



Ritt Kellogg Memorial Fund Registration

Registration No. 5RWR-XS17L

Submitted Jan 9, 2018 8:06pm by Zivia Berkowitz

Registration

2018

Ritt Kellogg Memorial Fund

RKMF Expedition Grant 2017-18 Group Application

This is the group application for a RKMF Expedition Grant. If you have received approval, you may fill out this application as a group. In this application you will be asked to provide important details concerning your expedition.

**Waiting
for
Approval**

Participant



I. Expedition Summary

Expedition Name

Hoping for Gold: Backpacking in the Olympics

Objectives

The objectives of this expedition are to continue to strengthen and improve our backcountry skills while exploring the diverse and engaging landscape of the Pacific Northwest. As college students we have many opportunities to learn and grow, but the lifestyle of the block-plan is not conducive to staying in the backcountry for extended periods of time. Prior to coming to CC we both had the opportunities to spend extensive amounts of time in the wilderness on NOLS courses and through independent travel. During our gap years, we learned the everlasting rewards of pushing our mental and physical endurance. We would like to reconnect and build upon those experiences with this backpacking trip in Olympic National Park. By the end of the expedition, we plan to have found ourselves in the heart of the park--an environment only accessible by foot and willpower.

Location

We will be backpacking in the Olympic National Park on the Olympic Peninsula in Washington. Olympic National Park consists of coastline, temperate rainforest and glaciated mountains. The park is commonly characterized by rain, moderate temperatures, and impressive megaf flora such as sitka spruce, douglas fir, and western hemlock. Our 86.5 mile route will take us through a combination of canopy-covered valleys and alpine environments. Over 13 days, we will face the challenge of climbing 19961' and losing 21243' in elevation while carrying large packs. Simultaneously, we will experience the unique wilderness of the Olympic Peninsula.

Port Angeles is the home of Olympic National Park, and just 5 miles from our starting location, Lake Dawn. Initially, we head south through the Elwha River Valley and then return via the mountain tops of the Southern Bailey Range and the Appleton Range. As we descend from the alpine environment, we approach our final destination, Lake Crescent. Lake Crescent is just west of Port Angeles, and we will spend our last night in Port Angeles, Washington.

Departure Date

Aug 11, 2018

Return Date

Aug 25, 2018

Days in the Field

13

Wilderness Character

The Olympic Peninsula has been long protected by the National Park Service and the National Forest Service for a good reason. The spectacular biodiversity of the area continues to flourish due to the establishment of Olympic National Park in 1938. The park consists of rugged coastline, temperate rainforest, and glaciated mountains. We will walk amongst megafloora while exploring the forest floor. When we get above tree line, we will have a vast view of the substantial alpine peaks which decorate the heart of the park.

While Olympic National Park is well visited in August, we are taking precautionary measures to travel independently and avoid heavily impacted areas in order to experience the wilderness of the park. We are not going to travel in areas which require reservations or specific permits because these are the most popular. Although there are serviced campsites along portions of the trail, we are going to increase our wilderness experience by setting up camp independent of others. By avoiding heavily impacted areas, we have chosen to explore sections of the park that are the most wild.

II. Participant Qualifications

a. Participants' Graduation Date

Katie Pell - 2021

Zivia Berkowitz - 2021

b. Medical Certifications

1. Katie Pell - WFR half block (January 2020)
2. Zivia Berkowitz - WFR (January 2019)

Does your group have adequate experience?

Yes

d. Training Plan

1. Prime Backpacking Shape
 - a. Throughout the Spring, we plan to do 3 overnight trips in Colorado, and 2 hikes a week. Over the Summer, we plan to do 2 day hikes a week.
 - b. In addition to outdoor training, we will continue to do endurance and strength based workouts 5 days a week starting in May.
2. Level 2 Backcountry Training-Katie
 - a. Katie will be thoroughly involved with CC Outdoor Education as she progresses through the backcountry tracks with the Ahlberg Leadership Institute. She will gain comfortability with various scenarios in the backcountry.
3. Bear Safety Skills
 - a. Prior to this expedition, Katie completed a semester long NOLS course in the Pacific Northwest. While exploring the North Cascades and the coastlines of Vancouver Island she encountered many (large) black bears and always carried bear spray. Also, she has hiked in Western Virginia and canoed the Delaware Water Gap, where she responded to the presence of bears.
 - b. Zivia and Katie will practice bear protocol in on their hikes in the Spring and Summer in both Colorado and at home. At the CC gear house, we will review how to utilize bear spray.

4. Contact with Rangers

- a. Through May and June we will call every other week to ask rangers about trail conditions and other hazards in Olympic National Park. In July and August, we will call weekly.

5. Map reading skills:

- a. On all the trips we do--whether an afternoon hike or a weekend hike--we will practice our map reading and triangulation skills.
- b. Katie and Zivia became comfortable with reading maps during their NOLS courses. Over this period, they had to navigate without the assistance of instructors in terrain similar to the Olympics, where some areas are heavily forested and others are open and exposed.

6. Gear check!

- a. Before leaving Colorado Springs, we will check to make sure all of our gear is functional. Both of us will practice whisperlite maintenance with the ORC.
- b. Before we enter Olympic National Park, we will ensure we have safely packed our food.

III. Expedition Logistics, Gear and Food

e. Travel Plan

1. We will meet in Colorado Springs on Friday, August 10th.
2. We will take the Colorado Springs Shuttle from The Antlers Hotel which is 1 mile from campus to Denver International Airport.
3. Fly from DIA to Seattle–Tacoma International Airport.
4. Use Travel Washington's Dungeness Line to get from SeaTac to Port Angeles. <https://olympicbuslines.com/sample-page/>
5. Jan Wehner will pick us up from the Transportation Center in Port Angeles. She is a family friend of Katie's who is happy to help. More information on the Wehner's is provided in the Expedition Itinerary.
6. The Wehner's will assist us in driving to the Ranger Station to pick up permits, and then to the trailhead.
7. On August 24th we will end our expedition at Lake Crescent, Jan Wehner will pick us up from Storm King Ranger Station and bring us to their home, 20.3 miles away in Port Angeles.
8. The next day we will take the Dungeness Line back to SeaTac.
9. Fly back to DIA and take the shuttle back to Colorado Springs.

**To mitigate risks inherent with traveling, we will be sure to always wear seat belts and be aware of our surroundings.

e. Expedition Itinerary

EXPEDITION ITINERARY.pdf (3.8MB)
 Uploaded 1/9/2018 7:46pm by Zivia Berkowitz

Appendix A

Empty

We do not have plans to re-ration. Carrying 13 days worth of food is part of the challenge. The nature of our route does not allow for a resupply after day 3 and before day 11, which is when it would be most advantageous.

Food Storage

1. Since bears are of concern in Olympic, we will utilize bear canisters. All scented items such as food, toothpaste, etc. will go into these canisters at camp to conceal odors and prevent animals from getting into our food. The park requires the use of cans rather than bear hangs. We will place them 100 ft from our campsite at night.
2. All food will be stored in resealable 2 mil plastic bags
3. We will keep a very clean camp kitchen, by being mindful of dropping small particles of food we are preventing potential conflict with wildlife while leaving the area just as we found it.

g. Food List

Food.pdf (140KB)

Uploaded 1/9/2018 7:51pm by Zivia Berkowitz

Appendix C

f. Equipment List

GEAR.docx (375KB)

Uploaded 1/9/2018 12:48pm by Zivia Berkowitz

Appendix B

b. LNT Principles

Yes

Empty

1. Both Zivia and Katie are Master Educators certified through Leave No Trace. With thorough implementation of the 7 principles on ORC trips, NOLS semesters, and independent backcountry excursions, they are both very familiar with LNT.
 - a. Plan Ahead and Prepare: With this proposal, we are responsibly planning our trip. We have previously researched wildlife concerns, emergency evacuations, and hazards in the park.
 - b. Travel and Camp on Durable Surfaces: We will avoid placing our tent on fragile surfaces, such as moss beds. We will maintain conscious distance from streams.
 - c. Dispose of Waste Properly: All waste will be carried out. Human waste will be disposed of according to LNT standards (catholes 6-8 inches deep, 4-6 inches wide, 200+ feet from water, trails, and camp)
 - d. Leave What you Find: We will take photographs, not things!
 - e. Minimize Campfire Impacts: By bringing a stove on our trip, campfires will not be necessary.
 - f. Respect Wildlife: By storing our food properly and by being mindful of our proximity and noise level when we encounter wildlife will minimize our impact.
 - g. Be Considerate of Other Visitors: We will be respectful of other visitors we encounter and leave all areas as we found them

IV. Risk Management

b. Objective Hazards

1. Terrain: The trail be steep and loose at times, particularly in the Appleton Range. Katie will use her trekking poles, and both Katie and Zivia will take their time and edge sideways. The greatest risk when going down steep terrain is going too fast. By walking slowly and facing upslope, we will mitigate the risks of falling in steep areas.
 - a. Snow travel: Katie and Zivia have experience travelling on snow. Both of them had mountaineering training on their NOLS courses, and both have backpacked in alpine areas. The path we selected does not include any permanent snow, and in the past several years, it has melted by mid-August. However, there is a chance we could encounter some snow at high altitudes. First, we will evaluate our options and see if we can simply walk around the obstacle. If we choose to travel on the snow, we will kick in our shoes to the snow to gain solid footing and utilize our poles. There is no need for technical gear on our route.

