



Ritt Kellogg Memorial Fund Registration

Registration No. KBCW-4YJ6Z

Submitted Jan 12, 2023 10:21pm by Zinnia Voss

Registration

Jul 1, 2022-Feb
1, 2023

Ritt Kellogg Memorial Fund

RKMF Expedition Grant Group Application 2022-23

RKMF Expedition Applications due by Noon Feb 1, 2023 11:00am-12:00pm

This is the group application for a Ritt Kellogg Memorial Fund Expedition Grant. In this application you will be asked to provide important details concerning your expedition.

In addition to this Group Application, **each team member must submit an Individual Application**. All Group Applications and Individual Applications must be received by 1st Wednesday of Block 5 at noon.

For more information, example applications, proposal writing tips, and further guidance, please visit <https://www.coloradocollege.edu/other/rittkelloggfund/grants/expedition-grants/overview.html>

If you have any questions please email Kacie Bell, Outdoor Education and Ritt Kellogg Memorial Fund Coordinator, at kbell@coloradocollege.edu

**Waiting
for
Approval**

Jan 12,
2023
10:21pm

Participant



Zinnia Voss



Expedition Summary

What is the name of your proposed expedition?

Packrafting the South Nahanni River

If you have an alternate name for your expedition, please list it here.

Dirk and Stacy's Waterbug Thriller

Briefly describe the objectives of your expedition.

The South Nahanni is no doubt the mightiest river of the Mackenzie Range, and one of the great stretches of alpine river in the world. Our primary objective is to get intimately acquainted with this extraordinary landscape by way of exploration in our favorite expedition whitewater craft, the packraft. Our itinerary will incorporate time for side hikes and forays into wild places, including the world-renowned Cirque of the Unclimbables. In addition to being immersed in the power and beauty of this place, we hope to gracefully navigate the whitewater challenges of the Nahanni, thereby strengthening our mutual support and communication systems as a marvelous two-person team. The South Nahanni is renowned for its canyons, peaks, and wildlife, alongside its remote arctic nature in northern Canada. We are excited to dive back into the immensity of skills, humor, challenges, and creativity that this kind of landscape requires of a visitor. After spending three weeks in Gates of the Arctic National Park on several wild rivers last summer, this feels like an incredible opportunity to return to what we had just scraped the surface of as we left Alaska. There is something innate and rare in the wildness of the Nahanni that is felt just from the research. The rich and old stories of this land is another curiosity that we are excited to dive into. In addition to our expedition skills, craftsmanship, and

companionship, we are eager to understand the history of a place that has been the soul of communities for thousands of years.

Briefly describe the location of the expedition.

The Nahanni National Park Reserve is located in the Northwestern Territories of Canada, within the Mackenzie mountain range. A few towns serve as jumping-off points for trips into the wilderness, including Fort Simpson, Watson Lake, and Finlayson Lake—where we will be starting our journey by float plane. The South Nahanni boasts four significant canyons—some of the deepest in Canada—as well as several hot springs, a waterfall twice the height of Niagara, and one of the most renowned and dazzling climbing spots in North America. From our starting point at Island Lakes, we will follow the river's path 270 miles to its confluence with the Liard River, passing through long sections of scenic flatwater as well as sections of class II-III whitewater. This landscape is well known for its astonishing beauty and rare combination of tall peaks, deep canyons, wild and prolific rivers, and a waterfall of an unfathomable size. The expanse of designated wilderness in the Northwest Territories allows for these sweeping scapes to remain large and wild.

Date that travel to the expedition will start.

Jun 24, 2023

Date that your team will enter the field.

Jul 1, 2023

Date that your team will exit the field.

Jul 27, 2023

Date that the last team member gets to their home location.

Aug 4, 2023

How many days will your team be in the backcountry?

27

How does your planned destination provide a "wilderness experience," and how will your expedition offer solitude and promote self-reliance and grit?

The Nahanni National Park Reserve is part of one of the largest wilderness areas in the world. It was the first site ever to be designated as a UNESCO World Heritage Site, for its natural beauty and cultural heritage. As with every river in the Mackenzie Range, the Nahanni is incredibly remote. Its waters are exclusively accessed by float planes, with the exception of one long and rugged road ending near the headquarters of the Little Nahanni, a significant tributary. The wildness of the Nahanni experience is exactly what led us to select this trip. We looked long and hard for a North American river that would provide a remote and beautiful backcountry experience, an extensive journey spanning hundreds of miles, and significant whitewater—and none could quite put all of these together like the Nahanni. It is inevitable that over the span of 27 days, we will, both individually and collectively, encounter hurdles. Remote wilderness often accentuates these moments and demands a rare reach for resolve, something that requires a grit and honesty that both of us look forward to leaning into.

As a team we are practiced in self-reliance and look forward to being "in the soup" again together. Although there are many other visitors to this park and we will definitely encounter other groups, access to resources and assistance are a very long way off. Each group that visits the park must be very much independent and resourceful. Traveling as a team of two, the necessity for mutual dependence and care becomes especially clear, and the opportunities for true solitude and reflection are especially abundant. Both of these facts are things we cherish and embrace.

Participant Qualifications**Expedition team member information**

Devan Udall, 
WFR expiration: 1/23/2024

Zinnia Voss, 
WFR expiration: 6/30/2024

Does your team have adequate experience?

