Ritt Kellogg Memorial Fund Registration
Registration No. 5NBH-HVXR9
Submitted Jan 3, 2016 2:27pm by Sumner Lawson
RITT KELLOGG FUND

## Registration

| Sep 1, 2015Aug 31 | Ritt Kellogg Memorial Fund <br> RKMF Expedition Grant 2015/2016/INDIVIDUAL <br> This is the individual application for a RKMF Expedition Grant. If your group has received approval, you may fill out this application individually. In this application you will be asked to provide important details concerning your experience and eligibility for your proposed expedition. | Waiting for Approval |
| :---: | :---: | :---: |
| Sep 1, 2015Aug 31 | Ritt Kellogg Memorial Fund <br> RKMF Expedition Grant 2015/2016/Group Application <br> This is the group application for a RKMF Expedition Grant. In this application you will be asked to provide important details concerning your expedition. | Waiting for Approval |

## Participant




## I. Expedition Summary

## Expedition Name

## Women Who Run with Wolves: Off Trail Travel in the Canadian Rockies

## Objectives

The objective of our expedition is to develop off trail navigation skills while also diving into our individual relationships with the environment. We feel that off tail navigation will allow us to have the most authentic wilderness experience. Our trip will give us the opportunity to really develop this skill. In addition, the backcountry has played a unique role in each of our lives and we are looking to further develop and uncover each of our connections to the environment. In order to reflect and develop this relationship we will read books that explore the relationship between women and the wilderness, specifically, Women Who Run with Wolves. We will also be very conscious about the impact our expedition will have on the environment. This will include buying local, low impact food, minimizing the amount of waste we produce, and how we can best dispose of our waste. We will do all of this while having the least contrived backcountry experience. This will be achieved by spending as much time as possible in areas that are not heavily traveled and that have minimum designated trails. These elements will allow us to really connect ourselves to the natural wilderness.

## Location

Our trip will take place in St. Mary's Alpine Park and a southwest portion of the Purcell Wilderness Conservancy Park in British Columbia, Canada.

## Departure Date

Aug 9, 2016

## Return Date

Aug 26, 2016

## Days in the Field

15

## Wilderness Character

St. Mary's Alpine Park and the Purcell Wilderness Conservancy Park embody wilderness in it purest form. The British Columbia government website describes the area as "a wilderness paradise for the experienced backcountry traveller. Numerous lakes and tarns are tucked against rugged granite cliffs and surrounded by tundra and lingering snowfields...experienced hikers, willing to expend considerable effort in bushwhacking and route finding should visit this protected area where few if any people will be encountered."

Canada's Provincial Parks aim to protect wilderness areas and make them free and open to the public. The sheer size of the wilderness areas (the Purcell Wilderness Conservancy itself is about 800 square miles) lead to a pristine and seldom-travelled environment. The area is home to over seventeen alpine lakes and three major drainages with several creeks branching off. The elevation ranges from 1,400-2,700 meters (roughly 4,600-9,000 feet). The only paths beyond the entrance to the parks come in the form of game trails; however, ridges slightly above timberline make travel more efficient and enhance navigation ability.

## II. Participant Qualifications

## Participants' Graduation Date

Sumner Lawson, Eliza Stein, Katherine Kerr - 2018
Medical Certifications

- Katherine Kerr:

Expected Graduation: 2018
Wilderness First Responder - expires January 2017

- Eliza Stein: expected graduation - 2018

Expected Graduation: 2018
Wilderness First Responder - expires January 2017

- Sumner Lawson

Expected graduation - 2018
WIIderness First Responder - expires May 4, 2016. Signed up to take refresher course
through
NOLS in Denver April 30- May 1, 2016 earning hours. New expiration date: March 2018.

## Does your group have adequate experience?

Yes

## Training Plan

Our trip consists entirely of hiking, so it will be necessary for our group to practice backpacking together before we leave on our trip. To do this, we will be using our seventh block break to hike in the San Juan mountains to practice off trail traveling with topographical maps and compasses. At this time, we will be able to assess our different areas of expertise, and the areas in which we could improve as a team. We will also use this opportunity to run through our gear and review how to fix essential items (tent, stove etc.) should they break in the backcountry. The region we plan to travel in this summer has several lakes and streams, so we will refresh our proper stream crossing procedures, in case we encounter an unexpected stream or river on our route. Throughout the summer, we will all be guiding professionally in Colorado and Wyoming and will continue to hike and run on our own to be in shape for our trip. In addition, we will stay in frequent contact with the rangers in St. Mary's Alpine Park and the Purcell Wilderness Conservancy Park to check in on the water levels in late-August. We do not anticipate to encounter problems with snowpack, but will keep tabs on this as well as the summer continues. Finally, we will prepare ourselves for the wildlife we may encounter on our trip by Practicing snow travel on seventh block break and taking a bear safety course.