2. Weather: Olympic National Park is known to be one of the wettest places in the country. In order to avoid weather conditions that could prevent our progression, we have chosen to travel in August, when the area has the clearest weather. In August, the average hi/lo temperatures in Olympic National Park are 74/51, with an average precipitation of 2.33 inches over the whole month.
<https://weather.com/weather/monthly/l/WANPSOLMP:13:US>
3. Snowpack: In addition to looking at weather, we will be monitoring the snowpack on the Elwha Snowfinger Trail and the Southern Bailey Range. While the Snowfinger has been dubbed the "Snowless finger" in the past several years, we are still going to look at the conditions once a week starting in June. We will use the National Resource Conservation Service's website to evaluate the snowpack.
4. Lightning: In the case of lightning, we will assume lightning position and go to areas of low elevation, avoiding bodies of water and tall trees.
 - a. Stand on a pad to insulate yourself from the ground.
 - b. Put feet together to minimize shock. Standing on the pad wearing rubber soled shoes creates two non-conductive layers which the shock must pass through.
 - c. Crouch down, put your head between your knees.
5. Wildlife: Bears, Mountain Goats, Marmots
 - a. Bears: Black Bears can be very dangerous. The greatest way to prevent dangerous contact with a bear is to avoid surprising or attracting them. We will converse, sing, or say "Hey Bear!" on the trail to make sure we do not sneak up on them. By placing our bear cans away from camp and keeping a very clean kitchen, we will prevent encounters with bears. However, crossing paths with wildlife is expected since we are walking into the wilderness.

When confronted by a bear, we will

1. Speak loudly and prepare to take off cap of bear spray. Do not turn away from the bear, but walk backwards slowly.
2. If the bear approaches, take off the cap of bear spray and use it as necessary.
3. Bear Spray Protocol: Keep the bear spray immediately accessible, such as on the waist belt of your pack. Since bear spray is only capable of spraying within 30 feet, do not use if the animal is further away. If the bear comes within range, pull back the safety tab forcefully and then spray in a Z pattern for 1-2 seconds, from the bear's head to the ground. This creates a wall of the irritant which shields the person from the bear.
 - b. Mountain Goats: Mountain goats have been recently introduced to the park and have become a pest for both the native species and the visitors. While they are typically docile and afraid of humans, a habituated goat can be territorial and aggressive. We will never feed the goats and always keep a safe distance of 40 meters. The animals are attracted to salts in human sweat and urine, so we will not leave clothing out and avoid urinating on vegetation.
 - c. Marmots: The Olympic Marmot is protected and they live above 4000 feet in mountain meadows. The small mammals are known for their ability to get into hikers food. We will prevent this by storing all food and odorous things in bear cans.
6. Blisters: Blisters are at high risk for infection in the backcountry. To prevent blisters, we will deliberately inspect our feet every morning, mid-day, and night. Both Katie and Zivia will bring boots which have been broken in. They will be diligent about placing moleskin on hot spots as they occur. If we do have blisters, we will treat them accordingly with our knowledge from WFR.
7. Giardia: Giardia is a parasite that is commonly transmitted in wilderness parks with high frequency of human visitation. We will preventatively protect ourselves from the parasite by cleaning our water with Aquamira. If one of us does have symptoms of Giardia, such as diarrhea for over 24 hours, we will travel to the nearest exit if possible and treat using our knowledge from WRF.
8. Hypothermia: Since the Olympic Peninsula is one of the wettest places on Earth, there is a heightened risk for hypothermia despite the summer temperatures. We will try to stay warm and dry, and make sure our sleeping bags are stored in plastic bags. If either member is showing signs of hypothermia, including shivering, clumsiness, or slurred speech, the other will treat them accordingly with their WRF knowledge.

9. River Crossings: Throughout our expedition, particularly on the Elwha River Trail, we frequently cross small streams and occasionally we cross rivers. Every time we encounter a stream or river, we will evaluate the area and try to find the least dangerous way to cross. If a crossing seems too dangerous due to high water, we will wait and reevaluate an hour later.
 - a. For scoping out a potential crossing, take note of potential hazards such as fallen trees, rocks, fast water, and deep spots. Always think about the conditions of your chosen entrance and exit. Avoid constrictions of the stream or river, since they will likely have the fastest moving water.
 - b. For walking technique, we will link up and walk facing upstream to avoid catching our feet under rocks. Katie will bring her trekking poles, which help with stability and understanding the conditions. We will unbuckle the chest and waist straps of our backpacks while crossing.
10. Getting Lost: Before going anywhere alone, we will notify the other group member. If one of us gets lost we will follow the "staying found" protocols.
11. Remoteness: During our expedition there will be days where we will be many hours away from the frontcountry. If there is an emergency where outside support is necessary, we will make sure that it is obtained in an efficient and appropriate manner. In order to mitigate this risk, knowledge of the closest evac point, thorough planning, and safety will continuously be our priorities.

Evacuation Plan

No expedition plans for an evacuation, but it would be naive to deny the risks of travelling in the backcountry. We will do everything we can to mitigate the risk of an evacuation scenario by being mindful of the weather, intentional of what terrain we travel on, and awareness of our physical limits to avoid injury. As WFRs we will have the necessary training deal with any emergency medical situation, large or small. Medical issues that can be treated in the backcountry will be dealt with appropriately. Our first aid kit will have the necessary supplies to appropriately accommodate all medical situations. Carefully planning our route and constantly being aware of the nearest evac point will be extremely advantageous in the event of a medical situation that requires an evacuation. In the case of a self-evac we will make our way to the nearest exit and contact the appropriate emergency resources. If a group member has a minor injury that would prevent us from safely completing the expedition, we will self-evac to the nearest exit. We will carry a SAT phone and use it to contact emergency resources in the event of a medical situation that is a threat to life or limb/any emergency that requires immediate professional attention.

These are the locations of the nearest roads for access to vehicle and/or definitive medical care:

Days 1: Lake Dawn

Day 2: Lake Dawn or Obstruction Point Road

Days 3: Obstruction Point Road or Whiskey Bend Road

Days 4-7: Whiskey Bend Rd

Day 8: East on Bailey Range Way Trail to Ludden Peak Way Trail to Long Ridge Trail to Elwha River Trail (16 Miles) to Whiskey Bend Road

Days 9-10: Sol Duc Duc Hot Springs Rd

Day 11: Sol Duc Duc Hot Springs Rd or Boulder Creek Road

Days 12: Boulder Creek Road or Storm King Ranger Station

Day 13: Storm King Ranger Station

e. Emergency Resources

EMERGENCY HOTLINES:

Clallam County Search and Rescue: mobilized by calling 911 or the Sheriff's Department at 360-452-7836

Olympic Mountain Rescue: (800) 417-9471

Storm King Ranger Station: (360) 928-3380

MEDICAL CENTERS:

Olympic Medical Center

39 Caroline St, Port Angeles, WA 98362

360-417-7000

Bogachiel Clinic

390 Founders Way, Forks, WA 98331

(360) 374-6998

INFORMATION HOTLINES:

Olympic National Park Fire Information: (360)797-5677

Road and Weather Hotline: (360) 565-3131

Olympic National Park Visitor Center

3002 Mount Angeles Road

Port Angeles, WA 98362

(360) 565-313

Emergency Communication

We will be carrying an Iridium Satellite Phone obtained through CC Outdoor Education.

V. Budget

Budget

[Golden Budget.docx](#) (7.2KB)

Uploaded 1/9/2018 12:44pm by Zivia Berkowitz

Appendix D

Transportation

736

Food and Fuel

264.66

Maps and Books

0

Communication Device Rental

0

Permits/Fees

90

Gear Rentals

84

Total Funding Request

587.33

Cost Minimization Measures

1. Staying with friends in Port Angeles and getting rides from them to and from the trailhead.
2. Ordering food in bulk online.
3. Carrying all 13 days of food, no re-supply
4. Utilizing public transportation: Dungeness Line.
5. Using gear that we already own, and borrowing from friends and family if we do not own it ourselves. Only if these resources are exhausted will we rent.
6. Renting gear from the Gear House at CC, the prices we get from CC are significantly cheaper than any outfitter.
7. Flying from Denver instead of Colorado Springs saves us \$150 per ticket.