Yes

Describe your team's training plan to solidify or improve technical skills, physical conditioning, and team dynamics prior to the start of the expedition.**Boating**

We will use the spring in Colorado to refine our packrafting skills on a variety of single and multi-day trips. We are planning the following runs:

Waterton Canyon, South Platte - Class III (April/May, 1.5 miles)

Royal Gorge, Arkansas - Class III (April/May, 9 miles)

Numbers, Arkansas - Class IV (May/June, 6 miles)

Slaughterhouse, Roaring Fork - Class IV (May/June, 5 miles)

Cataract Canyon, Colorado - Class III-IV (late March [spring break], 7 days, 28 miles, hike in and out)

Ruby Horsethief and Westwater Canyons, Colorado - Class I-IV (mid-April [7th block break], 4 days, 42 miles)

During these trips, we also intend to rehearse key swiftwater rescue techniques like throwing ropes, Z drags, intentionally swimming safe rapids, fording, and in-boat swimmer rescue. Fortunately, we have a number of novice boater friends who regularly supply opportunities to practice these skills and more.

General fitness

In order to condition our bodies to an appropriate level of fitness for this expedition, we are constructing an exercise schedule together, which includes:

Morning runs 3x/week to build stamina

Intermediate yoga class 3x/week for general strength and flexibility

Bouldering 2x a week to build upper body strength

Rotator cuff strengthening in gym 3x/week for some shoulder love!

Both of us are active people on a day to day basis, but conditioning and strengthening specific muscles to prevent injury in paddling and hiking will be key to mitigate unnecessary risk.

As for our dynamic, we spend a significant amount of time together and will easily be able to continue building our communication and teamwork skills.

Expedition Logistics, Equipment, and Food**Briefly describe how each expedition member will travel from home to the trailhead and back again.**

Both team members will depart from [REDACTED] together on June 24, 2023 in Devan's Subaru Outback. The car will be thoroughly inspected and serviced by a trusted mechanic before departure. We will allow 7 days to travel 2,425 miles to Finlayson Lake, Yukon, Canada, averaging 350 miles per day. Only the last 100 miles of the road are not paved, but it is a smooth gravel road with no major elevation changes. We plan to camp in the car on public land, or find cheap hotels in the case of inclement weather. The last place with a gas station and services is Watson Lake, 150 miles shy of our destination, so here we will be sure to fill up on fuel and bring an extra gas canister for our shuttle driver. We intend to arrive at Finlayson Lake the afternoon of 6/30, in order to allow time to assemble gear and spend one night before departure into the field.

The morning after we take out at Blackstone Landing (July 28), we will be met by our shuttle driver from Kluane Airways, who we will then drop off at Watson Lake—a 481-mile drive. From Watson Lake, we have 2,275 miles back to [REDACTED] which we plan to complete over the course of 7 days, arriving on August 4.

Upload a detailed day-by-day itinerary, beginning when the first team member leaves home.

[Itinerary 2023.pdf](#) (71KB)

Uploaded 1/12/2023 9:10pm by Zinnia Voss

Please paste a URL to your complete digital expedition map.

<https://caltopo.com/m/8BA0U>

If you have plans to re-ration during the expedition, describe the plan below

We will receive our resupply at Rabbitkettle Lake on July 10, Day 10 of the trip. We will camp there the night before to ensure we are at the site in time to receive our resupply whenever it is dropped by Kluane Airways. We will be in touch

with the company via inReach about exact timing. Once received, the food will then be transferred to bear canisters and Ursacks and we will begin our next leg of the expedition, continuing down the South Nahanni River.

Describe how you will protect your food from wildlife.

For the duration of the expedition, we will be using one BV500 bear canister and one Ursack Major XL per person. These two containers should be able to hold 17 person-days of food, but we will bring one extra Ursack in case we need more space. The Ursacks will be properly hung when trees are available, ideally 10 feet from the trunk and at least 15 feet above ground. The bear cans will be stashed in places hard to access by wildlife, such as wedged between rocks.

We will use the triangle method as we have done before in grizzly country, setting up our camp, cooking area, and food storage area as the points of the triangle, with at least 200 feet between each point. The cooking area is always located down-wind of the other two. We plan on using a simple tarp tent for our cooking shelter, mounted with parachute cord and trekking poles. This tarp will be safely stored at night with the food. Any food or trash that is not being actively used or monitored in close range will be safely stowed in a canister or Ursack. Food, trash, or cooking gear will not be left unattended for any amount of time.

Upload a detailed food list with budget numbers and show how it meets the caloric needs of the expedition.

[Food list 2023.pdf](#) (61KB)

Uploaded 1/12/2023 9:12pm by Zinnia Voss

Upload a thorough equipment list.

[Equipment list 2023.pdf](#) (53KB)

Uploaded 1/12/2023 9:13pm by Zinnia Voss

Upload a first aid kit list.

[First aid kit 2023.pdf](#) (42KB)

Uploaded 1/12/2023 9:14pm by Zinnia Voss

How will you limit and leverage your impact on this trip?

As always with wilderness expeditions, we are making every effort to minimize our impact on the ecosystems we will travel in, as well as our contribution to global climate change. Leave No Trace principles will be followed, with particular vigilance around feces burial in such a well-traveled river system. Catholes will be at least 6-8 inches deep, and at least 200 feet from water—farther if possible. Open fires outside of fire pans or camp stoves are not permitted in the park, so we do not plan on having fires at camp. All waste will be packed out per park regulations, and we will avoid disturbing softer, more fragile ecosystems like marshes when traveling off-trail.

