tools climbers can use to predict moisture in the atmosphere. View these models and learn to understand the information in them in order

to understand the possibility for obscuring moisture present during your climb:

- [UW MM5 4/3km Mount Rainier Atmospheric Profile](#)
- [UW MM5 4/3km Clouds 3-10K feet](#)
- [UW MM5 4/3km Clouds 10-20K feet](#)

The Go/No Go Matrix (Weather)

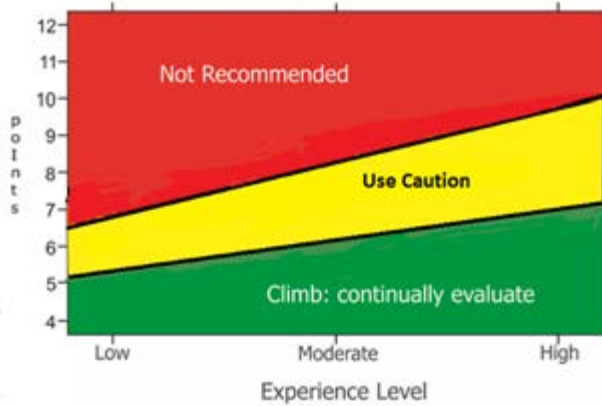
To assist in making a decision if one should climb based on the weather forecast, we have created this matrix. This Go/No Go Matrix only takes weather into account for a given team experience level. Other factors such as avalanche conditions, equipment issues, other team dynamics, etc., need to be evaluated as well. The actual number output from the matrix can be a rough guide, but the important part of the exercise is to discuss conditions with your team and arrive at a consensus as to what the experience level of your team is and determine how prepared you are to deal with the forecasted weather. As always, one should choose to turn back if the weather looks to be deteriorating. The matrix was created with input from guides and rangers, and represents cumulative knowledge of thousands of ascents. Start by going down the gray column on the left. First assess

Go/No Go Weather Matrix

Points:	1	2	3-4
Wind	Low (<15 mph) +1	Moderate (15-25 mph) +2	High (>25 mph) +3
Precip	None +1	Light +2	Present +4
Visibility	Clear (unlimited) +1	Overcast or Scattered Clouds +2	Restricted +4
Summit Air Temp	Warmer (>30°F) +1	Moderate (20°-30°F) +2	Cold (<20°F) +3

- Wind, Precip and Visibility all as 3 or greater indicates that a climber should not attempt to climb

Evaluator Tool: Weather Conditions and Team Experience



the wind component at either 1, 2, or 3. Then proceed to the precipitation component, add 1, 2, or 4 to your running total. Continue down the list, summing all the factors from the four rows. Then place your score in the evaluator tool relative to your team's experience level.

You can see from the above matrix that precipitation and visibility can be showstoppers, certainly on a summit climb, but even for a trip to Camp Muir.

On the lower mountain below 10,000 feet, these weather factors can often be mitigated by equipment and exceptional experience, however, there are far narrower margins of error on the upper mountain for everyone. With weather and navigational concerns, it can become all but impossible to reconnoiter your way and survive.

Forecasts

The reality is that the weather is forecastable. The important factors, Temperature, Wind Speed, and Presence of Moisture is forecasted to a high degree of

accuracy several days in advance. There is no excuse to be uninformed of the weather. Cellular reception is available now at most locations above 6,000 feet. Bring a phone, keep it in airplane mode or off until you need it. Bring a small portable charger as a backup. The rangers can also provide forecast information.

Here are some online resources to help you develop an accurate forecast:

- [Mount Rainier Recreational Forecast](#) is a general overview updated twice daily.
- [Northwest Avalanche Center \(NWAC\)](#) has a zone forecast for Mount Rainier.
- [University of Washington](#) has a bunch of forecast models available to view online.

What To Bring

There is no list of *required* gear to bring. And, the list of gear to bring should vary based on the climbing party's skill and experience level, and by season and conditions. However, we can generally say there are common denominators to any climber's gear choices for this route. Though this list isn't exhaustive, it's a good place to start. Also, it's a good plan to design contingencies into your equipment system. More than one climber's pack has rolled away from them and been lost on the mountain; it's happened to both experienced and inexperienced climbers.

Climbing rangers are often frustrated by the lack of crucial gear items climbers neglect to bring with them. In rare cases, extremely experienced climbers have developed systems and techniques to mitigate the absence of this gear, but for the vast majority of climbers, the lack of gear is a strong indicator of lack of experience.

The amount of ice screws, pickets, length of rope, whether or not to bring waterproof layers, how warm of a belay jacket and sleeping bag, guide tarp or tent, etc. all depends



Ranger climbing high atop the ridge with reasonable-sized pack, NPS photo

on the skill of the team and condition of the route. What's the "right gear" for one team will almost certainly be different from the "right gear" for another team.

Due to the "up and over" style of Liberty Ridge (unlike the **Emmons-Winthrop** or **Disappointment Cleaver** which are "up and back down" style) it's imperative to consider the weight of your equipment. Remember that unplanned bivouacs and slower than expected progress are common. It seems that climbers miss their return flight every year due to poorly estimated trip lengths (see adjacent gear list).

Route Description

The Liberty Ridge route begins at the Glacier Basin Trailhead which is located at the far end of the White River Campground. There's a large parking lot signed for climbers and overnight use. Please try to park in this lot even when there's limited spots. Don't block the narrow campground roads, park on vegetation, or leave your car in the spots reserved for the campsites. Water and bathrooms are available at the trailhead.

The first section of the route follows the Glacier Basin Trail (3.5 miles) to the Glacier Basin Campground. Most of the trail is under the forest canopy and follows the Inter Fork of the White River staying on the north side of the valley. There are many creek crossings and slide paths along the well-used trail. The maintained trail ends at Glacier Basin Campground. There are six sites available at the camp, a camp toilet, and a bear-proof food storage container.

From Glacier Basin Campground climbers continue to follow a social trail towards the Inter Glacier. The trail continues up the prominent yellowish lateral moraine (when it's melted out) and then starts trending climber's left towards the center of the Inter Glacier. At this point, at around 6,400 feet, the route will diverge from the main climber's trail to Camp Schurman and start up climber's right towards St. Elmo's Pass (7,500 feet).

From St. Elmo's Pass, climbers descend onto the Winthrop Glacier and start contouring counter-clockwise around the mountain, first crossing the Winthrop Glacier and then Curtis Ridge until arriving at the Carbon Glacier. Traversing the Winthrop Glacier requires climbers to travel inline with crevasses running laterally across the glacier and can expose parties to a larger than usual or pendulum type fall. Some of the largest crevasse falls have occurred on the traverse over to Liberty Ridge. Consider your spacing and orientation for this section and stay alert to self-arrest at a moment's notice.

Curtis Ridge has many scenic and remote campsites. To keep this area pristine for other climbers Use Leave No Trace Practices and do not create your own tent platform. Sites nearest the Carbon Glacier have a great view of the ridge. Descending off Curtis Ridge at about 7,600 feet onto the Carbon Glacier is straightforward.

