



Ritt Kellogg Memorial Fund Registration

Registration No. GB1Z-R5DQ1

Submitted Jan 9, 2018 10:19pm by Sophia Redpath

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**

I. Expedition Summary

Expedition Name

Arctic Dreams and the Gates to Paradise: Backpacking Gates of the Arctic National Park

Objectives

Our objective for this trip is to plan and execute a challenging outdoor expedition, improve our technical skills, and interact with a new landscape. Planning and executing a trip of this caliber requires careful preparation as well as a high level of backcountry competence. Gates of the Arctic is an intensely wild and challenging environment, and a part of the world few get to experience firsthand. Throughout the course of our expedition we hope to interact with our environment and appreciate the uniquely arctic solitude, as well as spend time thinking introspectively. We choose the Gates of the Arctic largely for the outstanding landscape and unmatched wilderness. The feeling of man's insignificance is put in perspective in wild places, and Gates of the Arctic remains relatively untouched by the movement of man. We hope to use this time in the backcountry to learn more about the environment, hone our outdoor skills and strengthen our understanding for what it means to work as a team.

Location

Our route will take us in a loop beginning and ending at Anaktuvuk Pass in the central northern Gates of the Arctic National Park. Our proposed route takes us through the valleys of the northern Gates of the Arctic National Park, passing rivers, lakes, and craggy peaks. We will spend a total of 13 days in the backcountry, camping the whole time.

There are no trails in the park, nor do park rangers recommend routes as the park was set aside specifically for discovery and exploration, so it is likely that our specific route has never been done before.

Departure Date

Jul 23, 2018

Return Date

Aug 6, 2018

Days in the Field

13

Wilderness Character

Gates of the Arctic National Park is the northernmost park in the United States, located past the Arctic Circle in Alaska. In 1980 the Gates of the Arctic Park was established spanning 8.4 million acres, the second largest national park in the U.S. The land was set aside in order to preserve its pristine environmental identity, and to protect the wildlife of the park. There are no trails in the park, with the intent that each visitor can find their own experience. The area is vast and managed in a way to minimize impact in the spirit of the Wilderness Act of 1964 where man himself is a visitor who does not remain. Gates of the Arctic is an expansive wild whose natural majesty and solitude is difficult to match.

II. Participant Qualifications

a. Participants' Graduation Date

Nora Holmes - May 2018
 Caleigh Smith - May 2018
 Sophie Redpath - May 2019
 Rachel Fitch - May 2019

b. Medical Certifications

Sophie Redpath - Wilderness EMT (NREMT, WFR, CPR)
 Nora Holmes - Wilderness EMT (NREMT, WFR, CPR), Swift water Rescue
 Caleigh Smith - WFR, CPR, Avalanche 1
 Rachel Fitch- WFR, CPR

Does your group have adequate experience?

Yes

d. Training Plan

Throughout the semester we will be all in season playing rugby, as well as supplementing practices with extra training. We will do endurance cardio such as running, the stairmaster, and never skip leg day! During the summer leading up to the trip, we will all be in places in which we will have access to either a gym or an area in which to exercise. We will create a training regime to stick to, with routines that can be done with or without equipment depending on our various locations. We will also be sure to practice packing a pack and hiking or 'doing stairs' with a weighted pack on.

III. Expedition Logistics, Gear and Food

e. Travel Plan

Our trip will begin in Colorado, where we will all meet up at school. From there we will pack up our packs and the car and start driving north. It is a 54 hour drive from Colorado Springs to Fairbanks Alaska, we plan to make this drive in four days, as we will have 4 drivers so rotating shifts will allow us to make the trip safely and in good time. We will leave Colorado College on the morning of July 19th, allowing us plenty of time to make the trip. We will arrive in Fairbanks July 22nd where we will attend a park mandated orientation (with our arctic pen pal Eric!) we'll park the car with the bush plane company, and catch a bush plane to Anaktuvuk Pass at 9:00am on the 23rd, arriving at Anaktuvuk Pass at 10:35 on the 23rd. On this day we will visit the National Parks "visitors center" in Anaktuvuk, and leave them with a copy of our route. The next day we will begin walking! We will be picked up by Wright airlines in Anaktuvuk Pass (the same place) after completing our route, on August 6th. We will make the drive back to school in a more relaxed fashion arriving back in Colorado by August 14.

e. Expedition Itinerary

[Ritt Route.pdf](#) (4.7MB)

Uploaded 1/9/2018 9:36pm by Sophia Redpath

Appendix A

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No, we will carry all food with us.

Food Storage

Since there aren't any (or very limited) trees in the arctic, bear hangs are not a guaranteed method. We will use ursacks in place of bear hangs or canisters. These are on the National Parks list of approved bear food safety equipment, and will be function with or without trees. We will put all food and scented items in these, and tie them at least 100 yards from our tent site.

g. Food List

THE OFFICIAL FOOD TABLE.pdf (52KB)

Uploaded 1/9/2018 9:14pm by Sophia Redpath

Appendix C

f. Equipment List

Equipment List Alaska 2018.pdf (52KB)

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Appendix B

b. LNT Principles

Yes

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The LNT principles are vital in the area we are traveling in order to protect the land and our own safety. The Gates of the Arctic National Park is pristine and virtually untouched by man. The beauty and isolation is part of the draw of visiting but this means we have to be aware and follow LNT principles closely to help everything. All participants are familiar with LNT principles and will implement them.

- Planning ahead is incredibly important in any backcountry trip, but especially in such a remote location. Knowing our route, backup plans, and having solid emergency plans is a necessity we have planned for.
- We will observe wildlife from a distance, not approaching any of them.
- The arctic tundra is extremely delicate so minimizing our impact by traveling on durable surfaces is a good policy. There are no established trails in the park so we will stick to game trails, durable surfaces or fanning out so as to have as little impact as possible.
- We will dispose of all of all of our waste properly (including human waste) by using proper backcountry 'bathroom' methods, and packing out all trash and food waste.
- We will leave what we find in order to have the most minimal impact on the environment.
- We will cook only on stoves, and if we choose to make fires we will make only pan fires and dispose of ashes properly.
- It is unlikely that we will see other visitors, but should we encounter others we will act courteously and respect their privacy.

Empty

The park has expansive untouched wilderness but there is some evidence of the Inupiaq-speaking Kuvuamiit and Athapaskan-speaking Koyukon roaming throughout the Brooks Range (Gates of the Arctic). Their descendants continue to hunt and gather in the Park. They have moved out of their nomadic lifestyle now residing in villages. There are 11 resident areas holding villages that are associated with the park. Another tribe that is in the Gates of the Arctic is the Nunamiut Eskimos. The Nunamiut have hunted caribou for 11,000 years. They follow caribou migration to create food, clothing and tents. The modern Nunamiut still hunt the caribou but use snowmobiles and rifles. Since the 1950s they no longer live a nomadic lifestyle instead living in Anaktuvuk Pass where there is air service, a village store and a museum for visitors. We are flying into Anaktuvuk Pass and will visit these sites. As our proposed route is in areas historically inhabited by these communities, we will leave any relics we may find. We will also respect and recognize the importance of their history and modern presence.