We are using the air charter company that is by far the closest to our put-in, to avoid the significant emissions associated with flying longer distances. We also plan to have the same company drop our resupply with a plane already scheduled to bring other customers into the park, thus eliminating a separate flight for our food. Our decision to drive, rather than fly, into the NWT was also highly influenced by the consequently large reduction in our trip's carbon footprint. Also in terms of emissions, we are planning to buy many food items from local sources, including on our 6-day road trip to the NWT. Dried fruit, cheese, jerky, and dehydrated vegetables, are all prime candidates for buying closer to the source, and we are currently trying to find a more consciously-farmed tuna source than the one we usually buy.

The land we will be traveling in for nearly a month is known locally as "Denendeh," or "Land of the People." This is the ancestral homeland of the Dene people, who have lived and thrived here for millenia. There is a lot to learn and be aware of when entering a new cultural space and homeland, and a good place we like to start is by learning and honoring original place names. For example, Virginia Falls, the landmark feature of the Nahanni River, is known by the Dene as Na'ili Cho, meaning "big water falling down"; the river itself is referred to in the Dene language as "Tehjeh Deé." A notable resource is a Parks Canada web page listing all of the first nations place names of the park, along with pronunciations, which is linked below for our own reference.

https://parks.canada.ca/pn-np/nt/naatsihchoh/info/culture/names_noms

In light of the fact that we are recreating on first nations land, we would like our trip to be of practical economic benefit to the local communities. We will patronize indigenous-owned businesses whenever we have the opportunity on the drives to and from the park. We also understand that the Nahanni National Park Reserve, to whom we are

paying a fee to recreate in the park, employs and works closely with first nations communities.

Lastly, based on the carbon emissions calculator, our trip will generate about 3.6 metric tons of CO₂e. The cost of offsetting this impact is \$17.98.

Risk Management

What are the main objective hazards of the expedition?

General Safety

Wildlife

Grizzly bears and black bears are both inhabitants of the Mackenzie Range and Nahanni National Park Reserve. We are prepared to carry all of our food in hard-sided bear canisters or bear-resistant Ursacks for the duration of the trip. By traveling predominantly by river, we will be in open areas giving bears plenty of space to see us. On the river, but especially on any hikes where visibility could be compromised, we will be making plenty of noise to alert the bears and any other wildlife of our presence. We will avoid traveling during the early morning and late evening hours, when bears tend to be most active. We will do our best to avoid vegetated surfaces and camp above the river channel when possible to decrease the likelihood of a bear encounter in their fishing environment.

Ideally, our camps will be set up in widely visible spaces, away from any recent signs of bears (scat, tracks, carcasses, digging) and common foraging areas (sedge meadows, berry patches). When at camp, we will set up a triangle with our sleeping tent, cooking tarp, and food storage area forming the 3 points (separated by 300 ft.), and the cooking tarp placed downwind of the other two. Food will always be prepared and eaten in the cooking tent only, and stored in bear canisters or hung in Ursacks at least 15 feet off the ground and 10 feet from the trunk whenever possible. The tarp will be stored in one of our bear-resistant containers along with our food at night. Important gear like packrafts and drysuits will be folded and tucked away from the food and smellables to avoid damage by any wildlife.

If we do encounter a bear at a safe distance, we will change course or navigate around the bear allowing it/us to pass undisturbed. It is recommended to speak calmly to the bear and slowly wave your hands above your head. If the bear begins to focus on or approach us, we will move to stand together and shout, make noise, and wave our arms vigorously. Each of us will carry bear spray that will be kept immediately accessible at all times, as well as air horns to use as noisemakers. If we are charged, we will stand our ground together with packs on and deploy bear spray once the bear comes within 25 feet. If the bear makes contact, we will fight back aggressively. If we encounter a bear by surprise, remaining non-threatening and speaking calmly to the bear while moving backwards diagonally is advised. In this scenario, if a grizzly bear charges it is best to play dead, lying face down with hands clasped at the neck and legs spread apart, and then fight back aggressively if the bear makes contact. In the case of a black bear charge, playing dead is not advised; instead, we would use bear spray and fight back aggressively if contact is made.

Both of us have experience traveling safely and properly storing food in bear country: Zinnia on the length of the AT and Colorado Trail; Devan in the Wind River Range and Colorado Rockies; and after our 2022 RKMF trip in Gates of the Arctic National Park we now have extensive experience in grizzly country together.

Bugs are an inevitable nuisance in the Nahanni wilderness but pose little threat aside from the bother. We will bring bug shirts/nets, khaki colored clothing, bug-spray, and an antihistamine to counter their presence to the best of our ability. We found that bugs tend to taper off in the north after June, so hopefully we will be on the cusp of escaping the bulk of them.

Off-trail travel

There are no maintained trails in the park, but our plans to hike into Cirque of the Unclimbables, the secret lakes, and any portages we do will be short and guided kindly by heavily used social/game trails that, from all research we've done, pose as established and reliable routes. We will be using 1:50000 topographic maps for all navigation throughout the trip, and will bring these on any side-hikes along with the inReach as a backup.

Both Zinnia and Devan have substantial experience with off-trail navigation that seems beyond what we will encounter on the Nahanni. Our Gates of the Arctic expedition primed us well, with 55 miles of extremely remote and rarely traveled wilderness terrain.