VI. Expedition Agreement**Expedition Agreement**[expedition agreementAgree....pdf](#) (156KB)

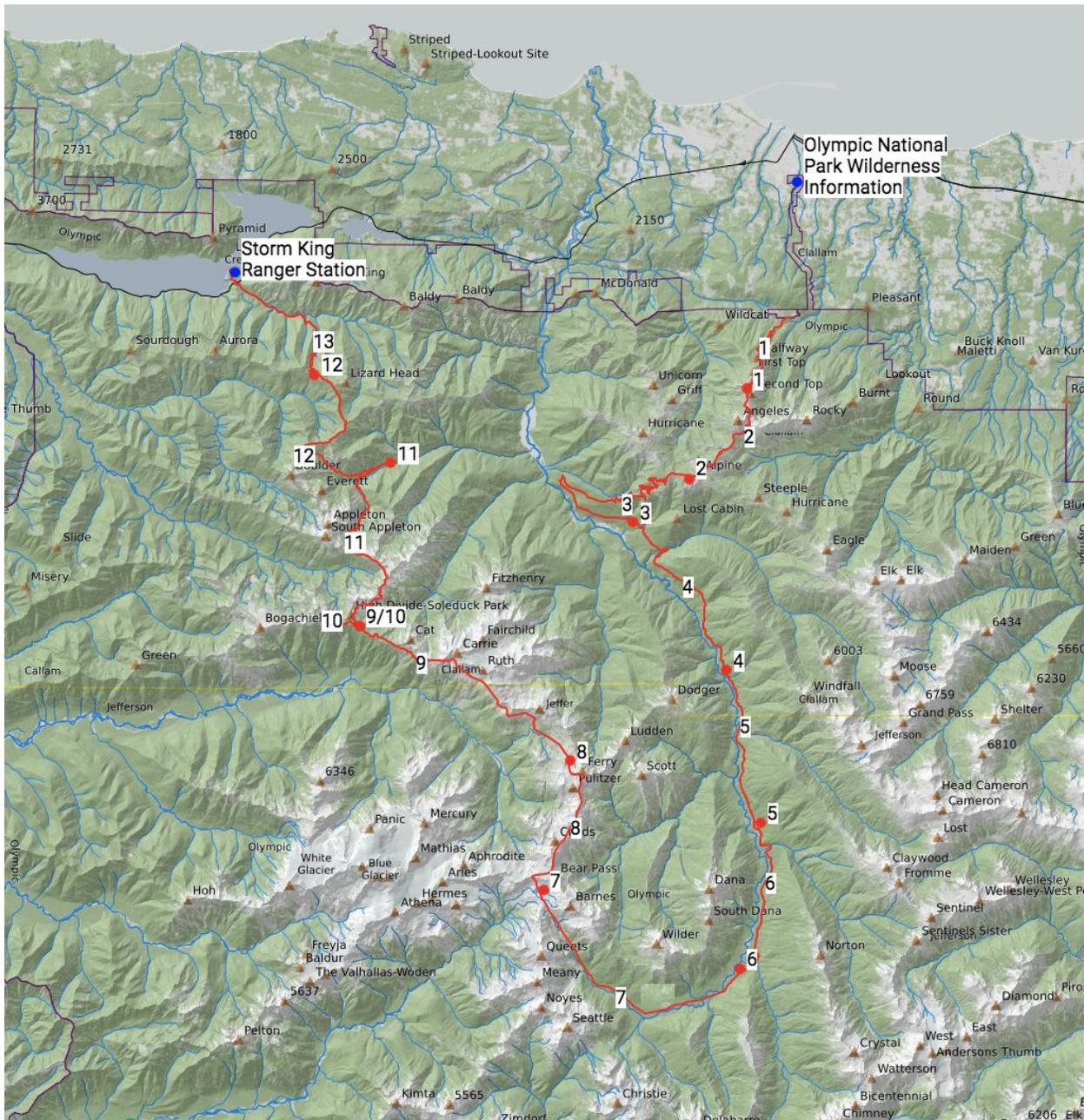
Uploaded 1/9/2018 12:32pm by Zivia Berkowitz

Appendix E

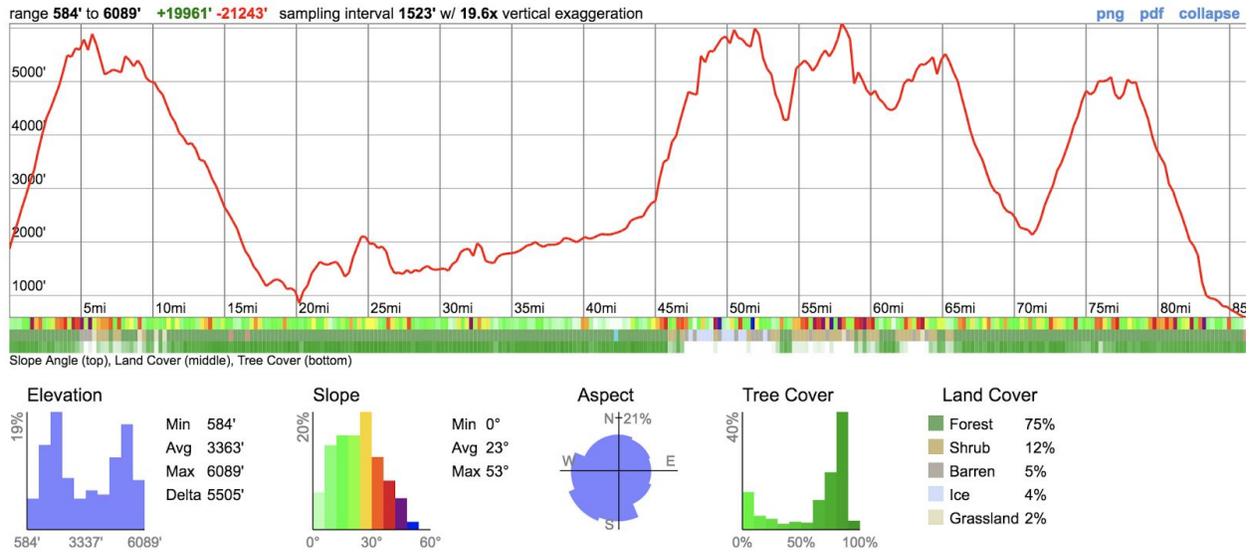
Appendix A- Itinerary

Expedition Itinerary

Hoping for Gold: Backpacking in the Olympics



Link to CalTopo map: <https://caltopo.com/m/70RH>



During our backpacking expedition, we will walk 86.54 miles over 13 days, gaining 19961' and losing 21243' in elevation. For days 1-3, we will pass over Hurricane Ridge, then descend into the Elwha River Valley. Beginning on the third day we will hike under the canopy of the Elwha Valley Trail. On day 7, we will begin our ascent to the Southern Bailey Range, which then connects to the Appleton Range on day 10. Our remaining 3 days take us towards Lake Crescent, where we will end our expedition.

FRONTCOUNTRY TRAVEL

DAY A: August 10th

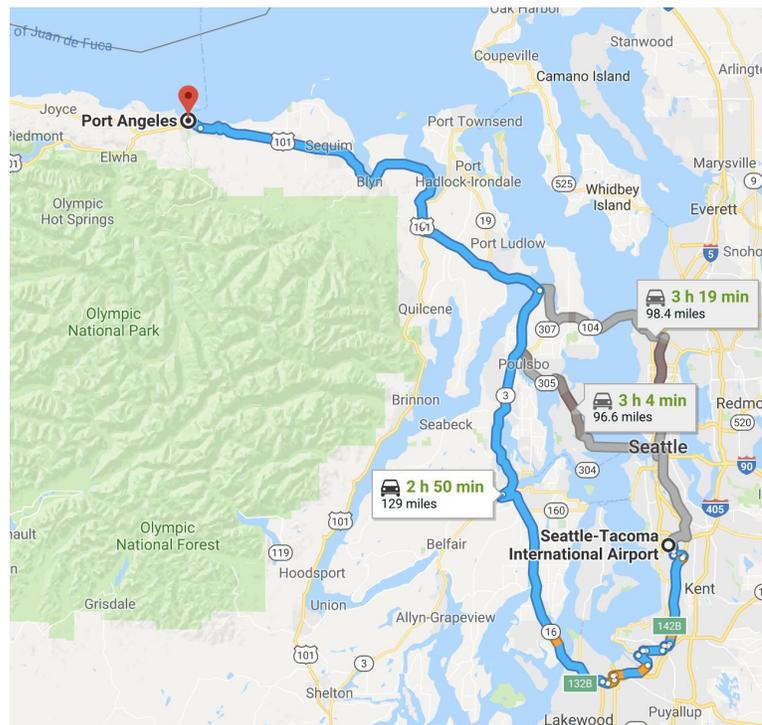
We start our journey by meeting in Colorado Springs. Here we will pick up gear from the CC Gear House and check to see if it is functional. That night, we will sleep heavily and dream of rain on our tents.

DAY B: August 11th

After waking up bright and early, we will take a shuttle from Colorado Springs to Denver (2.5 hours). From Denver International Airport, we will fly to SeaTac Airport (5 hours). Once at SeaTac, we will take the Dungeness Line to the Transportation Center in Port Angeles. where we will greet Jan Wehner (3 hours). More information on Jan provided on the next page. That evening, we will double check that all of our equipment is field-ready and also pack our bags with rations. Our food will be sent in a package to the Wehner's home and we will stop in town to buy white gas.

1. Travel Washington's Dungeness Line: SeaTac to Port Angeles.
 - a) The afternoon service takes about 4 hours and costs \$80 per person round trip. We will be picked up at door 00 at SeaTac, then travel 129 miles.