IV. Risk Management

b. Objective Hazards

- a. Objective hazards

- i. Rain: Viewed often more as a nuisance than as an actual hazard, persistent rain can actually be dangerous to the long term camper. Keeping gear (especially sleeping gear) warm and dry becomes more of a concern, as wet gear can lead to illness or hypothermia in extreme cases. We will combat this by employing excellent rain-protection techniques, being sure to waterproof bags and double waterproof sleeping bags. We will have rain gear for hiking, and are familiar with several drying techniques that do not require sunshine. We have enough experience among the 4 of us to be able to comfortably live and travel in the rainy backcountry.
- ii. Snow: Though snow is unlikely at this time of year, it is still the Arctic and quite possible for us to encounter snowfall or hail. This can be dangerous as temperatures would drop significantly (increasing risk for illness, frostbite or hypothermia) and gear could be exposed to wet or cold. All of us have ample experience in cold weather in the backcountry, and being prepared for anything is a part of our philosophy as outdoors-women. We will have extra warm layers with us, and all will have good sleeping bags and pads. Additionally, as our route includes several river crossings - which, besides river dangers, pose the threat of cold water exposure - we will be very conscious of having at least one pair of socks and one full outfit that is kept specifically dry. Based on the weather and personal necessity, we will use these layers to change into at camp, or if need be directly after a crossing. We recognize we may need to switch between wet and dry socks in the priority of minimizing wet feet.
- iii. Cold: As has been touched on in the previous sections, cold can pose a threat in both obvious and insidious ways. Catching an illness in the backcountry can cause a trip to be cut short, and frostbite and hypothermia can pose even larger threats. We have the sufficient medical training to deal with these issues should they arise, but prevention is always better than mitigation post-onset. As a group we have experience with extreme conditions, and will pack accordingly. As we have said in previous sections, we will pack warm layers, with some "sacred" dry layers. All of our sleeping bags will be rated 0 at least, and we will have good sleeping pads. We will be sure to monitor ourselves and each other for signs of cold or pervasive wetness. Hot drinks and hot water bottles also go a long way!
- iv. Sun: Sun exposure can pose a variety of issues. Prolonged exposure and heat related illnesses can be very serious. Heat related illness is unlikely in the Arctic, but sunburn or sun blindness will be a relevant threat as the sun will not set. Sunburn is not only uncomfortable, but can increase risk for infection. Sun blindness from snow or water can also be dangerous and painful. We will minimize these effects by using layers, sunscreen, sunglasses, sun hats and staying well hydrated.
- v. Navigation and Off-Trail Terrain: As there are no trails in Gates of the Arctic National Park, all of our travel will be based on our own navigation. Getting lost can be extremely dangerous, as it could add time to the trip (resource strain) or could lead us to terrain we are unprepared for. The terrain is also something to consider: tundra, bog, and mountainous terrain can be treacherous to travellers. The park ranger for Gates of the Arctic, as well as the testimony of several others who have travelled in the park suggest that a 6 mile travel day is a good length for competent hikers due to the challenging terrain and many rivers. We have planned our route with all these hazards in mind. The route follows easily identifiable landmarks like rivers and lakes, so it is unlikely we will get lost. Our group also has copious experience in backcountry navigation without trails, and will carry a compass and topo maps at all times. We will periodically check maps for landmarks on our route. Additionally our route is conservative in mileage, with shorter days towards the front where our packs will be lighter, and only two longer days of about 10 miles. Several of these hiking days could be combined into one should the need arise, and as water is virtually everywhere a suitable backup campsite would not be difficult to find. This route is a loop so should necessity arise, turning back is always an option. Additionally, the long hours of light take another layer of stress off in that there is little to no threat of hiking in the dark should we be delayed or get a late start. This reduces risk greatly as navigation (macro and micro) is dangerous and irresponsible in the dark.
- vi. River Crossings: River crossings will be frequent in this route as there are numerous drainages, and we will be following rivers much of the time. We will minimize river crossings as much as possible by using foresight and staying on the correct side of the river as much as terrain will allow, (see route description). Important to keep in mind is that a river crossing is never necessary. Should a river pose too large of a threat we can retrace steps to find a better spot, or simply not cross at all if it is too dangerous. When choosing to cross a river, however, we will utilize a systematic assessment system in order to stay consistent and not miss anything. The "WADE" acronym as well as the "ABCDEs" are useful tools when assessing river crossings. WADE stands for Watch, Assess, Decide, Execute, an overview of river crossing protocol. The ABCDEs are for assessing the river itself, and stand for Approach, Bank, Current/Clarity, Depth/Downstream, and Exit. We will walk through these assessment steps when preparing to cross a river, and will also be sure

to check with every member of the group to ensure we feel safe about the crossing. Should any member not feel safe we will find another crossing site, or if need be turn back. Should we all agree we will employ the suitable crossing technique to make the crossing (diamond, tripod, pairs, or solo), being sure to unclip packs before stepping into the river. Also due to precipitation the river level might rise. This will lead to changing conditions requiring constant reevaluation. We will need to pick our camping sites wisely because though gravel bars are the best choice due to their durable surfaces and less insects they also run the risk of being covered by a rising water level. We will monitor water level and be attentive when choosing campsites.

- vii. Injury & Infection: Injuries and infection can happen unexpectedly and can pose many different kinds of threats. The most likely injuries would probably be things like twisted or sprained ankles, strained muscles, or blisters. Infection can arise from blisters, sunburn, or kitchen related accidents. We will use preventative measures for all of these possibilities, but should we encounter any injury or infection we will first assess the situation to see if it requires evacuation. If it does we will begin that process immediately (see section on emergency preparedness). Having more people on the trip also increases the safety and emergency response ability. There will be 2 WEMTs as well as 2 WFRs which makes medical care less stressful for the providers and opens the option of a runner team should it be necessary. If necessary we will provide the appropriate care within our scope of practice.
- viii. Wildlife (Bears & Caribou): It is likely we will see several types of wildlife while in the Park. These animals will not be accustomed to human presence which could make them curious to us, but most likely they will be largely indifferent. We will still employ safety precautions to minimize any too-close-for-comfort interactions, especially with bears. While hiking we will be making human noises so as to make our presence known so we don't surprise any wildlife. When looking for camping we will first survey the area for any signs of bear such as tracks, trails, scat, or animal and fish carcasses. Should these signs be present we will continue until we find a suitably safe campsite. Once a site is deemed suitable, we will be sure to cook at least 100 yards from our sleeping location, taking the same precautions for using the 'restroom.' Additionally we will store our food overnight using bear-proof techniques (ursacks), and make sure to always have bear spray in a known and accessible location. If we do encounter a bear we will first identify what state the bear is in, note the type of bear, if it is a mother with cubs, (or if it is unattended cubs making sure we look out for the mother) to assess the risk level. If it is far away and does not notice us, we will attempt to keep it that way and will not approach the bear. If the bear does notice us we will employ proper bear protocol - banding together, seeming as large as possible, talking to the bear, and if necessary using our bear sprays.