Weather

The Nahanni National Park Preserve is set in a northern mountainous region, making it notorious for rapidly shifting weather. The park website advises to be prepared for temperatures anywhere from 0-30 degrees celsius, or 32-86 degrees Fahrenheit in July. The summer, particularly July, is well known for heavy rains and thunderstorms (typically occurring late afternoon-evening), which is a major hazard when paddling. We will be sure to be attentive to changing weather and get off the river immediately to seek a largely vegetated area with no particularly tall trees if any threat occurs. It is imperative that we respond quickly and know the signs of storms so that we don't have any close calls. Devan and Zinnia are both able to recognize clouds and weather patterns indicative of a thunderstorm, which will aid in making a safe call before any storm fully hits. If a considerable thunder storm hits while at camp, we will assume lightning position on our PFDs to minimize contact with the ground, or seek shelter in our tent to avoid excessive cold from rain.

The possible low temperatures bring concern to hypothermia in an off-river context (hypothermia in a whitewater context will be discussed below). Our biggest measure will be prevention; we will encourage each other to not tolerate any prolonged coldness or shivering, stay properly hydrated, eat enough calories, put on waterproof layers before rain, and take measures early to get warm—even if this means temporarily delaying our progress. We will stop and begin treatment as soon as any symptoms of mild hypothermia begin to appear. This includes getting to shelter, replacing damp clothing, providing wind and waterproof layering, warm liquids, calories, exercise, and a hypo wrap if necessary.

Flash floods are a common occurrence in certain canyons during heavy rains on the Nahanni. It is important to strictly avoid high-gradient or narrow tributary drainages during storms, or anytime when a storm seems remotely likely.

Another significant risk associated with rapid changes in weather is the delay of our food resupply. Float planes are unable to fly if seeing conditions are too poor, so although unlikely, being prepared for a delay is a worthwhile precaution. In order to be prepared we will carry an extra day of food for both legs of the expedition. We will also be in communication with Kluane Airways about the timing of our resupply via our Garmin InReach, so any delay will not be coming as a surprise.

Whitewater safety

Rapids

We will travel close together as we navigate rapids, communicating often about reading the water and determining the safest line. We will scout all significant class III rapids before running. We will take turns leading lines down rapids and the leader will always point positive to signal the other boater to navigate away from an obstacle. We will be ready to employ rescue skills to respond to a swim at any time. Throw bags will be kept in a readily accessible place in the cockpit of the packraft.

All locations of significant rapids are marked on our map. During our orientation at the Nahanni park office prior to departure, we will discuss the canyons section with rangers, who will be able to provide more specific beta on the rapids.

As discussed in our training plan, we will brush up on our swift water rescue skills in the spring, both through intentional practice and opportunistically while boating with beginners. Both of us have taken at least one swift water rescue course, and have experience performing rescues in class II-IV whitewater.

Strainers

Strainers are an unlikely, but possible hazard on the South Nahanni River due to weather and floods washing branches and debris downstream. If a strainer is observed ahead, we will immediately exit our boats and scout to determine whether the strainer can be safely navigated around. If boats cannot be eddied out and exited safely in time before the strainer is reached, the boater in front will blow their whistle once to signify the presence of a hazard, and point positive away from the strainer, modeling aggressive paddling out of the hazard area. In the unlikely event of one of us getting caught in a strainer, the other will exit their boat as soon as possible and throw a rope to the victim. The victim should use their momentum to grab hold of the strainer and hoist themselves up on top of it. If that doesn't work, and a throw rope isn't yet present, the victim should swim aggressively towards the main river and away from the strainer, parting branches if necessary.

Strainers can become particularly prevalent after a high water or flooding event. After significant rainfall, we will exercise increased precautions with respect to the risk of strainers (i.e. scouting, portaging, paddling slowly, observing around bends).

Foot Entrapment

Despite the Nahanni's relative depth and volume, foot entrapment is a present hazard on the river. If either of us swims, we will assume swimmer's position with feet pointed downstream and not attempt to stand up in the river. Additionally, we will ensure there are no loose cords, straps, or other foot entrapment hazards present on our boats. If foot or other limb entrapment does occur, the other boater will throw a rope to the victim from shore, then attempt to disengage the entrapment from their boat if the throw rope is unsuccessful.

Rising water levels

Due to the potential increase of rain in the summer months, rapidly rising water levels on the South Nahanni River are very possible. This means rapids can become somewhat more challenging as the volume increases. Rescue response time in case of a swim will have to be especially fast, since higher water levels can quickly carry boats, gear, and swimmers far downriver. Increased scouting and/or portaging will be used in these unpredictable high water situations.

If the water rises high enough, we will wait to continue downriver. This would be the case if we observe significant debris being carried downstream, water level rises over 2 feet, or boating otherwise seems unsafe. On higher water mornings we will closely monitor changes in the river to assess the safety of continuing downstream.

In camp scenarios, rising water level means the river can quickly flood the camp area. To prevent this, we will always camp at least 4 feet above the river whenever possible. Vegetated areas above the river banks will be preferred, and high sand bars will only be selected as camp if there are no other options.

The reality of rising water levels was very present on our trip in Gates of the Arctic, and our practiced precautions feel very helpful going into another expedition where similar scenarios could occur.