<https://olympicbuslines.com/sample-page/>

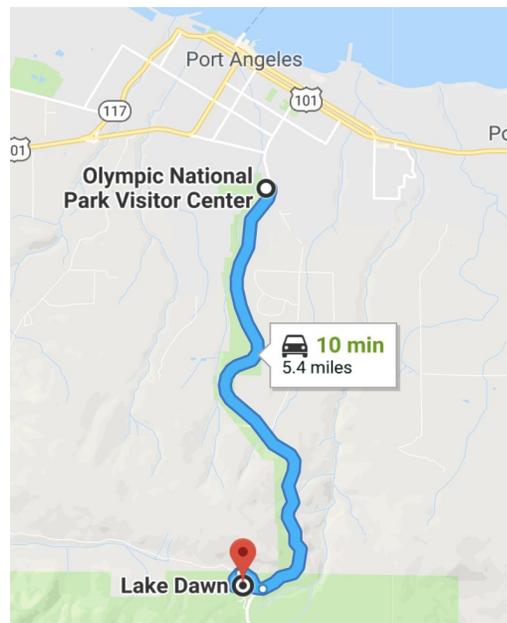


**Jan Wehner will pick us up from the Transportation Center in Port Angeles. Jan and her husband Ron are a family friends of Katie. Katie reached out to her family on the Olympic Peninsula and Jan excitedly made sure she could be around during the proposed expedition. Katie has been in close contact with Jan via email, and she has been very helpful offering local advice. Since Ron and Jan Wehner live in Port Angeles, they generously offered to support us by hosting us on the 10th and the 24th. [REDACTED]

DAY C/1st Day Walking: August 12th

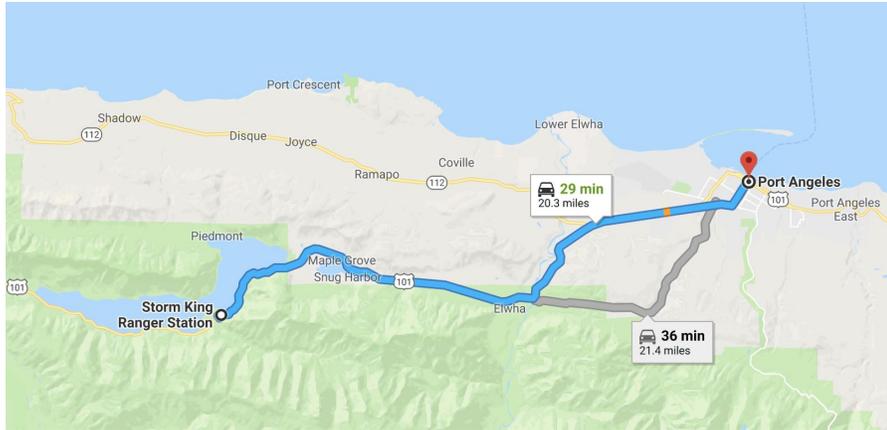
With an early start, Jan Wehner will drive us to the Olympic National Park Visitors Center and Wilderness Information Center to pick up our permits. Then we will go to the Heather Park Trailhead at Lake Dawn and commence hiking!

1. Olympic National Park Visitors Center to Lake Dawn: 5 miles.



DAY D/13th Day Walking: August 24th

Walk off the Barnes Creek Trail to the Storm King Ranger Station on Lake Crescent around 3:00 pm. Greet Jan Wehner and drive back to Port Angeles, which is about 20 miles away. Spend the night at the Wehner's.



DAY E: August 25th

Jan Wehner drops us off at the bus stop in Port Angeles, where we catch the Dungeness Line back to SeaTac (3 hours). Next we fly back to Denver International Airport (5 hours), where we will take a shuttle to Colorado Springs (2.5 hours). Once getting back to campus, we will go to the CC Gear House and deissue our gear. And then look forward to the exciting year to come!

BACKCOUNTRY TRAVEL

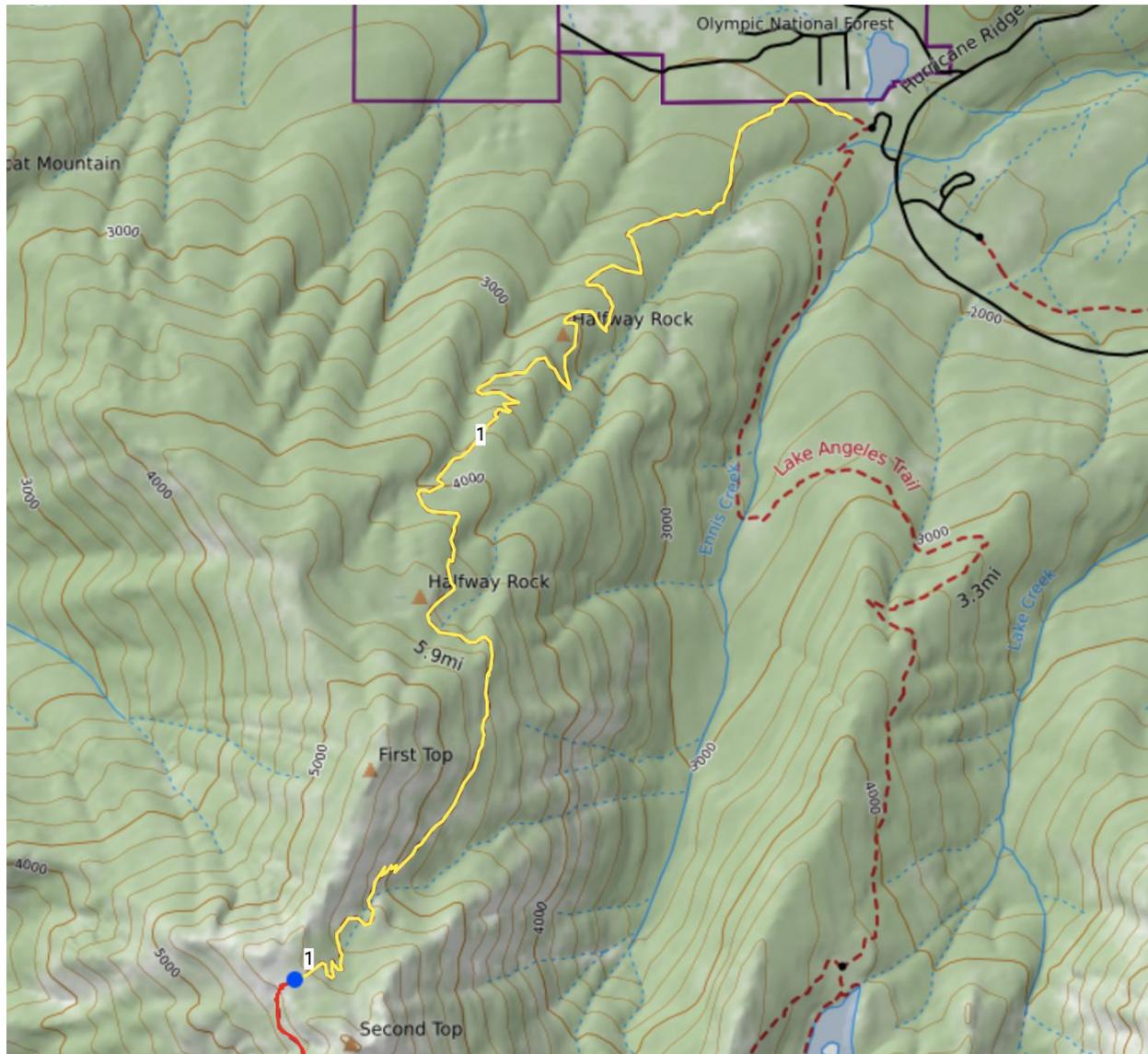
DAY 1: August 12th. Begin hiking on the Heather Park Trail, starting at Lake Dawn.