## III. Expedition Logistics, Gear and Food

## Travel Plan

Eliza and Katherine will both be working in Colorado for the summer. The two of them will drive from their respective parts of Colorado to meet in Denver. They will plan to leave from Denver at 10am on August 9th and drive in one car to Bozeman, Montana. This is about a 9.5 hour drive. They should arrive in Bozeman at about 7:30pm. Eliza and Katherine will stay with Sumner at her house in Bozeman for the night. The next day, August 10th, all three of us will drive to Kimberly, Canada at 11am. We will arrive in the evening, around $6: 30 \mathrm{pm}$, after the 7.5 hour drive. We will camp just outside of Kimberly for the night, and the next day, August 11th, we will run final errands, purchase our food, and place our bear canister. That night we will drive to our trailhead, 8 km before end of forest road SL 50 .

After our trip we will return to the trailhead where our car was left. We will all drive back together to Bozeman, Montana on August 25th. Eliza and Katherine will stay the night at Sumner's house again. On August 26th Eliza and Katherine will make the 9.5 hour drive back to Denver. The two of them will stay the night at Eliza's mom's in Denver. On the 27th Katherine will drive home to Indiana, about 22 hours, and Eliza will drive to Carbondale, Colorado, about 3 hours.

## Expedition Itinerary

Travelltinerary (1).docx (17MB)
Uploaded Jan 3 1:19pm by Sumner Lawson

## Appendix A

## Re-Ration Plans

We will place a bear can at the end of St. Mary's Westfork Forest Service Rd. to be retrieved at the end of day 6. Map and driving directions are in travel itinerary.

## Food Storage

In order to protect our food from wildlife, we plan to use a bear hang that will contain all of our food and scented items. We will use standard bear hang procedures, hanging the bag 15 feet above the ground, 8 feet away from the tree trunk when possible, and approximately 200 feet away from our campsite. In addition, we will be using smell proof bags within our bear hangs.

## Food List

## Equipment List

Gear List.docx (70KB)
Uploaded Jan 3 1:02pm by Sumner Lawson

## Appendix C

## Are all expedition members familiar with LNT principles?

Yes

## Plan for Minimizing Impacts

We will abide by the "leave no trace principles". Since we will be traveling in an area that does not have designated campgrounds and trails we will be looking for "durable surfaces" to travel and camp on. This will also include spreading out as we travel, in an effort to not make a trail of our own as we walk through. Additionally, we will set up our campsites at least 200 feet from any water sources. We will also be sure to dispose of waste properly, by packing everything out with us. We plan to buy food and other products that have minimal packaging and thus minimal waste. Proper waste disposal will also include defecating in holes dug at least 6 inches deep and 200 feet from water sources. We will also urinate on hard surfaces like rock, to prevent salt craving animals from digging up vegetation. Fires are not permitted in the park, therefore it is not something that will be of concern. Finally, we will be mindful and respectful of both wildlife and other visitors that we may see on the way.

## Cultural Concerns

There are no cultural concerns in our expedition area.

## Land Management

We will be traveling in provincial parks, managed by the British Columbia parks government office. Travel and camping in BC provincial parks does not require a permit or any fees.

## IV. Risk Management

## Objective Hazards

St. Mary's Provincial Park is known for it's steep cliff faces. Since we will not be following a clear trail we will need to be extremely careful of what's ahead. Traveling off a designated trail also poses a hazard. There is room for error and the potential to get lost. There is also the risk of both bears and cougars in Southern British Columbia.

## Subjective Hazards

There is no pertinent medical history that could be a hazard. We all guide professionally in the summers, giving us the technical experience necessary. This, however; could be a potential challenge. It is possible that we will all have different perspectives and ideas when trying to make a decision. It will be important for us to listen to each other's ideas and have open minds to doing things differently than how we may be used to. It will also be a long time spent together in close corridors. It will be essential to take time to ourselves and be communicative.