Hypothermia

Typical water temperatures for the Nahanni during the summer season are 40-50 F. Combined with sub-60 F air temperatures, the threat of hypothermia becomes significant. We will both be wearing drysuits, appropriately layered with warm synthetic tops and bottoms. We will also have pogies to keep our hands warm. We will be able to check the weather forecast on our inReach, so we'll be prepared to make most of our river miles earlier in the day if colder afternoon weather is expected, or vice versa. If one of us develops symptoms of mild hypothermia, we will get off the river and begin treatment. This would include removing dry suit and damp layers, replacing with dry, wind and waterproof layers, getting to shelter (likely a tent), exercise, caloric intake, warm liquids, and a hypo wrap if necessary.

Describe your self-evacuation plan in the event of an emergency.

The evacuation plan begins with assisting a SAR team proactively in locating our group should an emergency occur—especially if we are unable to communicate with resources for any reason. This includes giving Parks Canada our entire detailed itinerary upon registration, including any planned side-hikes. There are also logbooks to enter trip details at the following locations: Moore's Cabin, Glacier Lake (northwest gravel bar), Rabbitkettle Lake portage landing, Virginia Falls, Deadmen valley staff cabin, and the Kraus Hot Springs cabin.

If a non-rapid evacuation is necessary during the first 9 days of our trip, Glacier Lake is the most likely point of departure. After we pass Honeymoon Lake on the first day, the next legal landing spot for non-emergency aircraft is Glacier Lake. At any time between camps 1 and 8, we will be within 35 river miles and/or 5-6 walking miles of Glacier Lake, which would take 2-48 hours to travel—a reasonable time window to monitor and assess a non-urgent condition for usability and feasibility in the field.

For days 9-16, Virginia Falls is the ideal evacuation point. After we depart from Rabbitkettle Lake on day 10, we will be within 0-67 river miles of Virginia Falls. This could take anywhere from 0-60 hours travel, or more with a prohibitive injury/condition. This is an ideal-to-workable amount of time to assess a medical condition, with the possibility of passively floating or towing the compromised person to the evacuation site, given the river's flat and mellow character between Rabbitkettle Lake and Virginia Falls.

From day 17 to 27, there are no authorized landing spots within the preserve. Our last camp before Nahanni Butte is outside the preserve, but at that point we are already close to emergency resources. The town of Nahanni Butte would be our likely evacuation point for any non-urgent situation beyond day 17, when we depart from Virginia Falls. Since the stretch from Virginia Falls to Nahanni Butte is 158 miles, contains several sections of whitewater, and would take a minimum of 5 days to travel, we would want to be in close contact with park staff and Kluane air about alternative

evacuation sites even in the case of non-rapid evacuation within this section. The long and demanding nature of this section may not be safely navigable by a person experiencing significant symptoms or unusable injury. According to park staff, the river may be wide enough to land planes at Flat River (day 18) and Deadmen Valley (day 22), but this would have to have special authorization.

At the onset of symptoms of injury in all non-rapid evacuation situations, we would be in contact with Kluane Airways via inReach about the possibility, timing, and location of evacuation. We would also be in contact with the Nahanni park office to notify them of the situation and receive any medical or logistical advice they might be able to offer. In most cases, we would be responsible for covering all expenses related to a non-rapid evacuation. In all cases, if the condition remains non-urgent but prohibits travel to the nearest authorized landing site, we will consult with Kluane and the Nahanni park staff to devise a realistic solution, which may include helicopter rescue if no safe plane landing spot can be determined. In the event that we are having difficulty determining the medical necessity of an evacuation, medically experienced family members may be consulted via inReach and asked to perform further research on signs and symptoms. We will remain together at all times, giving no reason that one of us should end up without access to the inReach at any time. The device will stay charged and protected from damage and the elements.

In the event of a rapid evacuation, the SOS button on the inReach would be our go-to resource. This connects us via Garmin with staff at Parks Canada who can deploy Search and Rescue services, including helicopter rescue. In a true emergency like this, we would not be responsible for the cost of these services; expenses would be covered by Parks Canada. If we find ourselves mobile and within short range of one of the previously discussed authorized landing sites, we might attempt to safely move towards it while getting in touch with the Parks Canada emergency line—but ultimately their plan will determine where we are picked up. The Nahanni Preserve website encourages people to break into one of the staff cabins in a true emergency, if extra resources are needed. These cabins are all marked on our map. Each cabin contains personal locator beacons, park radios, food rations, and first-aid supplies. If we do not have access to one of the cabins or any obvious landing spot, it will likely be important to stay put and dedicate energy to managing the medical condition at hand.

During our RKMf expedition in 2022, we had to evacuate a team member for abdominal pain. This event added a great amount of context to our evacuation skills and preparedness. There were certainly unexpected elements of the evacuation that had to be carefully sorted through: the lake we had depended upon as an evac point was actually too small to take off from with any passengers, inclement weather was approaching, and [REDACTED] symptoms were highly fluctuating in intensity over 48 hours. We feel that dealing with this situation in a real-life backcountry setting made us much more prepared to address medical and evacuation concerns in the future.

Discuss any measures taken for teammates with medical histories which warrant special preparedness.

nothing applicable

List the emergency and rescue resources available in the vicinity of your expedition.