b. Subjective hazards

- i. Dehydration & Fatigue: When backpacking fatigue and dehydration are quite common. These can lead to larger problems if left unchecked, so we will be sure to monitor ourselves and each other for signs of both fatigue and dehydration, and honesty will be the policy, always. We will be travelling near water the entire trip, so we do not foresee finding freshwater sources to be an issue. In addition, this means we will not need to carry full droms with us which will reduce pack weight and help with fatigue. We will treat water before drinking it with aquamira or a similar method, or by boiling it. We will aim to drink between 3-5 liters per person per day depending on necessity. This will also help reduce fatigue. When we are travelling, we will start the day with some light stretching, and during the travelling portion we will take breaks to eat and drink regularly, so as not to 'burn out.' We will familiarize ourselves with symptoms of over exhaustion and tiredness (irritability, unusual silence, impaired awareness or judgement) and react accordingly. The longer travel days have strategically been placed later in the trip when our packs will be lighter, and our most extensive travel day will be following a layover day, giving us lots of time to recuperate and prepare.
- ii. Sleep: One of the trademarks of arctic summer is the 24 hour daylight. While this reduces some risks by eliminating the worry of hiking in the dark, it could make sleeping more difficult. We will combat this by staying to a regular sleeping and waking schedule as much as possible - checking our watches regularly, and using time rather than daylight to guide our schedule. We will also all bring light-blocking sleep masks for "night-time" to help us fall asleep.
- iii. Moods/group dynamic: When travelling in the backcountry, often interpersonal relationships are put to the test in a way that can be unexpected for some. Our group has never been backpacking together, but being teammates will work to our advantage as we have spent copious amounts of time together both in physically strenuous situations and in close quarters for extended time. This in addition to our close friendship will allow us to foster an environment of open dialogue and honesty, addressing problems as

they arise rather than waiting. We will also sit down as a group before the trip and create a set of values that we will uphold on our trip to further ensure that interpersonal issues are minimized.

- iv. Experience Levels: There is a bit of a gap in formal backcountry experience (NOLS, etc) but every member of our group has spent ample time travelling and camping in the backcountry. We come from slightly different outdoor backgrounds which we believe to be an asset, as we will have a broader range of techniques, experience, and understandings of the outdoors. Nora and Sophie have both completed NOLS courses that include formal training in leadership, navigation, risk management and camping skills. Both Sophie and Nora are also certified WEMTs (both of their recertification process' occur in late January). Rachel and Caleigh have both grown up in Colorado spending time in the outdoors going on personal trips as well as leading and guiding in the outdoors.

Evacuation Plan

Our evacuation plan will remain the same for the duration of the trip. The closest emergency room and hospital are in Fairbanks, AK, reachable by a 1.5 hour bush plane or helicopter ride. In the event of a serious injury or event requiring immediate evacuation, we will use the Sat phone to call the National Parks Service Emergency Dispatch (907-683-2276) that handles dispatch for all NPS units in Alaska including Gates of the Arctic. We will also have phone numbers for the Air Force Rescue Coordination Center, as well as Park Ranger stations in Anaktuvuk Pass, Bettles, and Fairbanks, in case of malfunction or inability to reach the primary rescue number. Additionally there is a charter bush plane company that flies in Gates of the Arctic regularly, so should all else fail we will contact Judith and Jay who run Brooks Range Aviation to initiate a pickup. In the event of a non-serious injury or illness, we will evaluate and initiate the best route of on-foot evacuation, and provide medical care to our scope of practice. We will be carrying comprehensive backcountry first aid kits for such events, as well as to care for more minor issues (blisters, bug bites etc.). We will also be leaving copies of our route with the park ranger for Gates of the Arctic, with instruction to call for search and rescue if we are overdue by more than 2 days.

Special Preparedness

n/a

e. Emergency Resources

- National Park Service Emergency Dispatch: 907-683-2276
- Air Force RCC: 907-551-7230; if we are overdue the toll free number to call is 800-420-7230
- Fairbanks Memorial Hospital: 1650 Cowles St, Fairbanks, AK 99701; Phone number: (907) 452-8181
- Park Service:
 - Anaktuvuk Pass: 3030 Main St, Anaktuvuk Pass, AK 99721; Phone number; (907) 661-3520
 - Bettles, AK (907) 692-5494
 - Fairbanks: Dalton Hwy, Fairbanks, AK 99701; Phone number: (907) 678-5209
- Backup Charter Plane (Brooks Range Aviation, Judith and Jay): 907-692-5444

Emergency Communication

We will be reserving and renting a satellite phone from Fairbanks Satellite Rental, and pick it up upon arrival in Fairbanks. Upon recommendation by the Alaska Search and Rescue Association we will be using an iridium phone with prepaid minutes, as well possible pay-by-the-minute rates.

V. Budget

Budget

[Budget Overview AK 2018.pdf](#) (23KB)
 Uploaded 1/8/2018 3:55pm by Sophia Redpath

Appendix D

Transportation

2186

Food and Fuel

428.45

Maps and Books

0

Communication Device Rental

150

Permits/Fees

0

Gear Rentals

192

Total Funding Request

705.8

Cost Minimization Measures

a. i. Personal gear

1. We will be using our own gear wherever possible, which is the vast majority of gear we will be bringing. Our personal gear includes sleeping bags and pads, tents, backpacks, bear spray, and considerable other 'odds and ends' which will save us a notable amount of money that would have gone towards gear rentals.

ii. Gear house

1. When we need rental gear we will rent from the Ahlberg gear house wherever possible. The unbeatable prices for CC students at the gear house will save us considerable money.

iii. Groceries

1. We will purchase our food in Colorado, as it is much cheaper than Alaska. Additionally we will buy bulk where possible to further minimize costs.

iv. No permit fees

1. Choosing to backpack in Gates of the Arctic National Park will save money as there are no permits or fees associated with visiting, a growing rarity in the parks system.

v. Driving to Fairbanks

1. Driving to Fairbanks, though a considerable time input, is nearly 4 times cheaper than flying there with all our gear. We are prepared to make the time commitment, thereby saving over \$1800 that would have been spent on commercial flights from Colorado to Fairbanks.