## Hazard Mitigation

We will be very familiar with our route before we leave, noting any areas that may have steep, dangerous terrain. We will also go on a block break trip before our trip to brush up on our map and compass skills. We will practice triangulation many times while on our training trip. Additionally we will do research on what to do if we see a bear or cougar. This will include bear training with a professional before we leave. We will also talk to the park rangers during our day in Kimberly to ask them if any bears and cougars have been sighted recently and their specific protocol. It will be very important to dispose, contain, and hang our food properly in an effort to not attract unwelcome visitors. We will also all carry bear spray and have it easily accessible at all times.

## Special Preparedness

No medical histories among expedition members.

## Emergency Preparedness

All of our evacuations lead to dirt roads. Evacuation from days 1, 2, 3, 4, 11, 12, and 13 will take us to our original trailhead where are car is parked, and we will be able to drive to Kimberley ourselves. Evacuation from days 5, 6, 7, 8, 9 , and 10 will require us to be picked up by local search and rescue. Our Spot device will be programmed so that the custom message button will alert the local ranger station that we need to be evacuated via car, and it will send them our GPS coordinates. This way, we will avoid using the emergency SOS button on the Spot device unless it truly is a life or limb emergency.

Our Spot device will be programmed so that an "OK" message is delivered to our parents' phones and emails each night, giving them our exact GPS coordinates and a message saying we are OK. The custom message button will send text messages and emails to our parents and the local Kimberley search and rescue that we need to be evacuated via car, and it will also send our exact GPS location from the road. Finally, the emergency "SOS" button on the Spot will automatically send a message to local search and rescue that we need emergency evacuation from the GPS coordinates of our location. We will reserve this button for evacuations during which we cannot hike to a road and need emergency backcountry assistance (there is a threat to life or limb, or injuries prevent any mobility).

All evacuation routes are less than 6 miles of hiking on easy terrain. The longest evacuation route is day 11 , which is a 5.6 mile hike to our car.

## Emergency Resources

Kimberley Visitor Centre<br>270 Kimberley Avenue, Kimberley, BC V1A 0A3<br>+1 250-427-0491<br>St. Mary Reservoir Provincial Recreation Area<br>Lat: 49.3454 Long: -113.1362<br>+1 403-653-2522<br>Kimberley Search \& Rescue<br>Info@kimberleysar.org<br>+1 250.427.5998<br>Kimberley Health Centre<br>2604 Ave, Kimberley, BC V1A 2R6, Canada<br>+1 250-427-2215<br>Kimberley Medical Centre<br>2604 Ave, Kimberley, BC V1A 2Y6, Canada<br>+1 250-427-4861<br>Purcell Wilderness Conservancy Provincial Park \& Protected Area Office Argenta, BC VOG 1B0, Canada<br>+1 250 489-8540

## V. Budget

## Budget

Detailed Expedition Budget.docx (90KB)
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## Transportation

\$211.87

## Food and Fuel

\$492.69

## Maps and Books

$\$ 76.65$

## Communication Device Rental

$\$ 9.99$

## Permits/Fees

\$21

## Gear Rentals

\$180

## Total Funding Request

$\$ 992.20$

## Cost Minimization Measures

We will be borrowing much of our gear from family, friends, and our jobs. We have also chosen a destination where we can drive to in order to minimize cost. We were also mindful in purchasing our food, and attempted to be as sustainable as possible while also keeping cost low. Additionally, no permits or fees are required for the area in which we will be backpacking.

## Expedition Agreement: Appendix E



## Appendix A

## 8/9/15: Tuesday

Katherine and Eliza leave from Denver and drive to Bozeman, MT. We will sleep at Sumner's house in Bozeman.

695 miles, 9 hours 32 minutes.


## 8/10/15: Wednesday

Eliza, Katherine, and Sumner will drive from Bozeman, MT, to Kimberley, British Columbia. We will camp at Kimberley Riverside Campground ( 3 km outside of town). 458 miles, 7 hours 28 minutes.


## 8/11/15: Thursday

Buy food at farmer's market and supermarket in Kimberley. Drive to bear can drop and bury bear can. Drive to trailhead and park when road becomes undriveable ( $\sim 8 \mathrm{~km}$ before road ends). This is our trailhead, on SL 50.
30.1 miles

Campsite: Near dirt road. Elevation: 4,200 feet
TH coordinates: 49.8078, -116.2738

Driving Directions to bear can drop:
Drive south on Hwy 95A. Just outside of town, turn right onto St. Mary's Lake Rd. Follow St.
Mary's Lake Rd. for 27 miles until road ends at parking lot.
Driving Directions to trailhead:
Drive south on St. Mary's Lake Rd. for 14.6 miles. Turn left at fork to leave St. Mary's Lake Rd. and enter onto dirt road (SL50). In 8.4 miles, road will become undrivable - this is our trailhead, and we will park here.