Nahanni National Park Reserve offices:

Fort Simpson - (867) 695-7750 (sat phone only)

Nahanni Butte - (867) 602-2025 (sat phone only)

Nahanni.info@pc.gc.ca (inReach)

Kluane Airways (Finlayson Lake and Watson Lake):

(250) 860-4187 (sat phone only)

info@kluaneairways.com (inReach)

Simpson Air (Fort Simpson):

(867) 695-2505 (sat phone only)

info@simpsonair.ca (inReach)

Parks Canada Emergency Line (SAR):

(250) 860-4187 (sat phone only)

inReach SOS button (will contact Parks Canada SAR)

Nahanni Duty Officer Line:

(867) 695-3732 (sat phone only)

Local Hospitals:
 Fort Simpson - 867-695-7000 (sat phone only)
 Watson Lake - 867-536-4444 (sat phone only)

List the emergency communication devices you will be carrying on your expedition. If none, explain why.

We will have a Garmin inReach from CC Outdoor Education

COVID-19 Preparedness

What is the current COVID-19 situation in the area where you are intending to travel?

There are currently no public health orders, isolation or vaccination requirements, or high risks related to covid-19 in the Northwest Territories. There have been a total of 11,511 recorded cases and 9 deaths due to covid. There have been no new cases in the last week, and the cases have been low, (below 2 cases a week, often zero), since July.

How do you intend to mitigate the risks of exposing yourself and your teammates to COVID-19 while traveling to your trailhead?

We will be driving to the Northwest Territories greatly reducing the amount of crowded spaces that we will be in. Unlike flying, we will be able to mitigate interactions that could pose a risk to our expedition and the small communities we encounter on the way. We will be able to camp and stay distanced from others when necessary as opposed to hotels and public buildings which inherently pose a higher risk. Gas stations will be our highest risk, but since covid cases are much lower, being aware of the spaces we occupy by washing hands regularly, and masking if necessary will mitigate any concern of contracting or spreading covid. We will be sure to take good care of ourselves in the weeks and months prior so we don't travel feeling unwell at all, and will make sure to take covid tests before we depart in case we were to be asymptomatic.

How do you intend to mitigate the risks of exposing the residents of the area(s) where you will be traveling to COVID-19?

As noted above, we will be sure to limit our interactions as much as possible as we travel across the US and Canada, to mitigate contracting anything. We will drive and camp to lower the risk of contracting or spreading anything that would otherwise be high risk in airports and hotels. We will be aware of the small communities that we travel through and monitor any covid cases that arise between now and our time of travel to stay educated on the protocols and statistics. By doing this we will be able to make the most educated decisions on where to stop. We will easily be able to stay distanced, and since we are ultimately traveling in a large wilderness area, once we arrive there are little to no threats.

How do you intend to mitigate the risks of COVID-19 while in the field?

Once in the field, mitigation won't be difficult at all due to its remote and vast nature. We will act as a family unit considering there are two of us and we will be readily counting on one another for emotional and physical support. If we are to see anyone in the field, it will be easy to remain at a safe distance so there is no concern of any transmission. We will bring masks and hand sanitizer as preventative equipment, and will make sure to have appropriate layers and nutrition to maintain healthy and strong immune systems.

If someone on your expedition develops COVID-19 symptoms, how will you handle it?

If either of us contract covid we will assess the situation and respond accordingly. Since we will be on a river, certain sections will pose a more challenging evacuation than others, but since the whitewater is fairly infrequent it would generally be safe to float to the nearest takeout if one of us is weak. If it shows up as a typical cold, or symptoms are mild, we will take care as best we can, either taking layover days or moving slower until it subsides. If the symptoms persist, worsen, or become life threatening, we will travel to the nearest evacuation point and notify the pilot that we have someone that is covid positive.

Budget

Upload a detailed and complete expedition budget.

Budget 2023.pdf (48KB)

Uploaded 1/12/2023 9:45pm by Zinnia Voss

What is the total funding request for your trip?

5,000

What is the funding request per person?

2,500

Describe what measures you have taken to minimize expenses for your expedition.

Unlike our last expedition in Gates of the Arctic National Park, we are choosing to drive which will lower the expenses significantly compared to flying. Flights, even this far in advance, will cost at least \$800 per person, not including all of our gear and food that needs to make its way as well. So, aside from the gas total being cheaper than the total cost of flights, we are also reducing costs of shipping food, additional charges for baggage, and will not need to be shuttled from the airport to the air charter. We are buying a lot of food in bulk, as well as using food we have dehydrated and will dehydrate ourselves. Having done the food shopping for our expedition last summer, we are aware of the foods that will last the longest, and provide weight and cost efficiency.

As far as lodging, we will be camping for no more than \$15/night for both of us, but intend on car camping on BLM land for no cost as much as possible. This will reduce the cost an incredible amount compared to staying in hostels and hotels.

WOOHOO! Let's paddle!

Expedition Agreement

The Expedition Agreement must be printed, read, and signed in ink by each member of the expedition team. Once the Agreement is filled out, it should be scanned into PDF format and uploaded here. The group application will not be considered complete until this form is submitted



Uploaded 1/12/2023 10:19pm by Zinnia Voss

TRAVEL DAYS (6/24-30):

Day A: ██████████ - Casper, WY (350 miles)

Day B: Casper, WY (Casper KOA campground) - Upper Missouri River Banks National Monument (410 miles)

Day C: Upper Missouri River Banks National Monument - Calgary (420 miles)

Day D: Calgary - Valleyview, Alberta (600 km)

Day E: Valleyview, Alberta - Trutch, Alberta (550 km)

Day F: Trutch, Alberta - Watson Lake, NWT (647 km)

Day G: Watson Lake, NWT - Finlayson Lake, NWT (242 km)

EXPEDITION DAYS (1 km = .62 mi)

Day 1- 7/1:

Locations: island lake - km 155, vampire peaks

Mileage: 25km

Route: Paddle downstream on South Nahanni stopping to check out Moores hot springs on river left just a couple km from Island Lake, right off the river.