VI. Expedition Agreement**Expedition Agreement**

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Appendix E

Appendix A- Itinerary

Day 1:

Beginning in the 'town' of Anaktuvuk, we will head south down the John River valley, keeping on the west side of the river to minimize necessity to cross. We will be following the John river all day, and staying within the clear 'walls' of the valley. This will be day one of backpacking with 2 weeks worth of food, so a shorter day seems to be in order. We will camp by a small collection of lakes, right above where the valley with Kollutarak Creek meets the main valley.

Days Hazards: weather, terrain

Days mileage: 6.5

Total mileage: 6.5



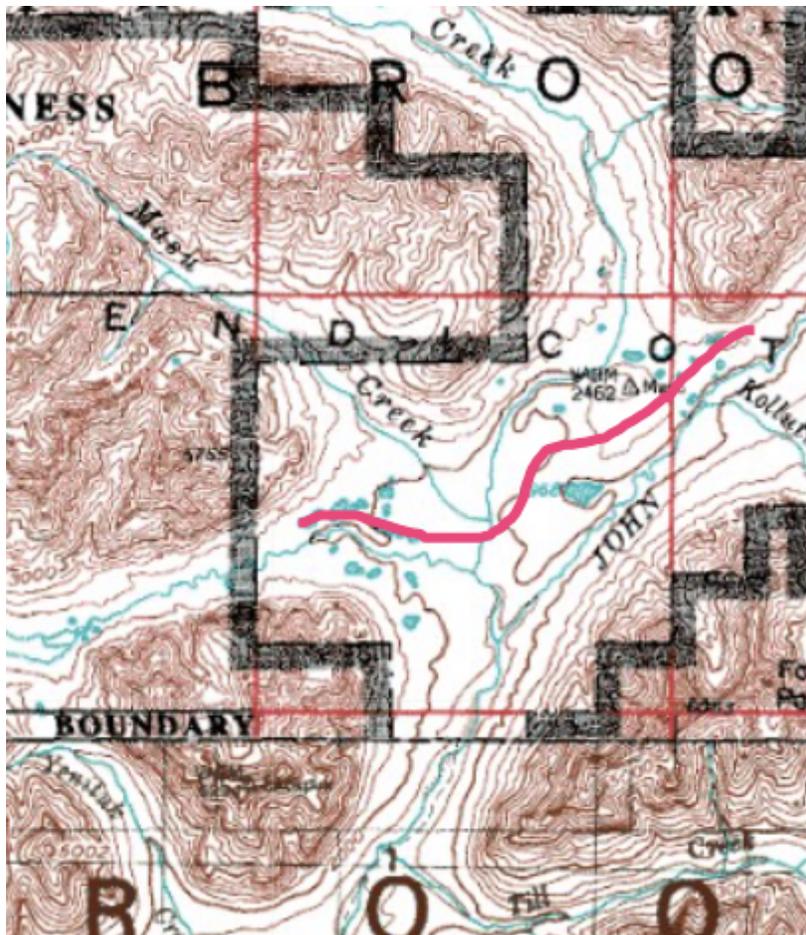
Day 2:

We will continue following the John River for the start of the day, but being heading more westward towards a triangular shaped mountain (Ekokpuk Peak). We will make camp at the base of this mountain, past the small collection of lakes.

Days Hazards: River crossing, weather

Days mileage: 7.3

Total mileage: 13.7



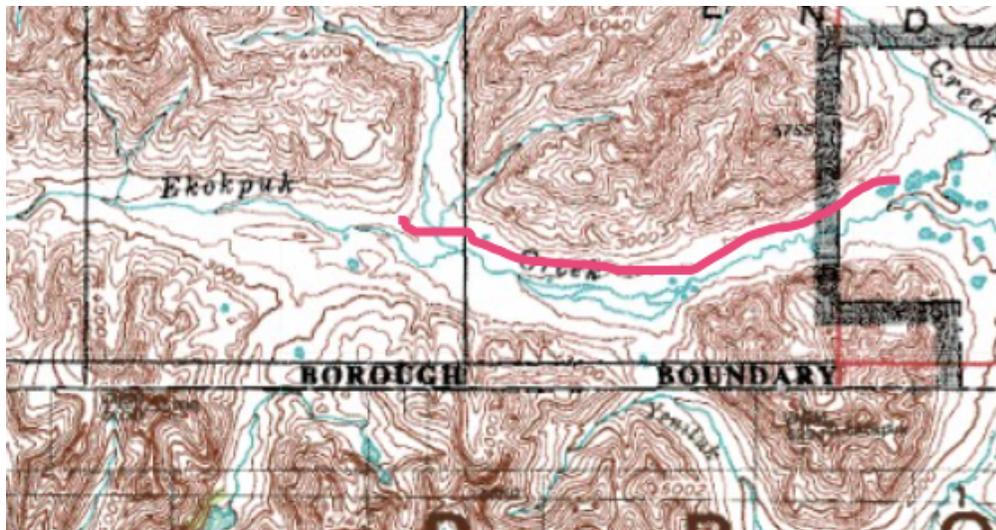
Day 3:

We will set off west along Ekokpuk Creek, keeping it to our south as much as possible, and make camp near the opening of the drainage that feeds Ekokpuk Creek. We will have to cross the drainage, and should there be no suitable place to cross close to the Ekokpuk, we can follow the drainage up as far as necessary, and likely to above where it is fed by a second drainage.