## 8/12/15: Friday

Begin Hike.
Distance: 5.12 miles
Elevation gain/loss: 500ft gain
Campsite: Northeast side of Spade Lake (49.8516, -116.3265). Elevation: 4,700ft.
Terrain: The first four miles will be following the dirt road we came in on. When the road ends, we will hike along the Spade Creek drainage until we reach Spade Lake. We anticipate significant bushwhacking and slow travel during this one mile.
Route finding techniques: Follow Spade Creek.


8/13/15: Saturday

Distance: 6.47 miles
Elevation gain/loss: 1,300ft gain
Campsite: West side of Huggard Lake (49.8583, -116.3620). Elevation: 6,300ft.
Terrain: We will begin our day on fairly flat grassy terrain. After about 2 miles, we will start to climb up toward the ridge west of the lakes. We will walk along this ridge before descending, following Spade Creek to Huggard Lake.
Route finding techniques: Visibility will be very good. We will be able to see the ridge from Spade Lake. Once atop the ridge, we will be able to see Huggard Lake and Spade Creek.


## 8/14/15: Sunday

Distance: 4.17 miles
Elevation gain/loss: 900ft gain
Campsite: Southwest side of Totem Lake (49.8706, -116.3687). Elevation: 7,200ft.
Terrain: This will be a pretty mellow day. We will not climb onto any ridges, and elevation gain will be slow and moderate throughout the day. Most of the terrain will be grass and boulder fields.
Route finding techniques: Visibility will be very good. We will follow creeks connecting the lakes for the entire day.


## 8/15/15: Monday

Distance: 3.46 miles
Elevation gain/loss: 100ft loss
Campsite: Southwest side of marsh west of Lyallii Lake (49.8978, -116.3585). Elevation: 6,900ft.
Terrain: This will be our easiest day. It will be flat the whole time, and we will not climb onto any ridges. Terrain will be mostly grassy, with one boulder field.
Route finding techniques: Visibility will be very good. We will be able to see the second lake from the first lake. To get to the third lake (our campsite), we will shoot a bearing. If we hug the east side of the ridge, we will be on track.


## 8/16/15: Tuesday

Distance: 7.27 miles
Elevation gain/loss: 2,300 ft gain, 2,700 ft loss. 400 ft loss overall.
Campsite: East side of unnamed lake (49.9482, -116.3999). Elevation: 6,500ft.
Terrain: This will be a difficult day. We will begin the day by climbing onto a ridge. We will follow this ridge north for about six miles before descending to our campsite. The terrain will not be challenging after we get to the top of the ridge, but it will be a long day.
Route finding techniques: We will ascend the ridge directly south of our campsite. We will follow this ridge north all day until we are above a large lake. Then, we will descend to the northwest to a smaller lake, where we will camp.


## 8/17/15: Wednesday

Distance: 8.63 miles
Elevation gain/loss: 1,900ft loss
Campsite: End of St. Mary's River Rd. (49.8992, -116.4673). Elevation: 4,600ft.
Terrain: The day will begin with a grassy ascent onto the ride due west of our campsite. We will then ascent to a peak, following the ridge, then descend until we are south of the lake we camped at. We will then follow a grassy slope down into a drainage, where we will most likely have to bushwhack for about a mile before arriving at the road.
Route finding techniques: We will ascend the ridge directly south of our campsite. From the ridge, we will be able to see the drainage we need to descend into.The drainage will take us to the road.
We will resupply from a preplaced bear can at this campsite.


## 8/18/15: Thursday

Distance: 8.54 miles
Elevation gain/loss: 1,000ft gain
Campsite: Northernmost end of St. Mary's River drainage (49.9149, -116.5783). Elevation: 5,600ft.
Terrain: We will begin the day by following the road south and crossing Denver Creek via a bridge. We will then slowly ascend the ridge to the west via a grassy slope. We will need to descend this ridge and ascent the opposite ridge, another gradual ascent. Finally, we will descend into the drainage.
Route finding techniques: Ridges will be clearly visible. Creek in drainage will provide path to follow down.


## 8/19/15: Friday

Distance: 7.41 miles
Elevation gain/loss: 3,300ft gain, 3,600tf loss. 300ft loss overall.
Campsite: Grassy area in southern end of unnamed basin (49.9790, -116.5530). Elevation: 5,300ft.
Terrain: This day will begin with climbing up to the same ridge we were travelling on the day before. We will gradually climb this ridge, following it northwest and then northeast. The day will finish with a descent down a grassy hillside to a creek, where we will camp.
Route finding techniques: Ridges will be clearly visible. After joining with the ridge running north/south, we will fork onto the first ridge we come across that runs northwest. We will be able to see the drainage from here and descend when the slope becomes grassy.