Hazards: Corner Rapids is a class I/II 20km into the day, it shouldn't pose as any threat

Evacuation / notes: Island Lake is the easiest evacuation point as we'll just have been dropped off there.

Day 2- 7/2:

Locations: vampire - broken skull river confluence

Mileage: 25km paddling

Route: Paddle down South Nahanni river

Hazards: No hazards aside from everyday weather/ wildlife. There are no rapids

Evacuation / notes: Island Lake will still be the closest evac point 25-50 km away.

Day 3- 7/3:

Locations: Broken Skull river confluence - km 205 (from headwaters)

Mileage: 25km paddling

Route: Paddle down South Nahanni

Hazards: No rapids or outstanding concerns

Evacuation / notes: Glacier Lake is the closest evac point between 20-45 km away

Day 4- 7/4:

Locations: km 205 - Glacier Lake

Mileage: 5km paddling, 10km hiking

Route: Paddle south on South Nahanni River, takeout on river right and transition to backpacking in order to hike 10km on a social trail to Glacier Lake

Hazards: No rapids, depending on trees we will hang our packrafts and extra food while we hike into the Cirque of the Unclimbables, potential hazards being wildlife getting into gear.

Glacier Lake has a high density of bears so being extra cautious of food and making noise is necessary.

Evacuation / notes: If need be, Glacier Lakes is an evacuation point that climbers get dropped off at to hike into Cirque of the Unclimbables. Glacier Lake is one of four places on the South Nahanni that has limited spaces to camp so we just need to make sure that we have communicated with the rangers about when we plan to be there, though it shouldn't be an issue.

Day 5- 7/5:

Locations: Glacier Lake - Fairy Meadows

Mileage: 10 km

Route: Follow the social trail to hike into Cirque of the Unclimbables and set up camp in Fairy Meadows

Hazards: According to many sources, there are whistle pigs and ground squirrels that will ravage food if not stored properly in Fairy Meadows, so like always we will be very cautious with our belongings and food storage.

Evacuation / notes: Glacier Lakes is the closest evac location 0-10 km away. Fairy Meadows is the second of four limited space camping areas but again shouldn't be a problem if we register properly when we arrive.

Day 6- 7/6:

Locations: Cirque of the Unclimbables/ Fairy Meadows

Mileage: ~5km

Route: Layover day to explore cirque of the unclimbables

Hazards: Mostly wildlife as mentioned above

Evacuation / notes: Glacier Lakes is the closest evac location 10km away

Day 7- 7/7:

Locations: Cirque of the Unclimbables/ Fairy Meadows

Mileage: ~5 km

Route: Second layover day at the Cirque to continue exploring

Hazards: Wildlife

Evacuation / notes: Glacier Lake is closest evac 10 km away

Day 8- 7/8:

Locations: Fairy Meadows - Glacier Lake

Mileage: 10 km

Route: Hike back down to Glacier Lake following the social trail

Hazards: Wildlife/ bad bugs at Glacier Lake- we will be sure to bring lots of bug spray, light clothing and bug head nets

Evacuation / notes: Glacier Lake will be immediately accessible in case of an evacuation emergency

Day 9- 7/9:

Locations: Glacier Lake - Rabbitkettle Lake

Mileage: 10km hiking, 15 km paddling

Route: Follow social trail from Glacier Lake back to the South Nahanni, return to boats and paddle 15 km downstream to Rabbitkettle Lake to camp

Hazards: No outstanding hazards, no rapids

Evacuation / notes: Glacier Lake is still the nearest evacuation point 25 km away. Rabbitkettle Lake is the third limited space camping area on the South Nahanni, though it shouldn't be an issue. If there is a ranger present, there's a guided ~6km hike to the tufa mounds, a historical site. We will plan on getting our resupply here.

Day 10- 7/10:

Locations: Rabbitkettle Lake - Secret Lakes

Mileage: 15 km paddling

Route: Spend morning at Rabbitkettle Lake to receive resupply and potentially go to tufa mounds if a ranger is present. Once we have everything sorted with the resupply we will paddle a shorter day, 15 km downstream to sister lakes trail to camp.

Hazards: The only outstanding hazard would be if we couldn't get our resupply due to bad weather, but we will plan on having at least an extra day of food in case of this scenario. Otherwise nothing else apparent, no rapids,

Evacuation / notes: Glacier Lake is the closest evacuation point.

Day 11- 7/11:

Locations: Secret Lakes - Alpine Ridge

Mileage: 12km hiking, 8 km paddling

Route: Take a social/ game trail on river left ~6 km each way to the Secret Lakes, small deep alpine lakes nestled a little ways inland from the river, then return to the river for another ~8 km of paddling to Alpine Ridge to camp.

Hazards: Following a social/ game trail can pose an unpredictable trek because there is no guarantee of conditions. From all the research we've done and information we've received from rangers there should be reliable enough trails, if not we can always return to the river as we are just doing out and back treks. We are also experienced in off trail travel and navigation, so we aren't worried about the lack of a maintained trail. Otherwise, no rapids, long day.