Clothes:
<input type="checkbox"/> Fleece Hat
<input type="checkbox"/> Balaclava/Bandana (winter/summer)
<input type="checkbox"/> Sunglasses
<input type="checkbox"/> Goggles (winter)
<input type="checkbox"/> Dexterous Thinner Gloves
<input type="checkbox"/> Insulated Warmer Gloves/Mittens
<input type="checkbox"/> Hooded Base Layer
<input type="checkbox"/> Softshell/Fleece Mid Layer
<input type="checkbox"/> Waterproof Hooded Shell
<input type="checkbox"/> Insulated Jacket w/ Hood
<input type="checkbox"/> Softshell Pants
<input type="checkbox"/> Waterproof Pants
<input type="checkbox"/> Insulated Pants
<input type="checkbox"/> 2 x Socks (non-cotton)
<input type="checkbox"/> Mountaineering Boots

Personal Gear:
<input type="checkbox"/> Ice Axes w/ Leash
<input type="checkbox"/> Crampons (Steel Front Points)
<input type="checkbox"/> Helmet
<input type="checkbox"/> Pickets
<input type="checkbox"/> Ice Screws
<input type="checkbox"/> Harness
<input type="checkbox"/> Belay & Rappel Device
<input type="checkbox"/> Pulleys (Prussik Minding)
<input type="checkbox"/> Carabiners
<input type="checkbox"/> Cordelette
<input type="checkbox"/> Prussiks & Sewn Runners
<input type="checkbox"/> Water Bottles
<input type="checkbox"/> Food
<input type="checkbox"/> Multi-tool
<input type="checkbox"/> Headlamp (full charge)
<input type="checkbox"/> GPS w/ Topo Map Loaded
<input type="checkbox"/> Sleeping Pad
<input type="checkbox"/> Sleeping Bag
<input type="checkbox"/> Prescriptions/Medications
<input type="checkbox"/> Sunscreen
<input type="checkbox"/> Backpack

Group Gear:
<input type="checkbox"/> Shovel
<input type="checkbox"/> Rope
<input type="checkbox"/> Stove, Lighter, Fuel
<input type="checkbox"/> Tent
<input type="checkbox"/> Medical Kit



Case Study: Deep Instability

In late-July, 2010, a group of climbing rangers were flying in a helicopter enroute to a training on the north side of the mountain, snapping photos along the way. When the helicopter flew over Ptarmigan Ridge and Liberty Ridge came into sight something looked off. “I did a double-take and my stomach just sank,” said Climbing Ranger Thomas Payne. “This larger than life avalanche had occurred and ripped out almost half of the route.”

Rangers did not hop out to get an exact measurement, but the crown appeared to be about 15 feet tall in places and the debris littered the Carbon Glacier below. Rockfall from the Gun Sight feature just above Thumb Rock seemed to be the trigger. The recent spat of hot weather and a deep instability in the snowpack combined to create this catastrophic event. It’s not often that avalanches, collapsing seracs, and rockfall look “big” against the backdrop of Mount Rainier, and when it occurs it’s always frightening. This avalanche was no exception.

Predicting these larger avalanches which run on layers 15 feet deep in the snowpack isn’t possible. Though rare, these unpredictable and large events are a reminder that there are real unseen hazards always present on Mount Rainier. Climbers had been on that face in the preceding weeks. The boot track just above the crown was still visible. And while the reward and joy of a successful climb cannot be measured, the consequences of hazards like these are severe, each climber should be conscious of the possible outcomes when attempting Liberty Ridge.



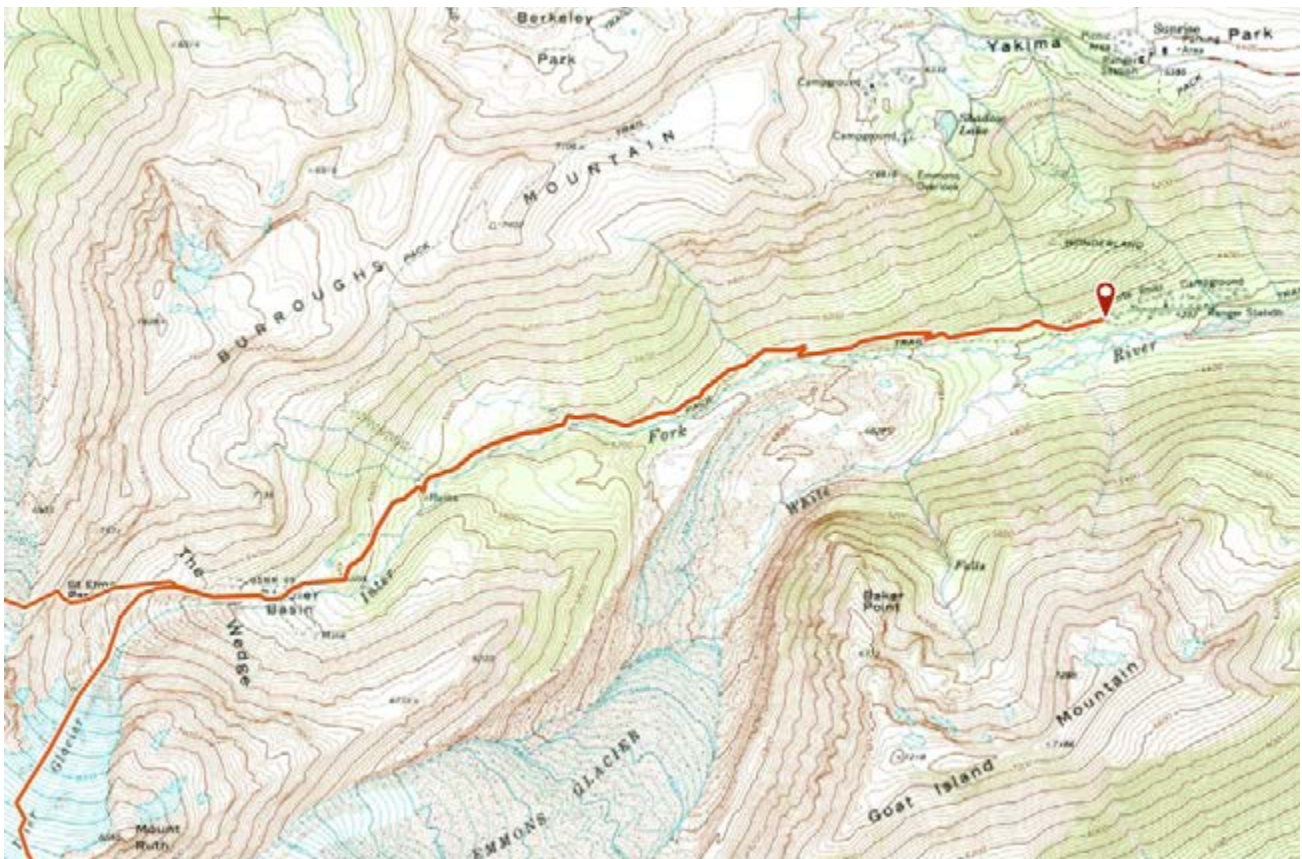
View from Glacier Basin, NPS photo

The Carbon Glacier can be crevassed and tricky to cross later in the season, but generally in May and June there are multiple ways to travel across the glacier to the base of Liberty Ridge (around 8,600 feet). Typically the crux of getting across the glacier and onto Liberty Ridge is crossing the moat between the glacier and the ridge itself. Not being able to access the ridge has shut even the most experienced teams down. It is possible to get onto the ridge from either side or even directly from the toe. Generally, if starting at the base and climbing the exact