## 8/20/15: Saturday

Distance: 5.29 miles
Elevation gain/loss: 800ft gain
Campsite: Eastern end of valley branching east off Deward Creek (49.9559, -116.4573).
Elevation: 6,100ft.
Terrain: We will begin the day by ascending to the ridge we travelled the day before. We will come through the pass and descend the eastern grassy side of the ridge into a valley. We will follow the valley east, which will include minimal bushwhacking.
Route finding techniques: We will pass over the ridge in the same location we began our descend the day before. We will be able to see the valley from the ridge. We will know that we have reached our campsite because it is before the drainage begins a steep ascent to a rugged knoll.


## 8/21/15: Sunday

Distance: 4.17 miles
Elevation gain/loss: 850ft loss
Campsite: South of marsh in Findlay Creek (49.9989, -116.3663). Elevation: 5,250ft.
Terrain: This day will begin with bushwhacking to the top of the knoll, then we will ascend a ridge above timberline. We will travel on this ridge until reaching boulder fields, which we will travel for about a mile. When the boulder fields end, we will travel a ridge as it dips below timberline. We will then bushwhack alongside a creek until reaching our campsite.
Route finding techniques: We will be able to see the knoll from our campsite, and we will be able to see the ridge from the knoll. We will follow the first ridge that forks east and descend with the ridge. We will be able to see the valley/creek we need to follow from the ridge, and we will camp where this creek meets Findlay Creek.


## 8/22/15: Monday

Distance: 7.73 miles
Elevation gain/loss: 1,000ft gain.
Campsite: Northern end of Alton Creek valley (49.9737, -116.3179). Elevation: 6,200ft.
Terrain: The day will begin with bushwhacking up to our first ridge. We will follow this ridge the rest of the day as it moves south, then forks east and north. The day will end with a mellow grassy descend into the valley.
Route finding techniques: We will head south until our ridge becomes visible to the east, and then we will ascend up onto the ridge. We will follow the ridge south and fork east when the ridge splits. We will follow this ridge north and descend east into the valley when the ridge begins to dip below timberline.


## 8/23/15: Tuesday

Distance: 6.81 miles
Elevation gain/loss: 600ft loss.
Campsite: Basin east of two alpine lakes (49.9156, -116.2615). Elevation: 5,600ft.
Terrain: The day will begin with easy, flat travel through a grassy valley. We will then bushwhack to ascend onto a ridge traveling south, and we will follow it as it climbs above timberline. We will climb up and down over several ridges for about two miles before descending between the alpine lakes and bushwhacking to our campsite.
Route finding techniques: We will follow the Alton Creek south from our campsite and ascend the ridge to the east before the ascent becomes steep. Once above timberline, we will cross over three small ridges, heading west until we reach the alpine lakes. We will descend between the lakes and then follow the drainages to the basin. We will camp when the basin flattens out.


## 8/24/15: Wednesday

Distance: 6.12 miles
Elevation gain/loss: 1,300ft loss.
Campsite: At end of road along White Creek (49.8536, -116.3017). Elevation: 4,300ft.
Terrain: We will begin with grassy, mellow travel to the ridge, which we we follow as it climbs above timberline. Most of the day will be near-timberline travel along this ridge, ending the day with bushwhacking as we descend into the valley.
Route finding techniques: We will be able to see the ridge we need to ascend to the southwest of our campsite. We will follow this ridge south until we see an alpine lake west of the ridge. Just past this alpine lake, we will descend along the first drainage we come across until we reach the dirt road. We will camp near the dirt road.


## 8/25/15: Thursday

Distance: 3.81 miles
Elevation gain/loss: 100ft loss.
Campsite: We will arrive at our car and drive home.
Terrain: We will travel on the dirt road.
Route finding techniques: We will head south on the road for less than four miles until we reach our car.


## 8/25/15: Thursday

We will pick up our bear can and return to Bozeman, Montana. We will sleep at Sumner's house.

Driving Directions:
Drive south on dirt road for 8.5 miles. Turn right onto St. Mary's River Rd. Follow road north for 14.6 miles to parking lot. Pick up bear can. Drive back south down St. Mary's River Rd. for 40 miles. Arrive: Kimberley, BC.