Distance: 4.18 mi

Elevation: +3900' / -176' (1872' to 5596')

Camp: 10U 0465588E 5317448N

Day 1 Evac: Walk back to Lake Dawn



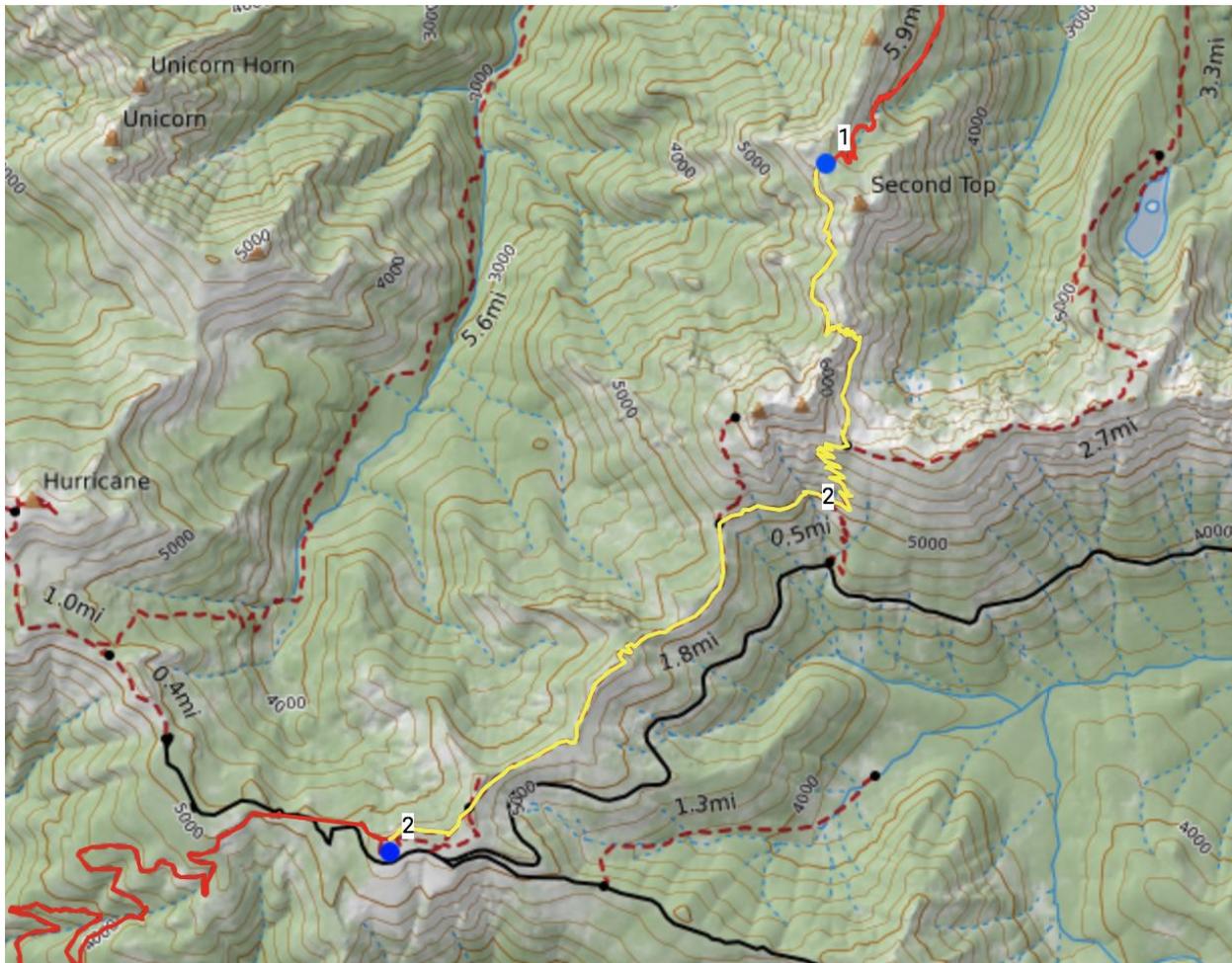
DAY 2: August 13th. Continue on the Heather Park Trail heading south towards Hurricane Ridge.

Distance: 5.24 mi

Elevation: +1998'/-2372' (5007' to 5899')

Camp: 10T 0462778E 5313086N

Evac: Lake Dawn (early in the day) or Obstruction Point Road (later in the day)



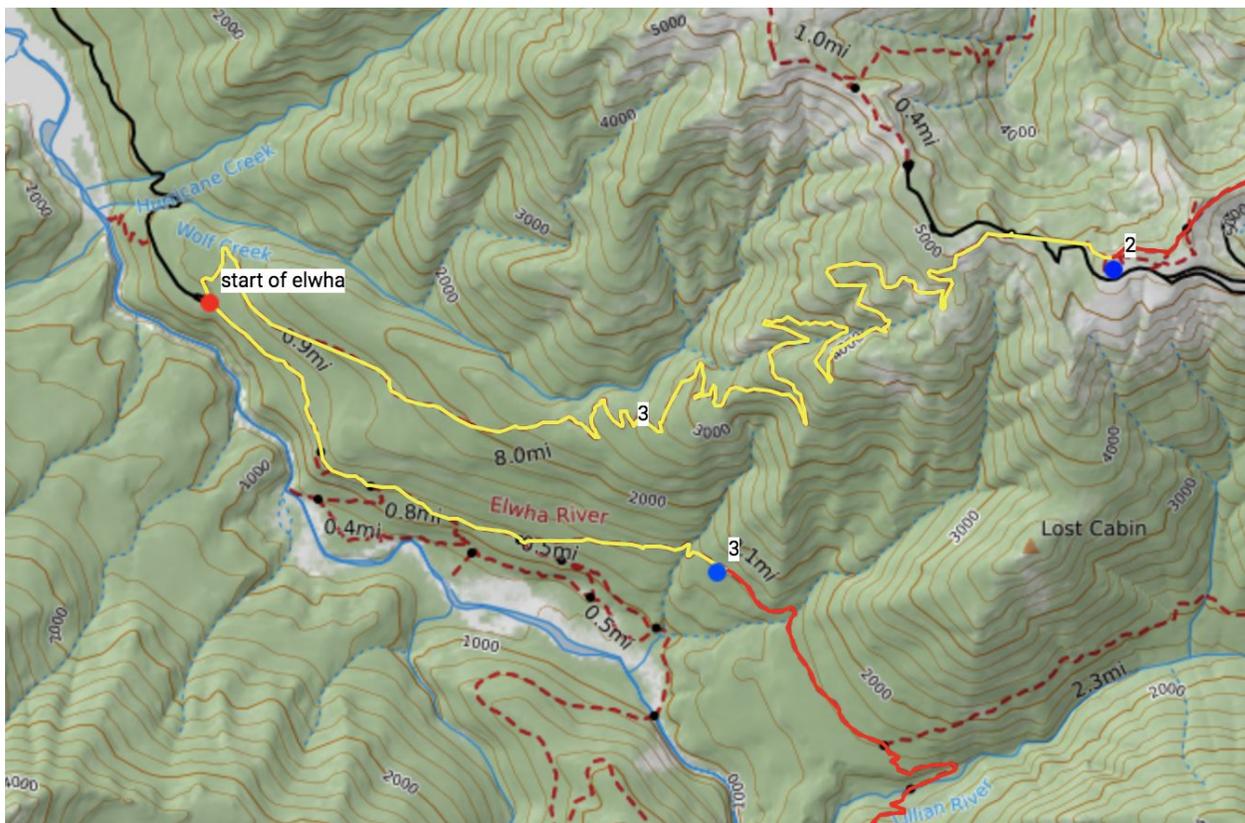
DAY 3: August 14th. Walk westward on Obstruction Point Road until the trailhead for Wolf Creek Trail appears on the left. After 8.46 miles, the Wolf Creek Trail leads to Whiskey Bend Road and the Elwha River Trail begins. Walk southeast on the Elwha River Trail for 3 miles, and set up camp after passing creek.

Distance: 11.36 mi

Elevation: +1591'/-5207' (1099' to 5249')

Camp: 10T 0460024E 5311015N

Evac: Whiskey Bend Road or Obstruction Point Road



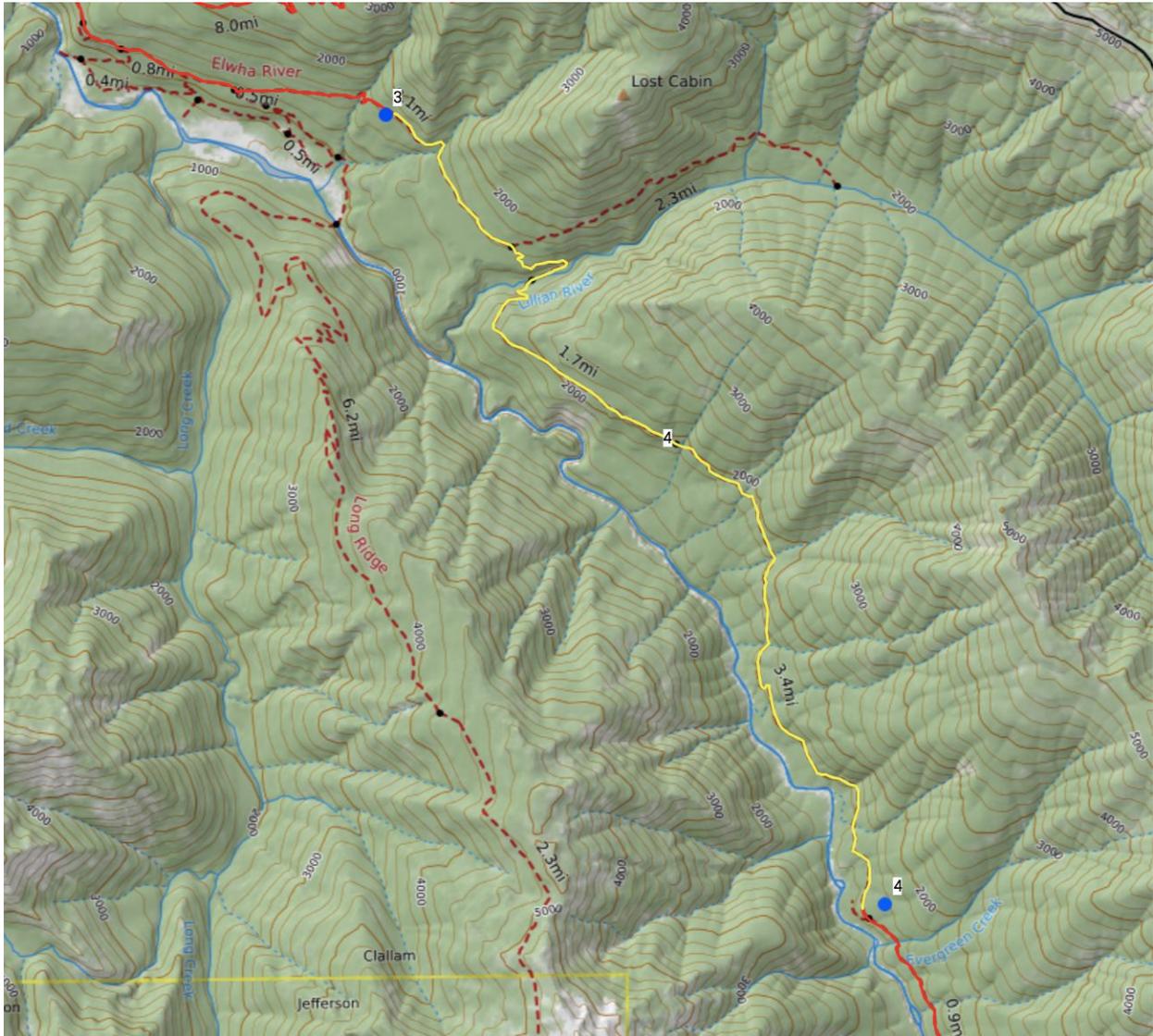
DAY 4: August 15th. Continue walking south on the Elwha River Trail. The trail crosses several small streams, and of greater note, the Lillian River after 1.5 miles.