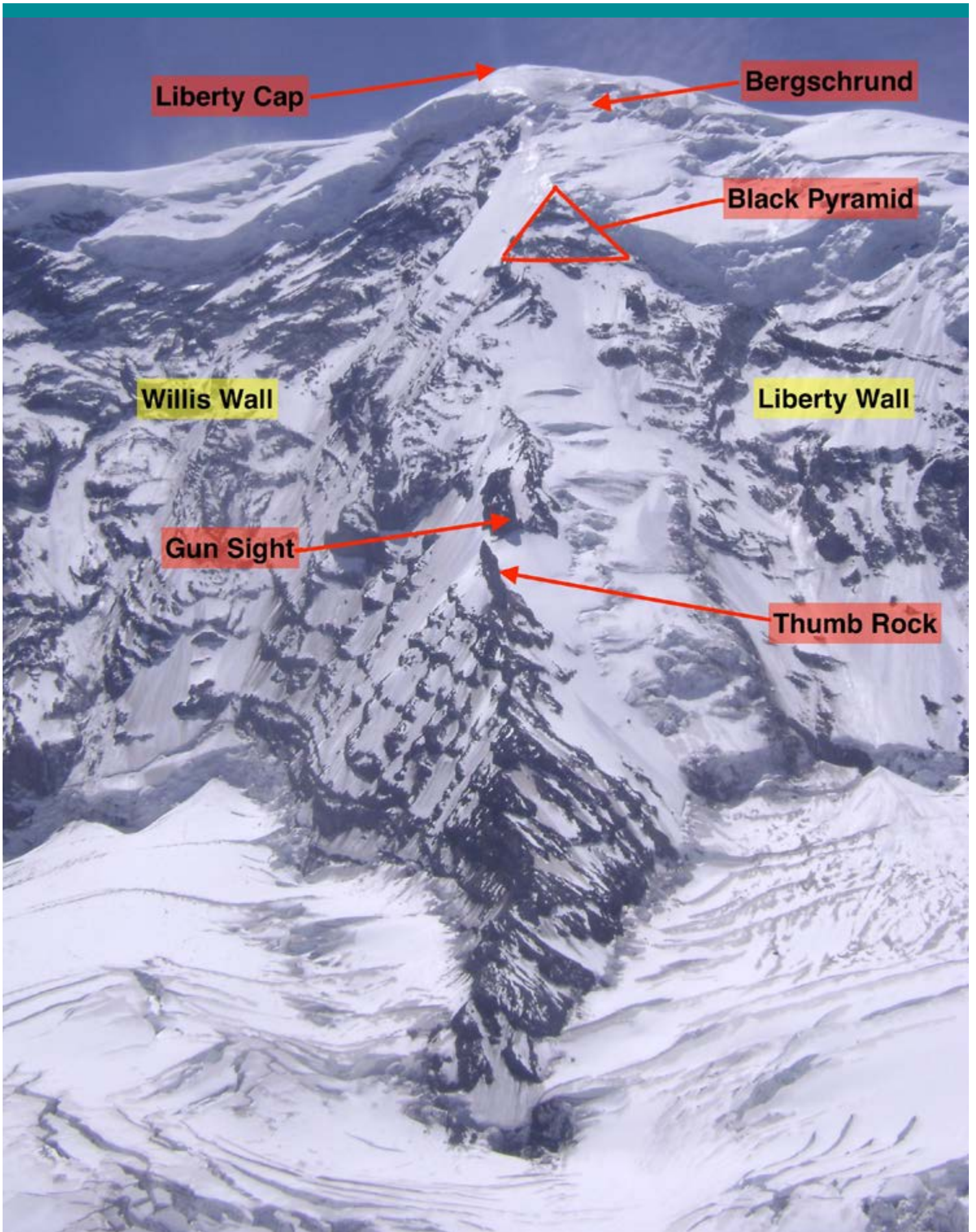
ridgetop proper there will be some loose rocky sections and less consistent climbing. Gaining the ridge from the side will enable climbers to ascend a more consistent angled snow slope, but with an added rockfall risk due to the nature of climbing below the ridgeline. The snow slopes on the east side of the ridge are steeper than the west side and have more rockbands. If gaining the ridge from the east side, traverse up and over the ridge top to the west side of the ridge and continue up towards Thumb Rock, the prominent gendarme at 10,500 feet. Be sure to keep your head up and any tunes turned down for this section as random rocks will tumble down occasionally with both alarming speed and size.

A small saddle on the ridge just above Thumb Rock offers climbers a nice spot to dig in and bivvy for an evening on the ridge and is considered the standard high camp on the route. There's a limit at the site of twelve people, but that would be tight and the best tent platform zone would be taken if there's ten other people at the high camp. Building a protective wall around your tent can help with the high winds and can also block some of the small rocks known to fall from the rocky cliff above.

From Thumb Rock there are a couple of variations to advance around the rock band immediately above, sometimes referred to as the "Gun Sight," and then continue up to the base of Black Pyramid. The easiest option is to climb



Topo map, White River Trail Head to St. Elmo's Pass / Glacier Basin.