Return to Bozeman, MT, following same route we came in on.

## 8/26/15: Friday

Sumner will stay in Bozeman. Katherine and Eliza will drive to Denver, where Eliza lives.
695 miles, 9 hours 32 minutes.


Katherine will fly home to Indiana.


## Evacuation Routes

The following evacuation routes are for slow, hike-out evacuation only. For immediate evacuation, we will call search and rescue via our Spot device.

Evacuation routes for nights $1,2,3,4,11,12$, and 13 will bring us to our TH. Evacuation routes for nights 5, 6, 7, 8, 9, and 10 lead to Forest Roads from which we will need to call ranger station for a ride.

Night 1 via SL 50 and St. Mary's Lake Rd.


Night 2 and 3 via night 1 evac route


Night 4 via White Creek


Night 5 and 6 via St. Mary's East Forest Service Road


Night 7 via St. Mary's Westfork Forest Service Rd.


Night 8 and 9 via St. Mary's River East Forest Service Rd.


Night 10 via night 5 route and St. Mary's River East Forest Service Rd.


Night 11, 12, and 13 via night 1 route and Forest Road SL50


## Appendix B

Breakfast:
. 41 lbs per person approximately
Lunch/Snacks:
. 63 lbs per person approximately
Dinner:
. 71 lbs per person approximately
Food category amount $\times$ no. people $\times$ no. days $=$ amount of food needed

Breakfast:
Amount needed: (. 4 lbs per day)( 3 people)(13 days) $=15.6 \mathrm{lbs}$ ideal

| Organic Instant Oatmeal | 2.5 | $\$ 11.00$ |
| :--- | :--- | :--- |
| Organic Dried Fruit Medley | 2 | $\$ 16.00$ (\$8 per lb) |
| Homemade granola | 3 | $\$ 27.00$ (\$9 per lb) |
| Bagels (locally made/ organic) | 3 | $\$ 9.00$ (baker's dozen) |
| Organic instant pancake mix | 1 | $\$ 5.00$ |
| Hash Browns | 1 | $\$ 9.69$ |
| Powdered Milk | 1 | $\$ 4.00$ |
| Eggs, local | .75 | $\$ 2.00$ |
| Total | 14.25 lbs | $\$ 83.69$ |

Lunch/Snacks:
(. 63 lbs$)(3$ people $)(13$ days $)=24.57$ ideal

| Ltem Lbs. | Price |  |
| :--- | :--- | :--- |
| Local Jerky | 1 | $\$ 35.00$ |
| Organic Tortillas | 3 | $\$ 10.00$ |
| Peanut Butter | 2 | $\$ 8.00$ price |
| Jelly | 1 | $\$ 5.00$ |
| Organic Dehydrated Hummus | .5 | $\$ 12.00$ price |


| Local Trail Mix | 6 | $\$ 31.80(\$ 5.30$ per lb) |
| :--- | :--- | :--- |
| Granola Bars/Energy bars | 6.5 | $\$ 30.00$ price |
| Snickers | 1.2 | $\$ 9.00$ |
| Local Summer Sausage | 2 | $\$ 28.00(\$ 9.33$ each $)$ |
| Cheese - local if possible | 2 | $\$ 14.00$ |
| Apples (4 per pound, local) | 3 | $\$ 10.00$ |
| Wheat Thins | 1 | $\$ 6.00$ |
| Carrots, local | 3 | $\$ 8.00$ |
| Total | 32.2 | $\$ 206.80$ |

Dinner/dessert:
$(.71 \mathrm{lbs})(3$ people $)(13$ days $)=27.69 \mathrm{lbs}$ ideal

| Ltem Lbs | Cost |  |
| :--- | :--- | :--- |
| Organic Spaghetti | 4 | $\$ 12.00$ |
| Marinara Sauce | 2 | $\$ 10.00$ |
| Dehydrated Pesto Sauce | .1 | $\$ 6.00$ |
| Couscous | 4 | $\$ 6.00$ |
| Dried Veggies | 3 | $\$ 36.00$ |
| Instant Refried Beans | 1 | $\$ 8.00$ |
| Instant Lentils | 4 | $\$ 16.00$ |
| Dried Soup (Ramen?) | 1 | $\$ 4.00$ |
| Canned Tuna | 2 | $\$ 12.00$ |
| Canned Salmon | 1 | $\$ 15.00$ |
| Olive oil | .5 | $\$ 9.00$ |
| Hot sauce | .25 | $\$ 4.00$ |


| Spice kit | .25 | $\$ 8.00$ |
| :--- | :--- | :--- |
| Instant Rice | 2 | $\$ 5.00$ |
| Onions (local if possible) | 3 | $\$ 6.00$ |
| Brownie mix | 1 | $\$ 12.00$ |
| Tea | .1 | $\$ 8.00$ |
| Instant Coffee | .05 | $\$ 10.00$ |
| Total: | $\mathbf{2 9 . 2 5}$ | $\mathbf{\$ 1 8 7 . 0 0}$ |