Distance: 6.84mi

Elevation: +2123'/-2306' (1296' to 2159')

Camp: 10T 0464512E 5303839N

Evac: Walk north towards Whisky Bend Road



DAY 5: August 16th. Continue south on the Elwha River Trail, cross Evergreen Creek after 0.3 miles, and Lost River at 2.1 mi, as well as 6 other unnamed drainages that feed into the Elwha river. We will set up camp about 0.4 miles after crossing the 6th unnamed drainage.

Distance: 5.26 mi

Elevation: +1680/-1516ft (1440' to 1988')

Camp: 10T 0466136E 5296438N

Evac: Walk North towards Whisky Bend Road



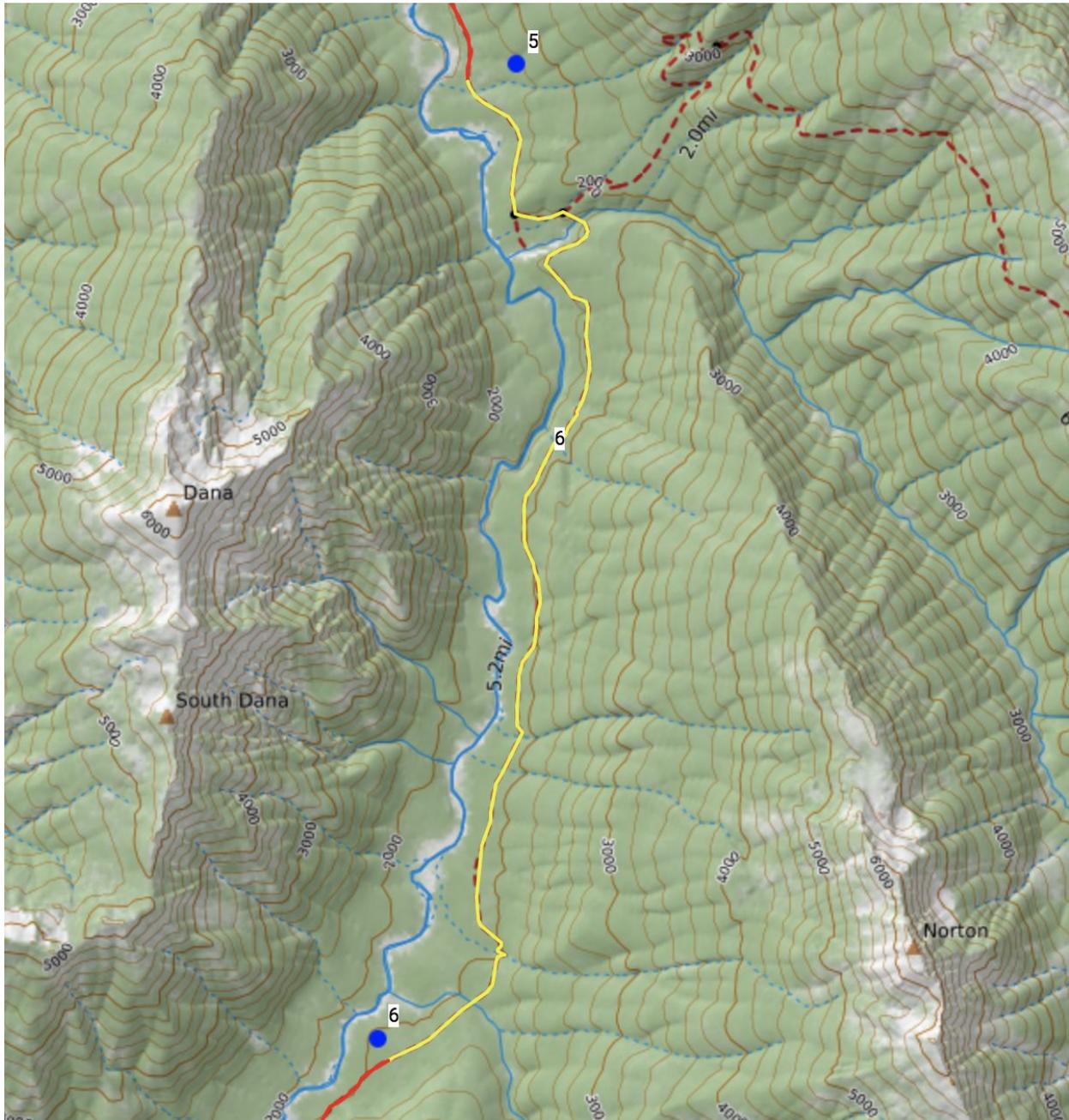
DAY 6: August 17th. Continue on the Elwha River Trail. Cross Hayes River after 1 mile, and Godkins Creek after 5.1 miles. Camp 0.5 miles after Godkins Creek.

Distance: 5.55mi

Elevation: +1273/-856 ft (1604' to 2077')

Camp: 10T 0465083E 5289364N

Evac: Walk North towards Whisky Bend Road



DAY 7: August 18th. Walk southwest on the Elwha River Trail, crossing Buckingham Creek at 1.2 miles, and the Elwha River at 1.6 miles. After 3.4 miles, the trail forks. Take the Happy Hollow Trail heading northwest and hike up the valley. The Happy Hollow Trail changes names to the Elwha Snowfinger Route without a fork.

Distance: 8.53 mi

Elevation: +3645'/-968' (1995' to 4928')

Camp: Base of Humes Glacier Route 10T 0455572E 5293241N

Evac: Whiskey Bend Road



DAY 8: August 19th. Begin the Southern Bailey Range Trail, walking north towards Mount Ferry. After 4.15 miles the trail splits and we will head west on the Bailey Range Way Trail for .78 miles until we reach our campsite.

Distance: 5.05 mi

Elevation: +3186/-2657 ft (4663' to 5995')

Camp: 10T 0456899E 5299500N

Evac: East on Bailey Range Way Trail to Ludden Peak Way Trail to Long Ridge Trail to Elwha River Trail (16 Miles) to Whisky Bend Road



DAY 9: August 20th. Walk northwest on Bailey Range Way. This day will be challenging, with large gains and losses in elevation. Luckily, the trail oscillates frequently between uphill and downhill, rather than strictly up and down.