Days Hazards: River crossing, weather

Days mileage: 7.85

Total mileage: 21.6



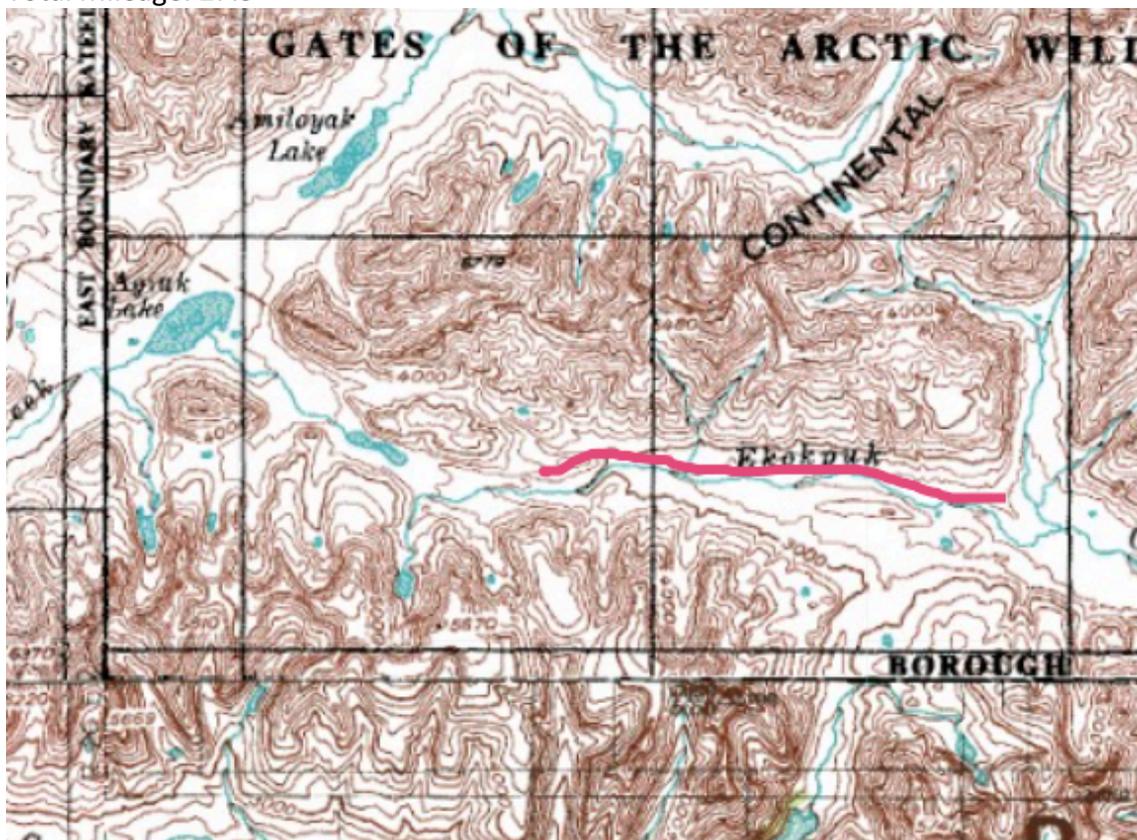
Day 4:

We will continue west, keeping the Ekokpuk to our south as much as possible once again. We will remain in the Ekokpuk valley and camp near a distinct 'bump' in the valley – an oval shaped hill sitting right in the center of our path.

Days Hazards:

Days Mileage: 5.9

Total Mileage: 27.5



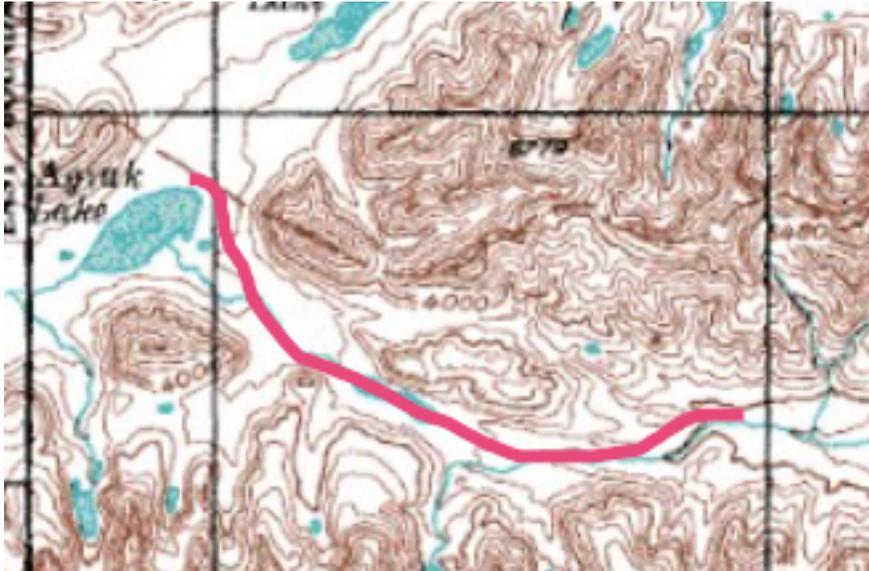
Day 5:

We will continue west, keeping the Ekokpuk to our left (south) as much as possible as usual. we will continue out of the Ekokpuk valley and camp near the Agiac Lake. There will likely be several small river crossings of drainages, for which we will employ proper preparation and crossing technique. Additionally, towards the end of the day there may be boggy terrain, which could increase fatigue or cause twisted ankles etc. we will be aware of this risk and check in with ourselves and each other to ensure everyone's safety. We will find a dry spot to camp that night.

Days Hazards: River crossing, weather, terrain

Days mileage: 7.0

Total mileage: 34.6



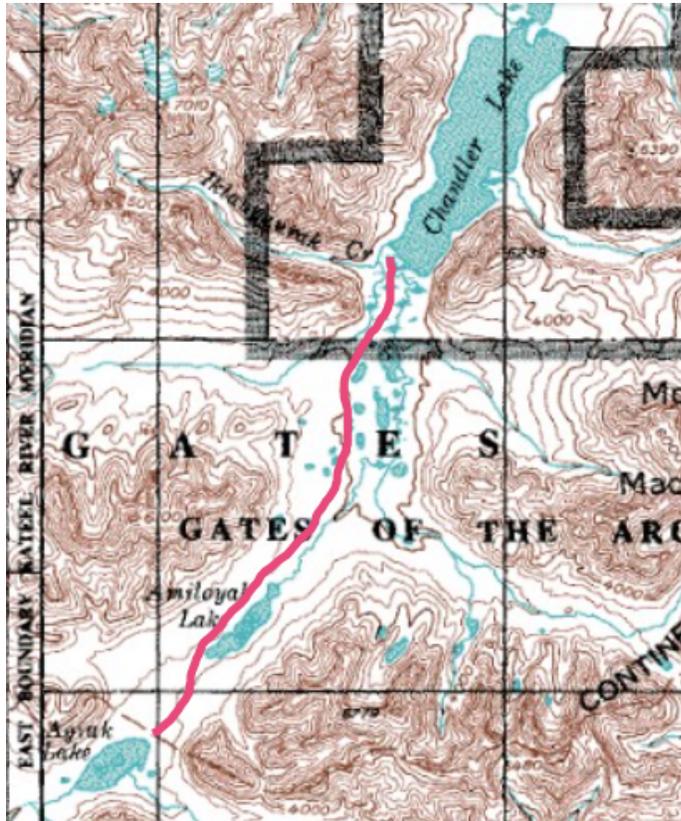
Day 6:

We will begin walking north today, passing Amiloyak Lake and keeping it to our right (East) in order to minimize river crossings later. Continuing on we will have spectacular views (weather permitting) of Mount Mac Vicar to our East. We will continue walking all the way up to Chandler Lake and make camp on the south bank where we can find a suitable spot. There are no marked river crossings on this day but it is possible there may be the necessity for one. Additionally, boggy terrain will continue towards Chandler Lake, which may cause us to veer more West in search of sturdier ground to camp on. This is our longest day yet, but having eaten some food will have lightened our packs, and the long days make splitting the day into two parts more than feasible if we choose. Additionally, there will be no concern of hiking in the dark and the associated risks, as the sun will not set.