## Appendix C

## Group Gear:

| Item | Number |
| :---: | :---: |
| 3 person tent w/ rainfly (mega mid) | 1 |
| Stakes | Package for tent |
| Ground cloth | 1 |
| Whisper lite stove w/ windshield \& repair kits | 2 |
| 4 MSR Red Fuel bottles full | 4 |
| Lighters | 2 |
| Large pot with lid | 1 |
| Fry pan | 1 |
| Spatula | 1 |
| Small sponge | 1 |
| Swiss Army Knife | 1 |
| Water treatment system - Aquamira | 1 per person |
| Trashbags | 6 |
| Trowel | 1 |
| Bug spray | 1 |
| Map (topographic) | 2 |
| Compass | 2 |
| Ziplock bags | 6 |
| Duct tape | 1 roll |
| Gear repair kit | 1 |
| Tenkara fly rod | 1 |
| Spot Device | 1 |
| Bear bag/canister | 6 |
| Cord/rope | 6 |
| Books: Women in the wild, flora \& fauna | 2-3 |
| Bear Spray | 3 |


| Bear Bells | 3 |
| :--- | :--- |
| Bear Canister | 1 |

Individual Equipment/Gear:

| Item |  |
| :---: | :---: |
| T- Shirt | 1 |
| Baselayer, long sleeve | 1 |
| Light Fleece layer | 1 |
| Thick layer, fleece or insulating layer | 1 |
| Wind Breaker | 1 |
| Rain Jacket | 1 |
| Underwear, Sports bras | 2-3 |
| Hiking shorts | 1 |
| Hiking Pants | 1 |
| Light or mid-weight long underwear | 1 |
| Wind/Rain pants | 1 |
| Liner Gloves | 1 |
| Baseball hat | 1 |
| Warm Hat | 1 |
| Buff | 1 |
| Boots | 1 |
| Hiking socks | 3-4 |
| Gaiters | 1 |
| Backpack | 1 |
| Camp Shoes | 1 |
| Sunscreen | 1 |
| Lip balm | 1 |
| Ditty bags | 2-3 |


| Bandanas | 2 |
| :--- | :--- |
| Headlamp | 1 |
| Hand Sanitizer | 1 |
| Passport | 1 |
| Toothpaste | 1 |
| Toothbrush | 1 |
| Personal bowl, fork/spoon | 1 |
| Sleeping bag | 1 |
| Sleeping pad |  |

## Appendix D

## Detailed Expedition Budget

## TRANSPORTATION

From Denver to Bozeman Montana and back - 2008 Honda Civic
From Bozeman Montana to Kimberly, Canada and back - Toyota Tundra 2002 Pickup Truck
Denver to Bozeman and back $-695 \times 2=1,390 \mathrm{mi}$
Bozeman to Kimberly to bear drop off to trailhead and back $-458 \times 2+(27+14.6+8.4+) \times 2=1,043 \mathrm{mi}$
National Gas Average for December 2015= \$2.00/gallon
Miles/ gallon= Average between Urban and Highway.
2008 Honda Civic- 30 miles per gallon
Toyota Tundra 2002- 17.5 miles per gallon
Denver to Bozeman and back= \$92.67
Bozeman to Kimberly and back \$119.20
Total transportation cost= $\mathbf{\$ 2 1 1 . 8 7}$
STOVE FUEL
We will use white gas for our whisperlite stove $=\$ 8 /$ quart
We are bringing two quarts of white gas.
Fuel= \$16
FOOD

| Item | Lbs. Price |  |
| :--- | :--- | :--- |
| Organic Instant Oatmeal | 2.5 | $\$ 11.00$ |
| Organic Dried Fruit Medley | 2 | $\$ 16.00(\$ 8$ per lb) |
| Homemade granola | 3 | $\$ 27.00(\$ 9$ per lb) |
| Bagels (locally made/ organic) | 3 | $\$ 9.00$ (baker's dozen) |
| Organic instant pancake mix | 1 | $\$ 5.00$ |
| Hash Browns | 1 | $\$ 9.69$ |
| Powdered Milk | 1 | $\$ 4.00$ |
| Eggs, local | .75 | $\$ 2.00$ |
| Total | 14.25 lbs | $\$ 83.69$ |