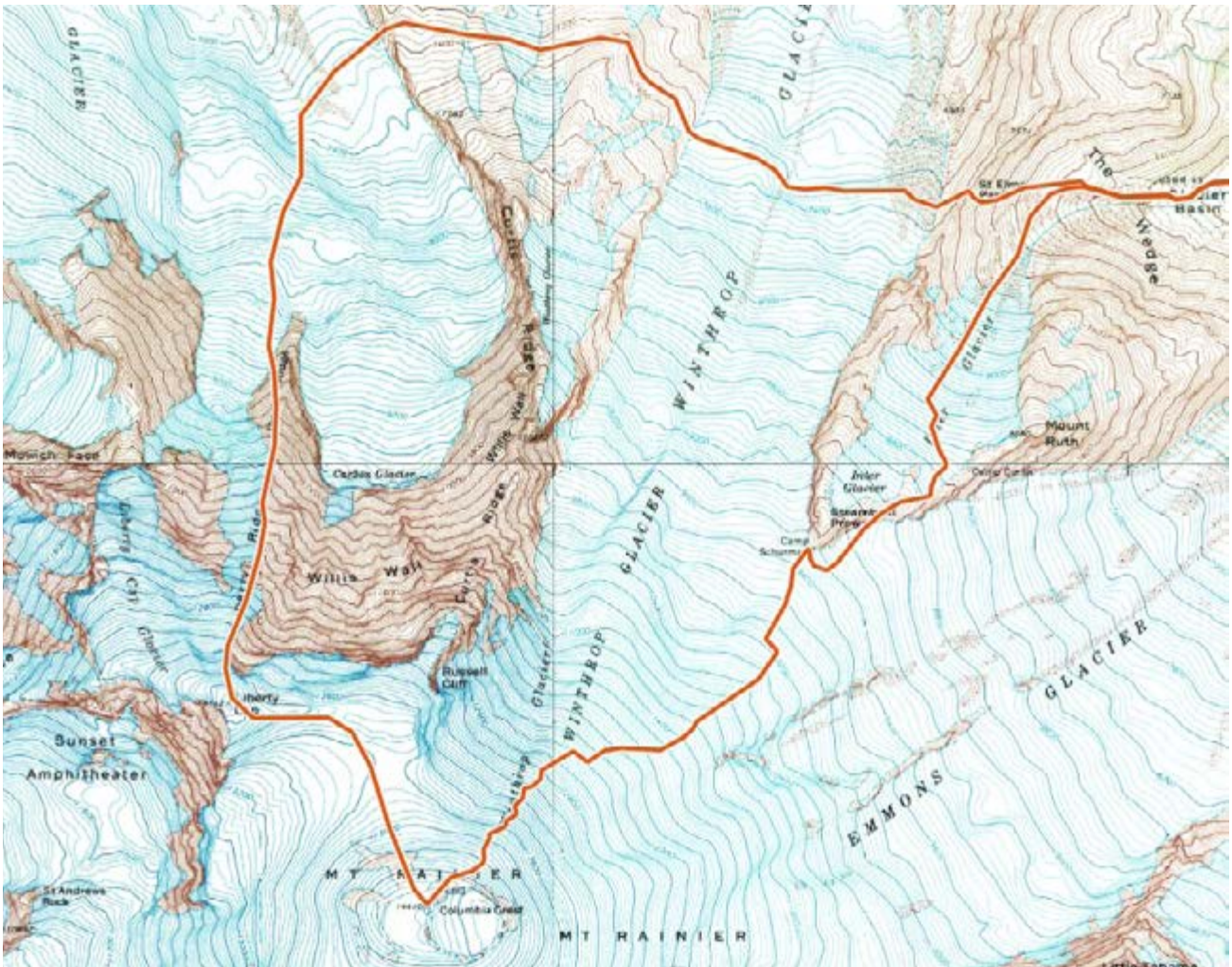
Aerial photo of Liberty Ridge from roughly 9,500 feet, NPS photo



Climbing through the "Gun Sight", NPS photo

out and around the band to the east (climber's left) and then continue up on the east aspect of the ridge. Another option when the ice is "in" is to ascend up a short pitch of water ice right through the middle of the "GunSight" rockband and continue directly on the ridge top. The right hand route around the rockband crosses below loose rock and generally is the less-appealing option.

Once around the rockband, continue up and left towards the east side of Black Pyramid (a massive rock feature on the ridge that is over 1,000 feet tall and made up of black rock). Climb on low angle alpine ice or steep snow, depending on conditions, on the climber's left hand side of the Black Pyramid from 11,800 feet to 12,800 feet. Regain the rounded ridge top above the Black Pyramid at 12,800 feet and continue up towards the summit of Liberty Cap. The bergschrund (the crevasse forming at the top of the ridge separating the glaciers drifting downward from the more stagnant upper ice cap) is the last and generally toughest crux on the ridge. Depending on the year, overcoming the bergschrund can be as simple as hopping across a small crack and ascending a snow ramp upwards to Liberty Cap. In other years, it can be a large gaping offset crack with a thin, awkwardly angled snow bridge and a challenging near vertical pitch on the other side. Be sure to anchor the belayer and pitch out this part of the route if it's dicey. Also, due to sun bake and extremely cold and windy conditions, any icy portions can be rotten and cause big "dinner plate" chunks to fall down; be sure to belay from a safe stance.



Topo map: Ascent and Descent routes.



Climbing to the left of the Black Pyramid, NPS photo

The last push above the technical pitches to the summit of Liberty Cap (14,110 feet) can be tedious and grueling or efficient and fast depending on surface conditions. Once atop Liberty Cap, the view across the summit area towards Columbia Crest (over a mile away) and Point Success (over 1.25 miles away) is visible. Most climbers having summited Liberty Cap, descend the 600 feet into Liberty Saddle, hook up with the Emmons-Winthrop route, and descend towards Camp Schurman. The ascent back up to Columbia Crest from Liberty Saddle is an extra 800 vertical feet of climbing at high altitude. Daylight, team fitness, weather, and route conditions should all be considered before attempting to add in the extra push to Columbia Crest.

The most common descent off Liberty Ridge is the Emmons-Winthrop Glacier route which has the advantage of being the shortest and most direct way down from Liberty Cap. Using the Munter Method, the descent from Liberty Saddle to Camp Schurman should take the average party just less than three hours. Reference the

Emmons-Winthrop Route Brief for more information on the descent and that route. Depending on the season and year, the Emmons-Winthrop Glacier route ascends either directly to the northeast side of the summit crater or to Liberty Saddle and then up towards Columbia Crest from there.

Crevasses can be thinly covered and dangerously deep between Liberty Cap and Columbia Crest. It's wise to stay roped-up and in glacier travel mode when climbing through Liberty Saddle. Large cornices regularly form on the east side of Liberty Saddle which makes travelling in that area hazardous with poor visibility. Due to the fact that the Emmons-Winthrop doesn't see too many climbers and wands are not maintained or allowed to stay after a party's climb, it's almost impossible to navigate down the route in a whiteout without a current tracklog in a GPS. It's generally better to shelter in place in the summit area rather than try to descend in stormy conditions. Since the route changes as the Emmons and Winthrop Glaciers



Sitting on Liberty Cap, NPS photo

shift throughout the summer it's not sufficient to have an outdated track log. See the *Inability to Navigate* Case Study for more information.

Glacier travel and steep snow with an occasional low angle icy patch are the main difficulties found on the descent. Be aware that icy conditions can make team-arrest impossible and adjust climbing techniques appropriately.

Camp Schurman (9,600 feet) has two permanent structures, the ranger hut and bathroom. Climbers typically camp on the Winthrop Glacier on the north side of the rocky mound at Camp Schurman and dig platforms into the snow for tents. It's typically a bit more than three hours more to descend from Camp Schurman out to the trailhead at White River Campground.

Current Conditions

Conditions change rapidly on the mountain. Not only day to day, but even hour to hour, especially when the freezing level reaches above 14,000 feet. Accurately reporting the changing conditions is difficult and it's also hard to gauge how to report the conditions to an audience with a varying degree of skill. So take all conditions reports with a healthy amount of skepticism. There are a couple of decent sources for information out there.

- **Mount Rainier Climbing Blog.** The Mount Rainier National Park Climbing Rangers maintain a blog that reports current conditions on a variety of routes. Be

sure to check out the archive; there are a lot of good route photos as well as other pertinent information from previous years. There's a good chance you'll find a report in the archive that was made during the same time frame that you're looking to climb.

- **Cascade Climbers.** A northwest gem, Cascade Climbers is an online forum that's a resource for all things climbing in the area, including trip reports, route advice, and gear recommendations.
- **Turns All Year.** A skier's forum which has plenty of conditions updates from a "mostly" skier's perspective. They organize reports by date and location. Lots of videos are also posted here.