Days Hazards: River crossing, weather, terrain.

Days mileage: 10.1

Total mileage: 44.5



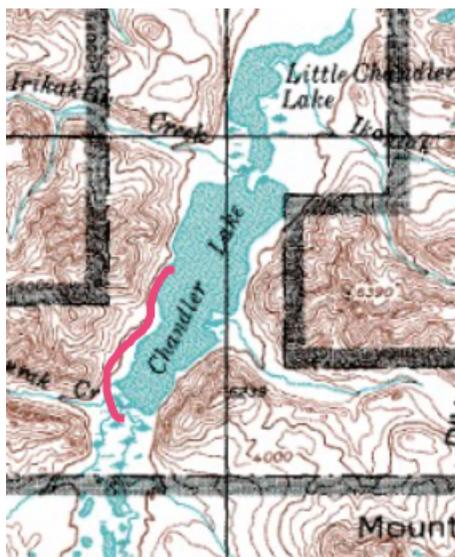
Day 7: LAYOVER DAY 1

Layover day! We will keep a base camp set up (with proper wildlife precautions), and explore the western bank of Chandler Lake.

Days Hazards: n/a

Days mileage: 0

Total mileage: 44.5



Day 8: LAYOVER DAY 2: We will spend another day along the banks of Chandler Lake, reading, exploring and resting.

Days Hazards: n/a

Days mileage: 0

Total mileage: 44.5

Day 9:

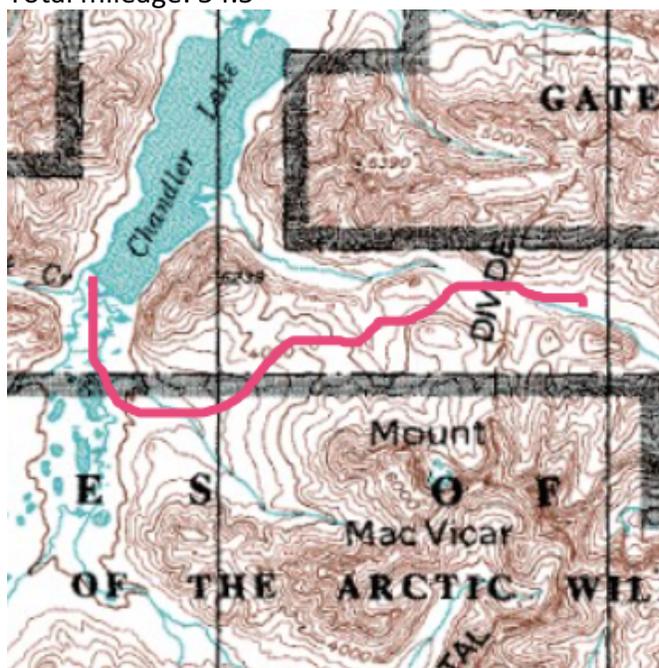
We're moving again! It's another longer day, but having rested and eaten some of our pack weight will put us in a great position to tackle the day. We will get an early start, and hike south back down the valley about a mile to cross the pass adjacent to Mount Mac Vicar. The pass is 4000ft at its peak, so altitude sickness is not a high concern but is possible. We will be sure to fill all of our water bottles before beginning an ascent. The route is not extremely steep but is likely scree or loose rock. We all have experience hiking and micro-navigating on scree fields, so this should not be a problem. We will also be crossing the continental divide! At the end of the day we will make camp along Kollutarak Creek.

Days Hazards: River crossing, weather, terrain, altitude

Days Hazards: River crossing, weather

Days mileage: 10.0

Total mileage: 54.5



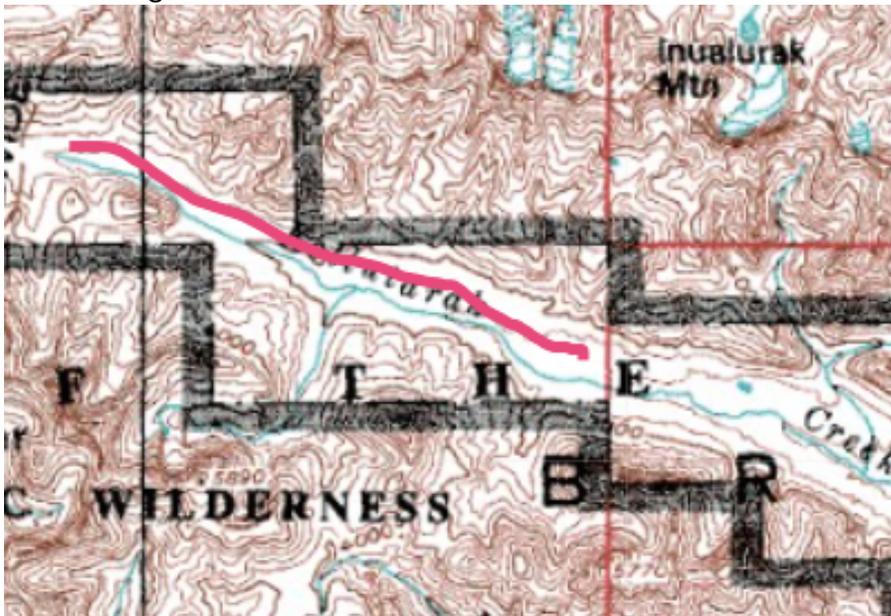
Day 10:

We will set off following Kollutarak Creek, moving east. As much as possible we will keep the river to our south, to minimize crossings later on where it may be bigger. We will hike for about 5.5 miles, and set up camp in a suitable spot in the river valley.

Days Hazards: River crossing, weather

Days mileage: 5.5

Total mileage: 60.0



Day 11:

In the same vein as the last 2 days, we will continue following Kollutarak Creek walking east, minimizing river crossings and choosing terrain carefully. We will make camp after crossing a drainage (draining from Inublarak Mtn), on the east side of that creek. Once again river crossings are almost certain, and we will employ the appropriate technique and risk management.