Distance: 9.02 mi

Elevation: +4093/-5065 (4269' to 6001')

Camp: Unnamed Campsite 10T 0446951E 5306374N

Evac: Sol Duc Hot Springs Road



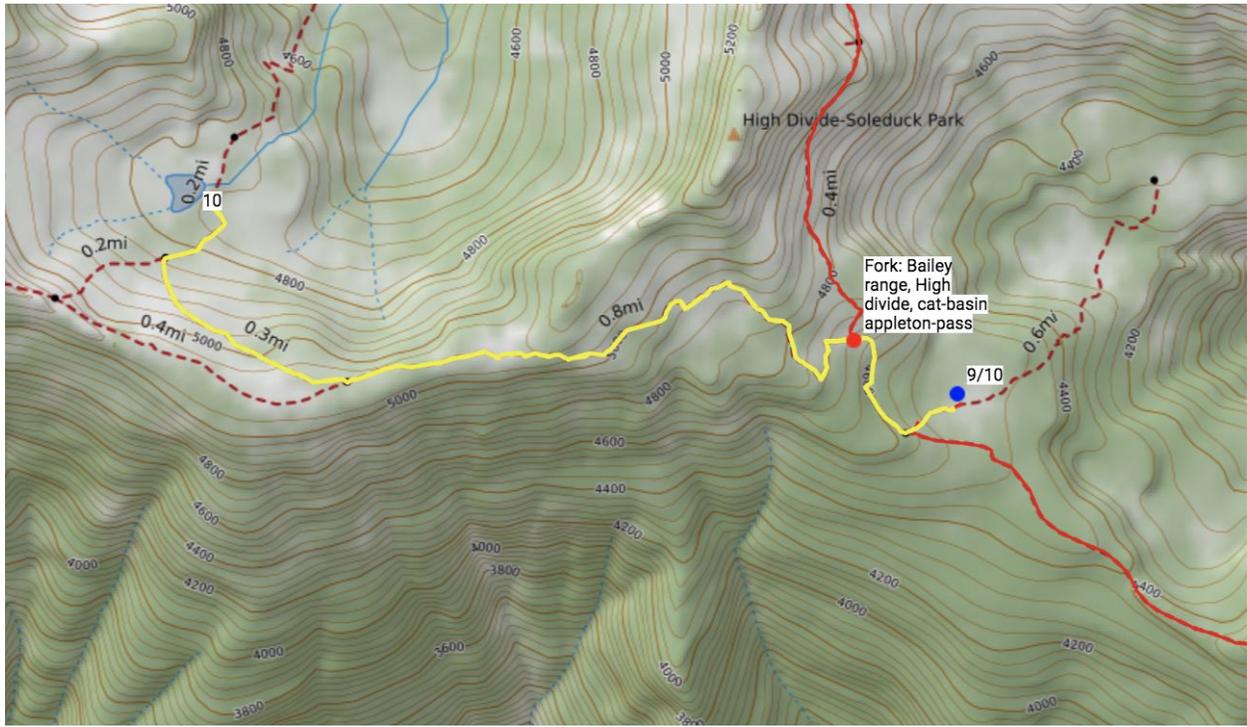
DAY 10: August 21st. Rest Day.....option to explore Heart Lake. Begin walking west on the Cat Basin Primitive Trail, passing Swimming Bear Lake Way Trail after 0.24 miles continuing on the Cat Basin Primitive Trail. At 1.09 miles, branch to the right toward Heart Lake. Arrive at the lake after 1.54 miles.

Distance: 3.06 mi

Elevation: +887/-887 (4484' to 4996')

Camp: 10T 0446951E 5306374N

Evac: Sol Duc Hot Springs Road (Travel north at Heart Lake on the Seven Lakes Trail)



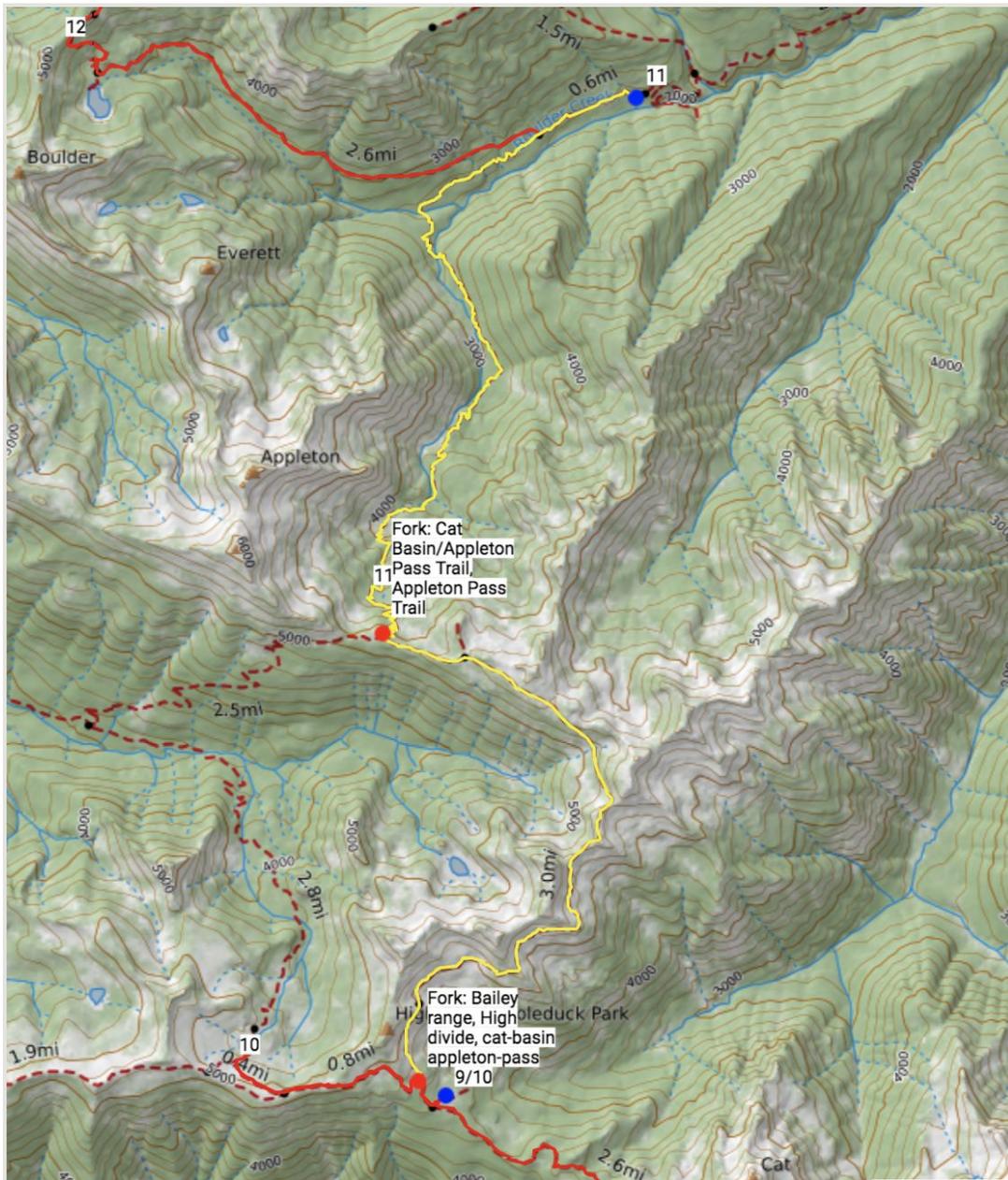
DAY 11: August 22nd. From our campsite we will head north on the Cat Basin Primitive trail for about 900 ft until we reach a fork. At the fork we will walk north on the Swimming Bear Lake Way Trail for half a mile until the trail turns into Cat Basin-Appleton Pass Way Trail. After about 3.5 miles the Cat Basin-Appleton Pass Way Trail also has a fork, at this fork we will again head north and while losing elevation to continue on the Appleton Pass Trail until we reach the Boulder Creek Campsite.

Distance: 9.19 mi

Elevation: +1783/-4192 ft

Campsite: 10T 0448635E 5314162N

Evac: Sol Duc Hot Springs Road or Boulder Creek Road



DAY 12: August 23rd. Head west on the Appleton Pass Trail for 0.76 miles, then take Boulder Creek Trail, which is to the right and immediately headed northwest, but quickly turns West. One Passing Boulder Lake, the trail shifts east northeast and becomes Happy Lake Ridge Trail. Continue until the trail forks at 5.82 miles, head north on the Aurora Ridge Primitive Trail. The next fork indicates the campsite.