Webcams and telemetry sites can also give up-to-date information and provide confirmation of snow reports.

- **Mount Rainier Webcams.** A growing network of webcams around the mountain offer a glimpse from afar of current conditions. Seasonal cameras at Camp Muir and Camp Schurman are particularly helpful in gauging what it will be like up high.
- **NWAC Telemetry.** The Northwest Avalanche Center provides an invaluable resource to outdoor enthusiasts in our area. Their network of professionals and volunteers keep a learned eye focused on local weather events, snowpack concerns, and long term forecasts



Climbing on Liberty Ridge in the sunshine, NPS photo

Key Waypoints

❑ Glacier Basin Trailhead	46 54.095, -121 38.755
❑ Glacier Basin Campground	46 53.310, -121 42.220
❑ St Elmo Pass	46 53.280, -121 43.290
❑ Base of Liberty Ridge	46 52.950, -121 46.200
❑ Thumb Rock	46 52.478, -121 46.288
❑ Liberty Saddle	46 51.550, -121 45.720
❑ Columbia Crest	46 51.180, -121 45.615
❑ Top of the Corridor	46 51.680, -121 44.500
❑ Camp Schurman	46 52.210, -121 44.000

Climber's Briefing

There are many hazards encountered on Liberty Ridge and a long history of accidents that have occurred on the route. Many of them exacerbated by poor weather. The majority of climbers ascend the ridge in May and June when notoriously long lasting storms can still bring winter-like conditions to the entire mountain. Being caught on the ridge in a storm can make upward progress or a descent impossible. To make matters worse, there are not any good bivouac options on the ridge besides Thumb Rock (the traditional 'high camp' at 10,500 feet).

Common Factors of Incidents on Liberty Ridge:

- Unexpected time on the route
- Smaller and/or worse than expected weather window
- Unstable surface conditions; poor quality ice and/or small snow sloughs
- Falling Rock/Ice; especially during warm sunny weather

Poor conditions can alter both expected timelines and the physical state of climbers on the ridge. The most technical portion of the climb is near the top of the ridge. Staying alert and focused to climb technical alpine ice when exhausted at altitude defines the major challenge of climbing Liberty Ridge.

When problems arise, and typically they occur more frequently up high, climbers tend to work themselves into more trouble on Liberty Ridge, not less. One mistake that's easy to make, like dropping an ice tool, cascades into moving slower, which puts the whole team out longer, and suddenly the storm front that the team planned to avoid hits the mountain, forcing the team to spend more time on-route. Hazards like avalanches, cold-injuries, and crevasse-falls present themselves with the poor weather. And to make matters worse, any rescue attempts are often prevented by the stormy weather.

Avoiding this downward spiral is easiest and requires less skill below high camp. The further above high camp a climbing team gets, the harder it is to get out of any downward spiral. It requires extra equipment, more skill, and practiced techniques to survive a storm and descend from Liberty Cap than it does to just turn around at the base of the ridge and make it back to the trailhead safely.

Due to the advanced nature of Liberty Ridge, the Climber's Briefing for this route focuses more on strategies than individual tactics. Breathing techniques, pacing, layering, and nutrition should all be dialed in before attempting Liberty Ridge. Strategies for different ascent-styles are valuable to consider.

- **Three-Day Ascents:** This strategy is the most popular. It's physically less demanding and has a contingency day built in. Climbers typically leave the trailhead in the morning on Day 1 and hike to Curtis Ridge to camp for the first night. This gives climbers a view of the ridge and a chance to test their camping and climbing systems before committing to the climb. Day 2 gives climbers a shorter day and chance to acclimatize by ascending from Curtis Ridge to Thumb Rock. Leaving early in the day helps avoid the near constant rockfall on the lower part of the ridge. Day 3 is typically the summit day when teams ascend up to Liberty Cap and then back down to Camp Schurman. Scheduling a fourth night at Camp Schurman adds flexibility to the itinerary which can be helpful when the weather isn't certain. It's best to sign up for a fourth night and not use it if it's not necessary.
- **Single-Push Ascents:** This strategy has the benefit of being straight-forward and fast which can be an advantage in a shorter weather window, but requires an extreme level of fitness and a dialed-in equipment list. Climbers generally leave the trailhead at White River Campground after dinner in the evening, hike along the trail, up and over St Elmo's Pass, and get to the base of the ridge to start climbing in the early morning hours. This sets teams up to be at Thumb Rock at a normal 'alpine start' time. Some considerations include having a plan to survive an extra day or two out on the mountain, timing the climb so that objective hazards are passed when they're the least dangerous (usually during the cool of night), and being able to turn around if things aren't lining up.

The strategy of a two-day ascent doesn't seem as advantageous due to carrying overnight gear and not having the benefit of slowly acclimatizing and smaller days. Longer day itineraries don't seem to be advantageous due to the total weight of climber's packs being prohibitively heavy for ascending so many vertical feet.



Ranger approaching the Bergschrund near 13,800 on Liberty Ridge, NPS photo

How long does it take to get to the summit? Just under six hours on this route, if you're going for the record. This is one of the most common questions that climbers have when they first embark on a climb. There is no set answer for everyone and every team. There are several methods for estimating travel times with the most popular being the Munter Method for time planning. This calculation gives a time estimate of 7 to 8 hours from the trailhead to Thumb Rock (approximately 8 miles and 6,500 feet of gain) in average conditions and another 8-9 hours from Thumb Rock to Columbia Crest (approximately 2.5 miles and 5,000 feet of gain). The descent can vary considerably depending on conditions and how broken the Emmons and Winthrop Glaciers are, but the Munter Method approximates the descent time to be between 7 and 8 hours from Columbia Crest back to the trailhead at White River.

A realistic evaluation of climber fitness should be done before ascending high upon the ridge where a descent becomes more difficult than continuing up and over the

mountain. Realizing that no safe bivouac option exists on the ridge above Thumb Rock forces climbers to continue their ascent even when completely exhausted. Don't risk being caught out high on the ridge and out of energy, food, water, etc.

When assessing yourself for fitness and competence there are three main factors to consider:

Balance and Focus: Are you able to safely and securely climb under your own power or are you struggling to maintain a steady rate of ascent? Are you stumbling and tripping over the terrain? An honest assessment can prevent a serious accident.

Self-Care: Are you able to eat, drink, change clothing, etc., on your own or are your teammates assisting with this basic skill? If you are having trouble with these minor mental and motor functions, can you successfully self arrest, team arrest? Can you help rescue an injured partner?

Case Study: Inability to Navigate

The 2016 climbing season highlighted the importance of navigation skills when climbing Mount Rainier. On June 10th, two experienced climbers who had climbed Liberty Ridge hit the SOS button on their Personal Location Device from the summit because visibility deteriorated and they couldn't descend the Emmons-Winthrop route. Then, on June 12th, just two days later, two more climbers ascended Liberty Ridge and called 911 from their phone because they became lost in a cloud on their descent of the Emmons-Winthrop route. Once more, on June 17th, climbers ascended the Disappointment Cleaver route and hit their Satellite Device's SOS button because yet another storm rolled in quickly and they were unable to navigate back down the mountain. Fortunately, all three parties got assistance from rangers and guides to help them off the mountain.