Days Hazards: River crossing, weather

Days mileage: 5.0

Total mileage: 65.0



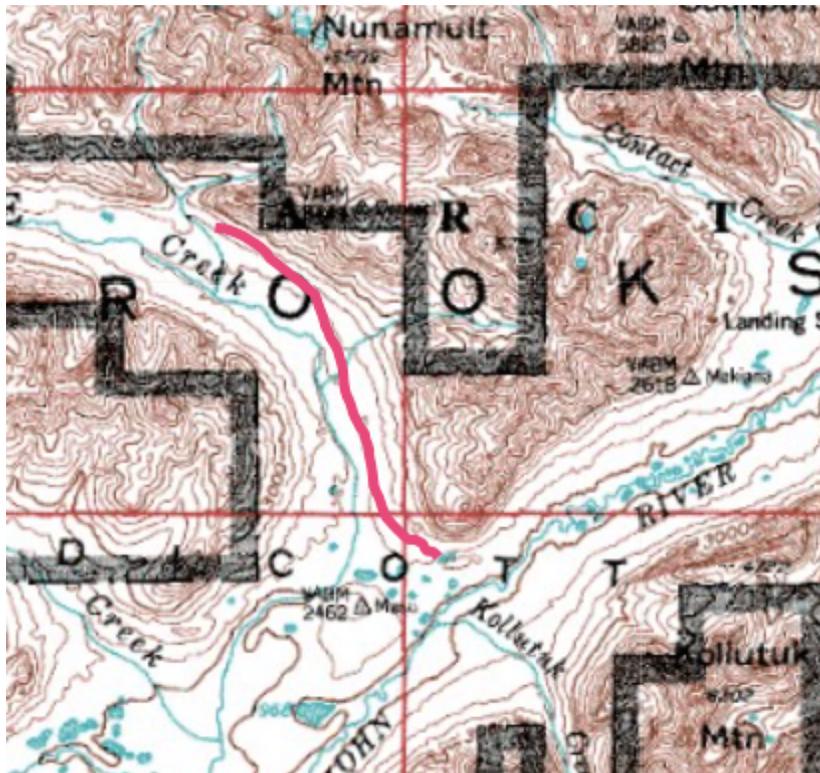
Day 12:

Following our good old friend Kollutarak Creek, we will follow the curve of the valley as it moves slightly southeast. There will be at least one guaranteed river crossing in this day, and we will make camp by a small collection of lakes that we visited on day 1.

Days Hazards: River crossing, weather

Days mileage: 5.7

Total mileage: 70.7



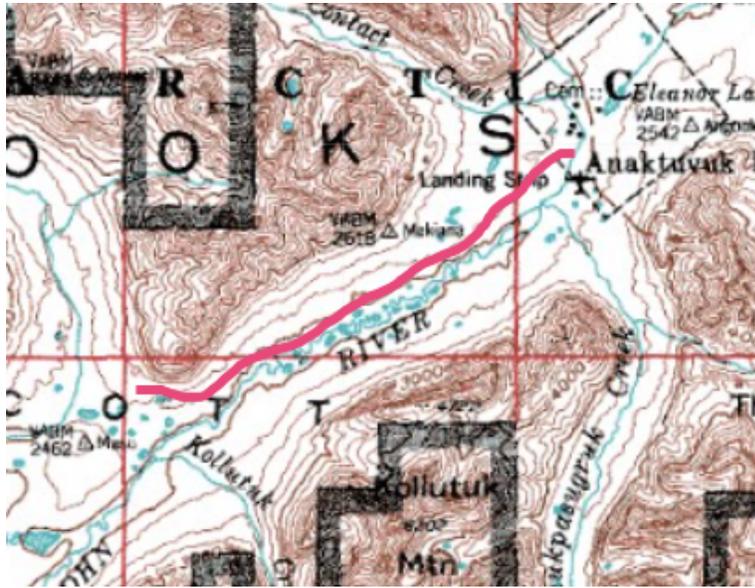
Day 13:

Retracing steps from the very start of our trip, we will make our way back up the John River valley (being sure not to get tunnel vision and continue to use proper river safety when necessary) back to Anaktuvuk where we will spend our last night in the park. The next morning we will catch our bushplane back to Fairbanks.

Days Hazards: River crossing, weather

Days mileage: 8.3

Total mileage: 79.0



Appendix B- Equipment List

EQUIPMENT LIST: ARCTIC DREAMS AND THE GATES TO PARADISE: BACKPACKING GATES OF THE ARCTIC NATIONAL PARK

- Group Gear: camping, cooking, safety and navigation
 - Two 2 person tents (with rain fly)
 - 1 stove
 - 5 Bottles of fuel for stove
 - 2 Lighters
 - Stove repair kit
 - Cookset: pot, lid, frybake or pan
 - Spatula or similar utensil
 - 1 First Aid Kit (full First Aid list at the bottom)
 - 1 Trowel
 - 6 Ursacks
 - 2 Bear Sprays
 - Sun block
 - Zip lock bags
 - Hand sanitizer
 - 10 Liter Dromedary Bag
 - Water treatment system (Aquamira, chlorine or iodine)
 - Satellite phone
 - Solar Charger
 - Compass
 - Map
 - Altimeter

- Personal Gear (1 for each)
 - Backpacking backpack
 - Large trash bags to line backpacks with
 - Synthetic sleeping bag (0 degree rating)
 - Sleeping pad (with repair kits)
 - Hiking boots
 - Gaiters
 - Trekking poles (if desired)
 - Camp shoes
 - 3 pairs Wool socks
 - Puffy jacket
 - Fleece jacket
 - Rainwear (jacket, pants)
 - Long underwear (synthetic or wool tops and bottoms) or equivalent base layers
 - Wicking T shirt (synthetic or wool)
 - Fleece pants
 - Underwear (at least 3)
 - Warm hat
 - Sun hat

- Bandana or buff
 - Gloves
 - Sunglasses
 - Small quick dry towel
 - Head lamp (extra batteries)
 - Toiletries
 - Eye mask
 - Watch
 - Mess kit: bowl with lid, spork
 - Knife or multi tool
 - Nalgene (2 per person)
 - Book
 - Journal and pencil/pen
 - Camera
- First Aid Kit Content (1 item unless otherwise specified)
 - Basic First Aid:
 - First Aid Handbook
 - CPR Mask
 - 3 Sets of Latex Gloves
 - SAM Splint
 - 2 Triangular Bandage
 - 5 Safety Pins
 - Athletic Tape
 - Ace Bandage
 - 4 Sheets Mole Skin
 - Wound Management
 - 10 Band Aids
 - 6 Small Band Aids
 - 2 Wound Closure Strips
 - 2 Combine Dressing
 - Gauze Pad
 - 4 Non-Adherent Pad
 - Gauze Roll
 - 2 Second Skin
 - 2 Op – Site
 - Eye Pad
 - 6 Providone – Iodine Prep Pad
 - 6 Alcohol Swabs
 - 6 Antiseptic Wipes
 - Medications:
 - Tylenol
 - Aspirin
 - Ibuprofen
 - Benadryl (Diphen)
 - Antacid