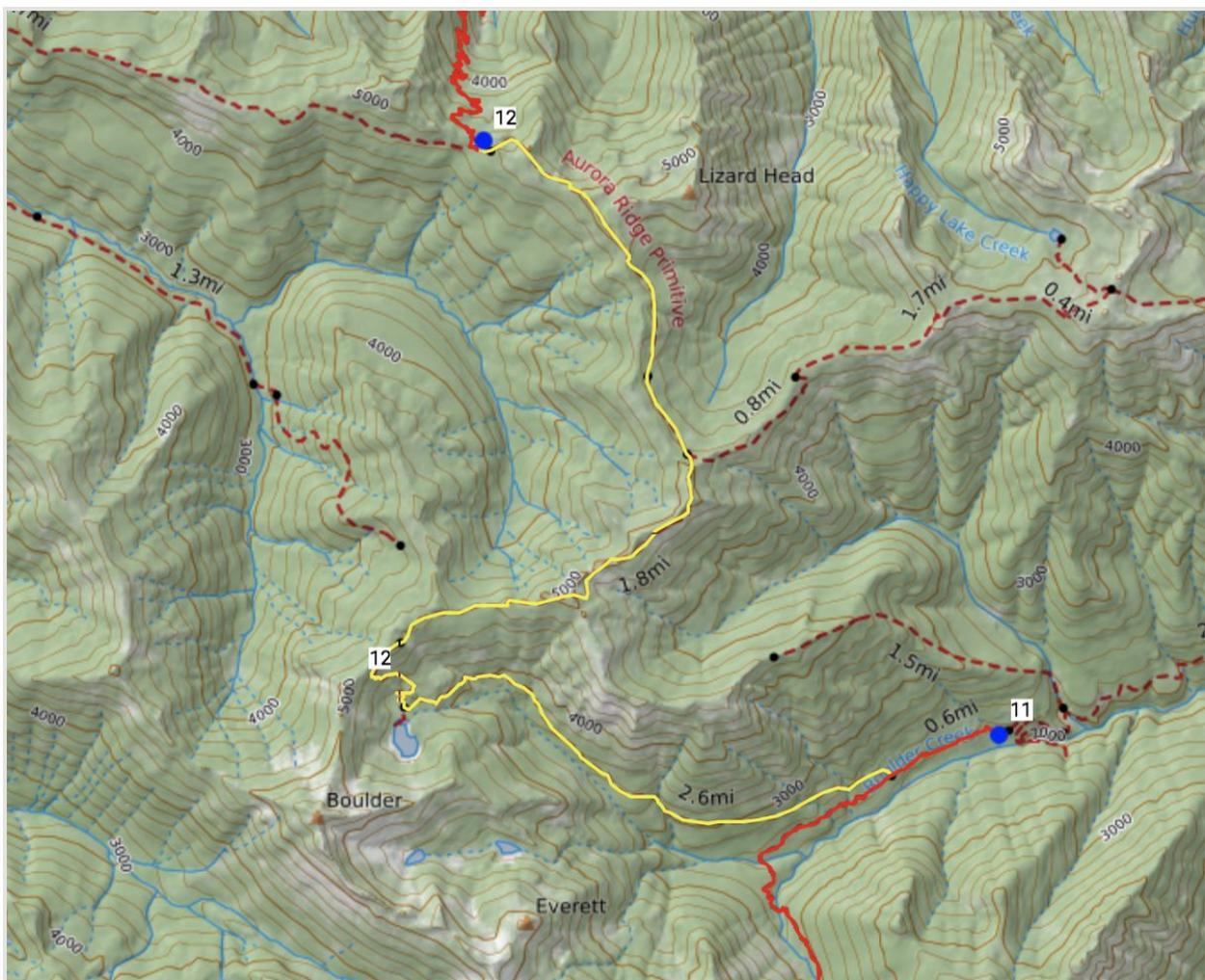
Distance: 7.74 mi

Elevation: +4143/-1771 (2127' to 5061')

Camp: Camp: 10U 0444666E 5318245N

Evac: Boulder Creek Road or Storm King Ranger Station

NOTE: CARRY AMPLE WATER AFTER BOULDER LAKE. Campsite has no water.



DAY 13: August 24th. Follow the Barnes Creek Trail north until we reach the Storm King Ranger Station at Lake Crescent.

Distance: 7.54 mi

Elevation: +1002/-4914 ft (587' to 4499')

End: Storm King Ranger Station

Evac: Storm King Ranger Station



Appendix B- Equipment

GROUP GEAR:

KITCHEN:

- 1 Whisperlite
- 1 Pot
- 1 Pan
- 1 pot grips
- 1 Spatula
- 3 lighters
- 1 Whisperlite repair kit
- 2 large fuel bottles
- 1 knife

NAVIGATION:

- 1 Compass
- 2 Sets of laminated maps (with emergency plans)
- 1 Iridium Satellite Phone from CC Outdoor Education

OTHER:

- 1 small bottle of Dr. Bronners soap
- 1 small bottle of hand sanitizer
- 1 trowel
- 6 extra aaa batteries
- 1 two person tent
- 2 bear canisters
- 2 bear sprays
- 1 aquamira
- 1 sunscreen (50+ spf)
- 2 Industrial Plastic Bags (for waterproofing backpacks)
- Plastic Bag for Food Storage
- 5 yards paracord
- Patch kit (for personal gear and tent)
- First Aid Kit (see below)
- Waterproof Digital Watch
- 1 Digital Camera

PERSONAL GEAR: As the Pacific Northwest is an incredibly wet environment, we will bring wool and synthetic layers only.

ZIVIA

- 1 Backpack (65-85L)
- 1 Sleeping bag (0-20 degrees F)

1 Sleeping pad
1 Headlamp
Rain gear (jacket and pants)
1 Puffy Jacket
Hiking boots
Camp shoes
Sports bra
Underwear
3 Pairs of socks
1 hiking shirt
1 buff
Thermal underwear (top and bottom)
Sunglasses
1 Mid-layer fleece
1 Sun hat
1 Warm hat
1 bowl
1 spoon
Water bottles (2L carrying capacity)
Personal toiletries
Bandana
Watch
Trekking Poles

KATIE

1 Backpack (65-85L)
1 Pair Trekking Poles
1 Sleeping bag (synthetic, 0-20 degrees F)
1 Sleeping pad
1 Headlamp
1 Rain jacket
1 pair rain pants
1 Puffy Jacket
Hiking boots
Camp shoes
1 Sports bra
3 pairs underwear
3 Pairs of wool socks
1 t-shirt
1 buff
Thermal underwear (top and bottom)
Sunglasses
1 Mid-layer fleece
1 Sun hat

1 Warm hat
1 bowl
1 spoon
1 Swiss Army Knife
1 Waterproof digital watch
2 One liter water bottles
Personal toiletries
1 Bandana

FIRST AID KIT:

Inventory List
NOLS Wilderness Medicine Field Guide
Medical Histories for both Katie and Zivia
5 SOAP Notes
1 WFR Guidebook
3 Pairs Latex Gloves
SAM Splint
2 Triangular Bandages
8 Safety Pins
1 Athletic tape (1" x 10 yards)
1 Ace Bandage (3" x 4.5 yards)
Moleskin

WOUND MANAGEMENT:

10 BandAids (medium)
4 Wound Closure strips
Combine Dressing (8" x 10")
Gauze Pad (4" x 4")
Gauze Roll
2nd Skin (2" x 3")
Op-Site
Eye Pad
Povidone-Iodine Prep Pad
10 Antiseptic Wipes

MEDICATIONS:

Ibuprofen (20 pills)
Diphenhydramine (Benadryl: 5 pills)
Pepto Bismol (10 pills)
Anti-Itch Relief
Hydrocortisone Cream
Tincture of Benzoin Swab
1 Triple Antibiotic Ointment

Aloe Vera Gel

TOOLS:

- 1 Tweezers
- 1 Oral Thermometer
- 1 EMT Shears
- 1 irrigation Syringe
- 10 Q-Tips (sterile applicator)

MISCELLANEOUS:

- 1 Whistle
- 10 Tampons
- 1 Resealable Plastic Bag
- 3 Pencils
- 1 Space Blanket

Repair Kit

- Duct tape
- Paracord
- Small sewing kit

Gear from CC Outdoor Education:

- Bear spray
- Bear canisters
- Iridium Satellite Phone

Appendix C- Food List

The calculations utilized to create this food list comes from numbers derived from the NOLS Cookery, 2017 Edition. We have based our numbers off of the understanding that we will likely need 1.75 lbs of food per day (3000-3500 calories). This is extrapolated from previous experience backpacking, as well as suggestions from the NOLS Cookery based on the environmental conditions of the Olympics in August and our mode of travel. The prices we have assigned to each food item are taken from Amazon, since that is where we plan to order our food.

FOOD	lbs	price/lb
Steel cut oatmeal	4	3
pancake mix	1.25	3.7
granola	3.5	7
lentils	1.5	2.5
quinoa	2.5	6.75
rice	2.5	1.5
TVP	1	13
tortillas	2	3.5
cheddar	2.25	11
pepper jack	2.5	11
motzereller	2	6
almonds	2.5	11
peanuts	2	3
dried apricots	1.5	11
banana chips	1	3.5
sunflower seeds	1.75	3.75
raisins	0.5	3
chocolate chips	1	3.2
sugar drinks	0.25	2
dried beans	1.5	2
dried veggies	1	7
butter	2	2.5
oil	2	4
brown sugar	1	2.25
PEANUT BUTTER	2	5
hot chocolate	0.3	3
maté	0.5	9

TOTAL COST: \$255.70 (\$127.85 pp)

TOTAL WEIGHT: 45.80 lbs (22.90 lbs pp)

Appendix D- Budget

Budget

- Transportation: \$736
 - Roundtrip flights DIA to Sea-Tac: \$200x2
 - Logistically it would be easier to fly out of Colorado Springs, but flights from Denver were less than half the price of flights from COS.
 - We have added \$50 to each of our plane ticket costs in order to accomodate a potential rise in price.
 - Bus from Seattle to Port Angeles and back to Seattle via Dungeness Line: \$80x 2
 - Colorado Springs Shuttle to and from Colorado Springs to DIA : \$88x2
- Food and Fuel: \$264.66
 - Food: \$255.66 (see food list for detailed budget)
 - Fuel: \$9
- Maps and Books: \$0
- Communication Device Rental: \$0
- Permits/Fees: \$90
 - Due to the length of our stay, it is most efficient to purchase the Olympic Annual Wilderness Passes which are \$45 each as opposed to paying the daily camping permit fee of \$8 per person per night.
- Gear Rental: \$84
 - Gear that we do not already own that we will be renting from the Gear House at Colorado College.
 - 2 fuel bottles (\$16)
 - Whisperlite Stove (\$16)
 - Pot (\$6)
 - Trowel (\$6)
 - Backpacks 75L+ (\$20x2)