A proper track log with the current "track" in a GPS Device with a map overlay and backup batteries is required to descend the Emmons-Winthrop in a storm. Without this, climbing teams will be forced to bivouac until conditions improve before descending the Emmons-Winthrop Glacier route. Storms can roll in quickly and without warning on Mount Rainier year-round, but the forecast is rarely wrong. All three of these parties knew the forecast and still decided to climb.

It's alarming to see three parties all experience the same life-threatening situation within the span of a single week. Interestingly, all three parties gave the same advice after their experiences: "Come prepared to descend this mountain in all conditions and don't try to summit with a small weather window. Wait for a good forecast." If only these climbers could have met their future-selves and taken their own advice!



Climbing Rangers searching from Chinook helicopter, NPS photo

Pacing: How long have you been out? Are you maintaining a steady and effective rate of ascent? Are you setting yourself up for a 12 hour day, 14 hours, longer? Are you past a reasonable turn-around time? It's generally not possible make up time later on a climb and parties that are going slower than expected continue to slow down further.

Search And Rescue

The National Park Service (NPS) has exclusive jurisdiction of all Search and Rescue (SAR) operations inside Mount Rainier National Park. It does not charge climbers for rescue services. A large portion of the Climbing Cost Recovery Fee goes toward preparing for SAR services such as hiring, equipping, and training climbing rangers. Rescues that necessitate aviation resources, outside cooperators (like mountain rescue groups or military groups), and other large unprogrammed costs are paid for via a SAR contingency account held regionally and not solely funded by the Climbing Cost Recovery Fee.

Each year there's an average of around 40 SAR missions inside the park per year. Most are for minor injuries in benign terrain or small searches that resolve themselves quickly. Some more serious injuries in hazardous terrain require a large and coordinated response. Notifying the park of an emergency is just like anywhere else, just dial 911. Phones without service can still make emergency calls from most places within the park. All cell service providers are required to allow emergency calls on their network. Personal Location Beacons connected to a satellite communication network also work to notify the park dispatch of your emergency. Every guide working on the mountain has a radio with the park's frequencies and are another good source to get help in an emergency.

The park has a contract exclusive use helicopter on duty each day between May 15 and September 15. The helicopter, when not on a SAR training or an incident mission, is often

contracted out on regional wildfires and other projects. Nevertheless, since the inception of this exclusive use contract in 2014, the response times have decreased from 2-4 hours to 1-3 hours. During the part of the year outside these dates (from September 16 to March 14) the National Park Service will call approved private vendors via a "Call When Needed" contract for SAR support if needed.

Mount Rainier also maintains a partnership with Joint-Base Lewis McChord's US Army Reserve Chinook Unit that helps support SAR at Mount Rainier. This unit flies the CH-47 Chinook, one of the few helicopters that can fly large groups of people to the summit of Mount Rainier without experiencing performance issues. They have been a dedicated cooperator for decades and their familiarity with the mountain and willingness to support in multiple capacities on both searches and rescues has been crucial to positive outcomes on many incidents.

Assessing And Managing Risk

There is nothing "safe" about mountaineering, however we can manage and mitigate risks by equipping and training sufficiently as well as making reasonable decisions. Real advancements in mountaineering safety won't come from more specialized equipment, it's the study of human behavior and heuristics that offer more substantial gains for parties trying to manage their risk.

The US Coast Guard (USCG), often looked to as one of the United States' most respected rescue resources, has developed a system of risk mitigation called Crew Resource Management (CRM). The National Park Service has recently adopted a very close derivative of it. The USCG identified the core common denominators of tragedies, injuries, and near-misses that occurred during rescue operations. In one of its applications, CRM asks you to compare and assess your intended action to these common denominators and see how well your plan of action stacks up, then asks you to either fill the gaps or refuse the risk and discontinue the activity.

If you have no other framework of risk assessment and management, then try this one. The climbing rangers use it and have had great success even conducting simple operations. Use this framework to have the conversation within your group the night before you climb.

(P) lanning:

What is the overall plan? Departure time? Turn around time? Return time? Predict expected mountaineering methods. Contingency plan for a sick climber (even if it's within yards of the summit)? Does someone outside the park know your plan?

(L) eadership:

What is the leadership structure in your group? Even on an independent summit attempt, we recommend identifying a leader. Many groups seem to be unwilling to do this, but this simple act can make the difference.

(E) equipment:

Do you have the correct equipment (ex. 2 pulleys, 2 prussiks, 2 anchors / person for crevasse rescue), what happens if a climber on your team loses their pack, their gloves, their sunglasses?

(T) raining:

Has everyone been trained to employ the skills needed for the activity? (Cramponing, team arrest, belaying, crevasse rescue)

(T) team fitness:

Are the right team members present? Do all feel up to the task? Is everyone in a healthy mental and physical state? Don't ascend with signs of Acute Mountain Sickness (AMS).

(C) communication

How shall we communicate? What if the party must split up? (not recommended!) Do we have cell phones, group radios, personal locator beacons (PLBs) or SPOT™ devices? How's the communication comfort level in the group? Are the less-experienced climbers able to share their concerns? Are the experienced climbers listening and providing valid reassurance?

(C) conditions:

What are the (snow and weather) conditions now? What is the forecast? Do we have reasonable margins of safety? Are we within our skill and equipment levels? What are the weather trigger points for turning around? Is your team able to assess avalanche conditions, and if not will you attempt to climb anyways?

(C) complexity:

Are we trying to do 'too much' with the resources (gear, training, skill) we have? What are our trigger points (weather, team, snow conditions, leadership, equipment) for turning back?

We recommend performing this risk management activity at natural breaks during the course of your trip, for example 1) at the initial planning phases on the phone with your friends a few days before your climb 2) at the trailhead before your packs are on 3) at high camps the night before your climb and 4) before you head down the mountain.

Encourage group participation. Lesser experienced team members may be silent in front of experienced and respected individuals. Reach out specifically to these silent team members. The discussion will pay off in spades.

Resource Protection

Blue Bags

The alpine environment on Mount Rainier doesn't allow human waste to decompose like most other lower-elevation wilderness. To keep the natural characteristics of the area pristine all climbers are required to remove their human waste. The rangers can provide "Blue Bags" for free at the ranger stations when climbers register for their permit. A "Blue Bag" is a pair of durable plastic bags and



Climber navigating through crevasses, NPS photo

twist ties to seal them. To use a Blue Bag, first defecate on the snow, then take the lighter weight blue colored bag and scoop up all your solid waste. Tie that bag shut and place it inside the second, heavy duty clear bag. Twist the clear bag shut and put it inside your pack where it won't get punctured. When you arrive at either Camp Schurman or White River you can put the used Blue Bags in barrels labeled "Blue Bags."

How many? You know yourself the best, but as a general guideline: bring one per day plus an extra for the whole trip. If you *don't* use them you can return the unused ones to the ranger station. Please don't throw blue bags in the park's trash cans or into the toilet vaults.