Lunch/Snacks:
(. 63 lbs ) (3 people) $(13$ days $)=24.57$ ideal

| Item | Lbs. | Price |
| :--- | :--- | :--- |
| Local Jerky | 1 | $\$ 35.00$ |
| Organic Tortillas | 3 | $\$ 10.00$ |
| Peanut Butter | 2 | $\$ 8.00$ price |
| Jelly | 1 | $\$ 5.00$ |
| Organic Dehydrated Hummus | .5 | $\$ 12.00$ price |


| Local Trail Mix | 6 | $\$ 31.80(\$ 5.30$ per lb) |
| :--- | :--- | :--- |
| Granola Bars/Energy bars | 6.5 | $\$ 30.00$ price |
| Snickers | 1.2 | $\$ 9.00$ |
| Local Summer Sausage | 2 | $\$ 28.00$ (\$9.33 each) |
| Cheese - local if possible | 2 | $\$ 14.00$ |
| Apples (4 per pound, local) | 3 | $\$ 10.00$ |
| Wheat Thins | 1 | $\$ 6.00$ |
| Carrots, local | 3 | $\$ 8.00$ |
| Total | 32.2 | $\$ 206.80$ |

## Dinner/dessert:

(.71 lbs)( 3 people) (13 days) $=27.69 \mathrm{lbs}$ ideal

| Item |  | 4 |
| :--- | :--- | :--- |
| Organic Spaghetti | 2 | $\$ 12.00$ |
| Marinara Sauce | 4 | $\$ 6.00$ |
| Dehydrated Pesto Sauce | .1 | $\$ 6.00$ |
| Couscous | 3 | $\$ 36.00$ |
| Dried Veggies | 1 | $\$ 8.00$ |
| Instant Refried Beans | 4 | $\$ 16.00$ |
| Instant Lentils | 1 | $\$ 4.00$ |
| Dried Soup (Ramen?) | 2 | $\$ 12.00$ |
| Canned Tuna | 1 | $\$ 15.00$ |
| Canned Salmon | .5 | $\$ 9.00$ |
| Olive oil | .25 | $\$ 4.00$ |
| Hot sauce | .25 | $\$ 8.00$ |
| Spice kit | 2 | $\$ 5.00$ |
| Instant Rice | .1 | $\$ 8.00$ |
| Onions (local if possible) | 3 | $\$ 6.00$ |
| Brownie mix | 1 | $\$ 12.00$ |
| Tea | 4 |  |

Lbs
Cost

| Instant Coffee | .05 | $\$ 10.00$ |
| :--- | :--- | :--- |
| Total: | $\mathbf{2 9 . 2 5}$ | $\$ 187.00$ |

Total amount of food in lbs currently being brought on trip: 75.7lbs, total cost: $\$ 476.69$
Permits/Fees
Camp at Kimberley Campground \$21
MAPS AND BOOKS
Wildlife and Trees in British Columbia = \$10.76
Women Who Run with Wolves= \$9.99
Map of Purcell Wilderness X $2=\$ 55.90$
Total $=\$ 76.65$
COMMUNICATION DEVICE
We will borrow a Spot device from Eliza's camp. Because Spot devices are paid for on a monthly basis, we will need to pay $\$ 9.99$ to activate Spot Basic Services for the month of August (includes tracking, GPS coordinates via SMS/Email, and SOS Search and Rescue services).
$\$ 9.99$

GEAR RENTALS -
UDAP Bear Food Storage Container x5: $\$ 24 \times 5=\$ 120$
Bear Spray x1: $\$ 60$ to rent
Fry Pan: \$11
outdoorgeeks.com
Total: \$180
EMERGENCY MONEY
100 each $=\$ 300$
SUPPLIES FOR THE FIRST AID KIT
Box of Aspirin = \$4
Box of Antihistamine $25 \mathrm{mg}=\$ 4$
Box of Ibuprofen $=\$ 2.50$
Povidone lodine: \$4
Total: \$14.50
GEAR PURCHASES
2 MSR Fuel Bottles - \$38
Water treatment (Aquamira) x3-\$7.73=\$23.19
Cord (Bear hang) x2 = \$3.69
Total: \$51.88
TOTAL BUDGET :
\$1,358.58
Budget Request:
\$992.20