- General Antibiotic
 - Electrolyte Tablets
 - Sugar Packets
 - Anti-Itch Relief Cream
 - Hydracortizone Cream
 - Tincture of Benzoin
 - Triple Antibiotic Ointment
 - Burn Cream
 - Aloe Vera Gel
- Tools
 - Tweezers
 - Oral Thermometer
 - EMT Shears
 - Irrigation Syringe
 - Space Blanket
 - Resealable Plastic Bag
- Gear Rental:
 - From gear house
 - Whisperlite stove
 - 5 full fuel bottles for stove
 - Cookset: pot, lid, frybake or pan, utensil (spatula or similar)
 - 6 ursakcs (bear proof bags)
 - Backcountry first aid kit
 - Other:
 - Satellite phone

Item	Quantity	Price	Total Cost
Whisperlite	1	\$8 per week	\$16
Fuel bottles	5	\$8 per week	\$16
Ursacks	6	Free from gear house	\$0
First Aid Kit	1	Free from gear house	\$0
Pot, Lid, Pan	1 of each	\$8 per week	\$16
Sat Phone	1	\$75/week, \$10 per extra day	\$160
			Total: \$208



Appendix C- Food

~THE OFFICIAL FOOD TABLE~

Lbs. per person per day (PPPPD) goal: 1.7 lbs.

Number of days: 13

Number of people: 4

Total goal weight per person: 23

Goal weights:

Breakfast: 0.35 PPPPD

Lunch/Snacks: 0.51 PPPPD

Dinner: 0.7 PPPPD

Breakfast (~0.35 lbs./person/day)

Food item	# Days eating	Total weight (divided individually)	\$\$USD/lb	\$ total
oatmeal	7 days (2 packets = 66g = 0.14 lbs. dry)	5 lbs.	1.49	7.45
granola	6 days	3 lbs.	4.89	14.67
Dried fruit (cherries, mango, pear, etc.)	13 days	3.5 lbs.	6.75 +/-	23.63
Dehydrated eggs	2 days (3 oz. = ~16 eggs)	0.375 lbs.	8.75	3.28
Bisquick	2 days (and some lunches)	2.5 lb.	1.76	4.39
Powdered milk	13 days	1 lbs.	6.40	6.40
Total for breakfast	4 people, 13 days = 18.2 lbs	15.375 lbs.	-	59.82

Lunch/Snacks (~0.51 lbs./p/d)

Food item	Servings (per person) (per amt day)	Total weight (to be divided individually)	\$\$USD/lb.	\$ total
tortillas	2/person, 13 days	4	1.99	7.96

Dehydrated hummus	13 days	1.5	5.24	7.86
Cheese	13 days (L+D)	5.3	5.91	31.32
Trail mix/GORP (peanuts, raisins, chocolate chips/M&Ms, almonds...)	13 days	4.5	~6.50	29.25
pretzels	13 days	1.3	1.49	1.94
Peanut butter	13 days (1 lb./jar)	4 jars (4 lbs.)	5.00	20.00
Jelly	13 days	1.3	2.00	2.60
Apples	6 days	6	3.49	20.94
Bars (Clif)	1/p/d for 8 days; 0.14 lbs./bar;	4.48	\$1 per bar	32.00
carrots	13 days	4	1.49	5.96
Chocolate bars - snickers	8 days, 1/person (0.1 lbs. each)	32 bars = 3.2 lbs.	\$1/bar	32
Total for lunch:		39.58	-	\$191.83

Dinner (~0.64lbs/p/d) (or 0.7 lbs/p/d)

Food item	Servings (per person) (per amt days)	Total weight (to be divided individually)	\$\$USD/lb	\$ total
pasta	4 days (8 oz. dry/ person/day)	5	3.39	16.95
quinoa	3 days (dry 4 oz. /p/d)	3.75	3.97	13.69
Instant lentils	2 days (4 oz. dry /p/d)	2.5	2.30	5.75
rice	3 days (8 oz. dry / p / d)	4	2.90	11.6
Dehydrated marinara	2 days (approx. 4 oz. serving = 1/4c)	0.75	2.76	2.07
Dehydrated pesto	2 days	0.75	2.76	2.07

Pizza dough mix	1 day	0.6	5.59	3.50
Dried beans (black)	3 days Ss .25 cup dry (.07 lbs.) x 4p x 3d = 3 cups	2.5	2.75	6.88
Dried bean (garbanzo)	2 d	2	2.75	5.50
Instant soup	1 day	2 packets/p/day = 9 packets	\$2/packet	18
Dried vegetables • Mushrooms • Green things • Tomatoes	9 days Serving size = ~1/4c (~1 oz. dry) = 1/2c cooked	2.5 lbs.	9.50	23.75
Onions (organic)	6 days	6 onions, 0.5 lbs. each = 3 lbs.	1.59/each	9.54
Peppers (organic)	5 days	5 peppers, 0.5 lbs. each = 2.5	2.49/each	6.25
Dinner total:		30.85 lbs.	-	\$125.55

Other

Food item	Servings (per person) (per amt days)	Total weight (to be divided individually)	\$\$USD/lb	\$ total
Hot chocolate	10 days	2	3.49	6.98
tea	10 days	1.2 (approx. 50 bags)	2.67	3.20
honey	1 lb./jar, 1 jar	1	3.87	3.87
Instant coffee	1 packet/person	0.1 lb.	1.49	0.15
Gatorade powder	5 days	0.5	3.99	2.00
Butter / oil	13 days	1.7 lbs.	5.32	9.04
total:		= 6.5	-	25.24

Grand Total:

Total Weight:	Total Price:
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92.31 lbs.	\$402.44
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= 23.1 lbs./person

= 1.78 PPPPD

Appendix D- Budget

BUDGET OVERVIEW:

Category	Cost Breakdown	Total
Transportation		\$2186
- Gas to Fairbanks (by gasbuddy.com)	- \$480 one way	
- Bush Plane to Anaktuvuk (Wright Airlines)	- \$1650 for 4 people	
- Parking with Wright Airlines	- \$54	
Equipment Rental:		\$208
- Gear house	- \$48	
- Fairbanks Sat Phone	- \$160	
Food		\$412
Fuel	\$8/week	\$16

Total Request	\$2832.2
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Per Person	\$705.8
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- Transportation cost to Fairbanks is taken from gasbuddy.com, based on the information available on a 2016 Chevrolet Colorado [REDACTED]
- Detailed food budget may be found on our food list.
- Detailed equipment budget may be found on our equipment list