Wands

Wands are the main source of trash climbing rangers collect during the summer. Climbers believe they are 'helping' others out by leaving the wands they placed on their ascent. **Please do not do this.** You could actually be

sending other climbers into harm's way because the route may have changed. Rangers and guides end up picking up all the stray wands. We encourage the use of wands if you need them for navigation, but only if you agree to pull them. The modern standard for navigation is the GPS. Practice using it and don't forget an extra set of batteries.

Rocky Fellfields

Areas above treeline where certain freeze/thaw and wind conditions allow for plant growth are called fellfields. This is an extremely fragile environment. Social trails can rapidly develop and new campsites (rock rings) are always popping up. Plants in this microhabitat depend on rocks for protection from wind and ice. Climbing rangers survey these campsites as the years go by and deconstruct the new ones when they develop. Please camp on snow and perform all your camp activity on snow.

Wilderness

The Mount Rainier Wilderness Area is part of the National Wilderness Preservation System. The five qualities of wilderness are: Natural, Undeveloped, Untrammeled,

Solitude, and Opportunities for Primitive and Unconfined Recreation. We strive to protect the "natural" qualities in our wilderness while at the same time providing for "recreation" like climbing. Do your part to protect these qualities by observing the Principles of Leave No Trace:

- Plan Ahead and Prepare
- Travel and Camp on Durable Surfaces
- Dispose of Waste Properly (Pack It In, Pack It Out)
- Leave What You Find
- Minimize Campfire Impacts
- Respect Wildlife
- Be Considerate of Other Visitors

For more on Leave No Trace, please visit www.lnt.org

Camping Zones And Limits

The route to climb Liberty Ridge passes through many backcountry camping zones and camps. For a full list and map of all the camps and zones inside the park, take a look at the park's [backcountry trip planner](#).



Camping at Thumb Rock, NPS photo

Camp Code and Name	Camp Limit (per night)
<input type="checkbox"/> BCGB "Glacier Basin"	6 Sites
<input type="checkbox"/> AINT "Inter Glacier"	2 Parties
<input type="checkbox"/> AWIN "Withrop Glacier"	2 Parties
<input type="checkbox"/> ACAR "Carbon Alpine"	3 Parties
<input type="checkbox"/> ACTH "Thumb Rock"	12 People
<input type="checkbox"/> ASUM "Summit"	36 People
<input type="checkbox"/> AEMM "Emmons Flat"	24 People
<input type="checkbox"/> ACCS "Camp Schurman"	48 People
<input type="checkbox"/> ACCC "Camp Curtis"	2 Parties



Partial map of backcountry camps and zones, NPS graphic

Fees And Permits

For current information on ranger station operating hours please visit the [park's facilities page](#). For climbing permit, climbing fee, and climbing reservation information please visit the [park's climbing page](#). Here is a brief description of the system to be aware of.

There are four terms we use in relation to fees and permits (required by 36 CFR 75):

“Climbing Fee”

- Purchase online at pay.gov ahead of your climb (recommended) or at any ranger station when you show up to climb.
- 100% of the revenue goes toward the Mount Rainier Climbing Program.
- Valid for unlimited climbs in the calendar year purchased.
- Required by each individual climbing team member.

- All party members must have paid the climbing fee for the party to be issued a permit.

“Climbing Permit”

- Only one permit per climbing party (stick together!)
- Obtain permits for Liberty Ridge climbs at the White River Ranger Station.
 - White River Rangers will have the most up-to-date info.
 - It's on the way to the trailhead.
 - They can alert climbers to any recent bear activity in the area.
- The actual permit is free and required for climbing and camping.
- Normally issued as a walk-up on the day team's start their climb.
- Can be issued up to 24 hours in advance of starting the climb.

Permit # _____ Estead In Access Database? _____ Special Use Permit for Travel on Glaciers and Climbing above 10,000 feet on Mt. Rainier # in party _____ (maximum 12) LEADER INFO: Name _____ Age _____ Address _____ City _____ State _____ Zip _____ Home/Phone (____) _____ Work Phone (____) _____ Emergency Contact and Phone (____) _____ # of previous Mt. Rainier climbs _____ Routes Summited _____ VEHICLE INFO: Make _____ Color _____ License _____ State _____ Make _____ Color _____ License _____ State _____ Location(s) vehicle(s) parked at: _____ CLIMBING ROUTE INFO: Route Ascending _____ Route Descending _____ Departure Date _____ Return Date _____ TEAM EQUIPMENT: Crampers _____ Map/Compass _____ Stoves _____ Ice Axes _____ GPS _____ Fuel (altays) _____ Ropes (#) _____ Altimeter _____ Food (altays) _____ Ascenders/Prunicks _____ Radio (type) _____ Wands (#) _____ Pickets (#) _____ Skis/Snowboards _____ Avy Beacons _____ Ice Screws (#) _____ Cell phone number (____) _____ Helmets (#) _____ Tents (# and color) _____ I have read and understand, and will comply with the regulations on the back of this card. Leader Signature _____ Date _____	Permit # _____ # in party _____ CLIMBERS SPECIAL USE PERMIT (Party leader completes & carries this portion) Leader's Name _____ <table border="1"> <thead> <tr> <th>NIGHT</th> <th>DATE</th> <th>CAMP</th> </tr> </thead> <tbody> <tr> <td>1st night</td> <td></td> <td></td> </tr> <tr> <td>2nd night</td> <td></td> <td></td> </tr> <tr> <td>3rd night</td> <td></td> <td></td> </tr> <tr> <td>4th night</td> <td></td> <td></td> </tr> <tr> <td>5th night</td> <td></td> <td></td> </tr> </tbody> </table> IMPORTANT: Complete this section upon return to CHECK OUT Number Out: _____ Number to Summit: _____ Route: _____ Date Actually Returned: _____ Comments: _____	NIGHT	DATE	CAMP	1 st night			2 nd night			3 rd night			4 th night			5 th night		
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Climbing Permit (front). Be sure to completely fill this out. It will used as reference if your party ends up needing help.

Regulations When climbing above 10,000 feet or on glaciers: <ul style="list-style-type: none"> Registration (this card) is required. Solo climbing is prohibited without written permission from the Park Superintendent. You must be at least 18 years of age or have written permission from a parent or guardian. Loading or participating in an unauthorized guided climb of Mt. Rainier is illegal. Camp on snow. Avoid rock or bare ground where plants struggle for life. Where toilets are not available, use "blue bag" carryout system. Climbers may be required to pay for search, rescue or recovery costs. Leave no trace - Pack it all out. When climbing on the Muir Snowfield: <ul style="list-style-type: none"> CAMP ON SNOW ONLY 100% OF ACTIVITY ON SNOW Camp between 7,000 AND 9,000 ft. Violations may result in fines and/or forfeiture of climbing privileges. Registered by (initials): _____	Fee Envelope # _____ LIST ALL ADDITIONAL PARTY MEMBERS (Maximum party size: 12) <table border="1"> <thead> <tr> <th>Name</th> <th>Emergency #</th> <th>Rainier Summits / Routes</th> <th>Climbing Pass #</th> </tr> </thead> <tbody> <tr><td>2.</td><td></td><td></td><td></td></tr> <tr><td>3.</td><td></td><td></td><td></td></tr> <tr><td>4.</td><td></td><td></td><td></td></tr> <tr><td>5.</td><td></td><td></td><td></td></tr> <tr><td>6.</td><td></td><td></td><td></td></tr> <tr><td>7.</td><td></td><td></td><td></td></tr> <tr><td>8.</td><td></td><td></td><td></td></tr> <tr><td>9.</td><td></td><td></td><td></td></tr> <tr><td>10.</td><td></td><td></td><td></td></tr> <tr><td>11.</td><td></td><td></td><td></td></tr> <tr><td>12.</td><td></td><td></td><td></td></tr> </tbody> </table> _____ OFFICE USE ONLY _____ Date _____ Camp _____ Registered by (initials): _____ Office/Station: _____	Name	Emergency #	Rainier Summits / Routes	Climbing Pass #	2.				3.				4.				5.				6.				7.				8.				9.				10.				11.				12.			
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Climbing Permit (back). Be sure to add all of your other party member's names on the backside and an emergency contact number for them if it's different from the party leader's which is written on the front side.

- f. Remember to do one thing when you get back to the trailhead: Turn in your climbing permit
 - i. You are required to check out by U.S. Code 36 CFR 75.
 - ii. We track specifics including what route you actually climbed and how many of your party made it to the summit.

“Reservation”

- a. Reserve your permit so that you can be assured there is space for your climbing team for specific dates, it’s especially recommended to make a reservation for your climb if you’re:
 - i. Flying in or travelling a long distance.
 - ii. Want to climb over a holiday.
 - iii. Want to climb during a weekend in July.
 - iv. Have a large (more than 4) party.
- b. A convenience fee of \$20.00 is charged per reservation (not individual).

“Solo Authorization”

- a. Climbing solo is restricted unless authorized by the superintendent.
- b. The superintendent delegates solo application reviewal to the climbing rangers.
- c. An application for Solo Climbing Authorization can be found online.
- d. It can take up to two weeks for the approval process, so plan ahead.
- e. Requesting to climb solo is free, and if issued, good for the period that you have on your application.



* National Park Service Mount Rainier Climbing Cost Recovery Fee:
Special use management policies allow parks to recover the costs of managing the special use by charging a fee for that use.

The Mount Rainier Climbing Cost Recovery Fee pays for the majority of the climbing program, its rangers, their equipment, training, and supervision, as well as several resource protection measures such as the collection and processing of human waste, the construction and maintenance of high camp toilets, and other minor resource protection efforts. Overall, it’s a fee to help the NPS facilitate and mitigate the impact that 10,000 climbers have on Mount Rainier every year.

Authorized Guiding Activity

Guiding a person or a party on a climb of Mount Rainier in exchange for any type of fee or exchange of any goods or services is considered a commercial use of the national park. Federal regulations prohibit engaging in or soliciting any business in park areas, except in accordance with the provisions of a written agreement with the United States. As in other National Park Service areas, commercial visitor services may be provided only by those holding an authorization from the National Park Service. The NPS uses the following principles to guide our policy and program development in regards to any commercial use in the park and mountaineering guiding in particular:

1. Commercial services are important to our visitors.
 - a. A major responsibility of park management is to ensure that appropriate services are provided in the national park.
2. Quality services should be provided at reasonable prices.
 - a. The NPS verifies that the concessioner’s rates are standard in the industry.
3. The National Park Service must remain the primary controller of park visitor services.
 - a. To assure that the visitor services aspects of the operation are consistent with park resource management, the NPS must continue to strictly control most aspects of the concessions operation.
4. The National Park Service Concessions Program is a partnership with private enterprise.
 - a. The partnership concept has worked out well because it has allowed the NPS to oversee the private operators, and in turn has allowed the private sector to provide the necessary capital while receiving the privileges of profitable businesses providing services to park visitors.

There are three categories of legal commercial ‘Summit Climb’ guiding in Mount Rainier National Park:

Concessions

There are three concession mountaineering guide operations in Mount Rainier National Park. The contract for each mountaineering concession is held for a ten year term. At the end of the contract term the companies must re-compete for the following term.



Guided party on Liberty Cap. Peter Adams, IMG Collection.

The three concession contracts are held by:

- [Rainier Mountaineering, Inc.](#)
- [Alpine Ascents International](#)
- [International Mountain Guides](#)

On Liberty Ridge, only one of these concessioners is allowed on the route per week, each company gets three trips per year, and maximum group size including the guides is six.

Commercial Use Authorization

If the NPS determines that there is a need, it is able to issue commercial use authorizations (CUA's) to persons (referring to individuals, corporations, and other entities) to provide commercial services to park visitors in limited circumstances. CUAs, although used to authorize commercial services to park visitors, are not concession contracts. They are intended to provide a simple means to authorize suitable commercial services to visitors in the park in the limited circumstances in the legislation.

A current list of CUA Single Trip Summit Climb providers can be found [here](#). There are currently 15 authorized CUA permit holders.

The application form for a Commercial Non-profit permit can be found [here](#).

Special Use Permit in lieu of a CUA

An SUP in lieu of a CUA is issued to organizations that have similar activities as a CUA, but with a 501c (3) non-profit status. For example, these SUPs are issued when an organization wants to host a fundraising climb.

Outside of either of these three criteria all exchanges of money, goods, or services for a guided summit climb is considered illegal.

Checking Out

Remember to do one thing when you get back to the trailhead. Turn in your climbing permit. You are required to check out of your climb by 36 CFR 7.5. We also track specifics including what route you actually climbed and how many of your party made it to the summit, so please fill out the questions at the bottom of the permit before turning it in.

Please call and leave a message at 360-569-6641 if you've lost your permit or forgot to turn it in and didn't check out.

It is a \$250 fine to not check out.

Supplemental Reading

Other In-Depth Route Descriptions in this Series:

- [Disappointment Cleaver-Ingraham Direct In-Depth Route Description](#)
- [Emmons-Winthrop In-Depth Route Description](#)
- [Liberty Ridge In-Depth Route Description](#)

For more information on mountaineering skills and techniques, check out:

- *Mountaineering: Freedom of the Hills*, Mountaineers Books
- *Extreme Alpinism: Climbing Light, High, and Fast*, Mark Twight
- *Alpine Climbing: Techniques to Take You Higher*, Cosley & Houston
- *Glacier Travel and Crevasse Rescue*, Selters

For an introduction to the mountain and its major features and route descriptions, check out:

- *Cascade Alpine Guide, Vol 1: Columbia River to Stevens Pass*, Fred Beckey

The most comprehensive and detailed guide book for Mount Rainier is:

- *Mount Rainier A Climbing Guide; 3rd Edition*, Mike Gauthier
- *Mount Rainier: The Essential Guide*, Becky and Van Steen

And a PDF of Ome Daiber's first ascent can be found at:

[The First Ascent of Mount Rainier by way of Liberty Ridge on Willis Wall](#), Ome Daiber



Guide leading out. Photo: RMI Collection



National Park Service
U.S. Department of the Interior

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