Evacuation / notes: Glacier Lake will be the closest evac point, 40km away

Day 12- 7/12:

Locations: Alpine Ridge - km 275 (from confluence)

Mileage: 20km

Route: Another mellow paddling day down the South Nahanni, scheduling a few less km to rest and potentially explore some social trails around Alpine Ridge.

Hazards: No rapids, the maps show the river braiding a bit in this section so there is potential to hit shallow stretches. We will need to pay more attention to the channels throughout these areas.

Evacuation / notes: Virginia Falls is the nearest evacuation point, 65 km south. Depending on the weather, it would be nice to spend the morning exploring Alpine Ridge as maps indicate social trails and beautiful scenery.

Day 13- 7/13:**Locations:** km 275- km 300 (from confluence)**Mileage:** 25km**Route:** Leisurely flat water day to make more miles down the South Nahanni towards Virginia Falls**Hazards:** No rapids or outstanding hazards, the river continues to braid so being aware of channels will be important**Evacuation / notes:** Virginia Falls is the closest evac point, 40 km south**Day 14- 7/14:****Locations:** km 300 (from confluence) - Oxbow Lake**Mileage:** 30 km**Route:** Paddle the South Nahanni River, bigger miles but the river seems to become one channel again which likely means any shallow areas will dissipate and the flow will be strong**Hazards:** No rapids or braids in river, no outstanding hazards**Evacuation / notes:** Virginia Falls is the nearest evac spot, now only 10 km away**Day 15- 7/15:****Locations:** Oxbow Lake - Virginia Falls**Mileage:** 10 km paddling, 2 km portage**Route:** Paddle on the South Nahanni until we reach the portage trail for Virginia Falls on river right. The portage trail is a heavily used social trail, so although it isn't maintained, there are signs and a well traveled path which, according to all resources thus far, will be easy to follow. The portage trail is dotted on the digital map.

Since Virginia Falls has a mandatory portage, every visitor that paddles the Nahanni will travel that section by foot making almost certain that it will be a recognizable path.

Hazards: The portage "trail" is fairly long and with a lot of gear could take multiple trips/ be tumultuous on wet rocks. Virginia Falls is twice the size of Niagara Falls and would pose a deathly threat if not addressed properly, though we have no concern around that as it is easy to know its coming and we will be following maps.**Evacuation / notes:** Virginia Falls is accessible as an evacuation location. It is also the fourth limited camping area on the South Nahanni, but as with the three prior locations there should be no issue as long as we follow the protocol set up through the park service.**Day 16- 7/16:****Locations:** Virginia Falls layover**Mileage:** 0 km**Route:** Take the day to rest and explore Virginia Falls**Hazards:** Being near Virginia Falls poses an inherent risk due to its size, but shouldn't be of any concern as long as we stay at a distance and follow proper protocol that the park enforces.**Evacuation / notes:** Virginia Falls, 0 km away**Day 17- 7/17:****Locations:** Virginia Falls - Clearwater Creek

Mileage: 10 km

Route: Paddle 10 km downstream on South Nahanni River

Hazards: This is our biggest whitewater day with 5 rapids, the first three being more significant than the latter. Within 2 km of Virginia Falls we will encounter "Canyon Rapids", three class II/III rapids, and just before Clearwater Creek we will encounter two more rapids, though only class I/II.

Evacuation / notes: Virginia Falls will be the closest evac point 10 km north. We are only planning about 10 km of paddling this day to have a slow restful morning at Virginia Falls, and to be able to take as much time as we need scouting/ running canyon rapids. Having fewer km will make it much easier to take the whitewater with caution and ease.

Day 18- 7/18:

Locations: Clearwater Creek - km 380 (between vera creek and mary river)

Mileage: 25 km

Route: Paddle down Nahanni

Hazards: No apparent hazards, no rapids

Evacuation / notes: Virginia Falls is closest evac point, 35 km north

Day 19- 7/19:

Locations: Km 380 - Pulpit Rock

Mileage: 25 km

Route: Head downstream on South Nahanni

Hazards: We are entering a stretch of canyons which can make any evac more difficult, but there are no rapids so the likelihood of an emergency on the river is much lower.

Evacuation / notes: Virginia is the closest evac point, 60 km north. It might become difficult to get here since we are now entering Canyons, and paddling downstream 155 km to Nahanni Butte would be the most realistic and least strenuous

Day 20- 7/20:

Locations: Pulpit Rock - Painted rocks canyon

Mileage: 25 km

Route: Paddling downstream on South Nahanni

Hazards: No apparent hazards aside from being constricted by canyon walls at times, no rapids

Evacuation / notes: Virginia Falls is still the closest evacuation point, 85 km north. Nahanni Butte 130 km downstream is the least strenuous evac option.

Day 21- 7/21:

Locations: Painted Rocks canyon - Deadmans Valley

Mileage: 25 km

Route: South down river

Hazards: No apparent hazards, no rapids

Evacuation / notes: Nahanni Butte is the closest and most realistic evac point, 105 km downstream.

Day 22- 7/22:**Locations:** Deadmans Valley**Mileage:** 0 km**Route:** Layover at Deadmans Valley to explore and rest, it is a renowned valley to hike in and spend a moment reflecting as we near the end of our trip.**Hazards:** No apparent hazards, no rapids**Evacuation / notes:** Nahanni Butte, 105 km downstream**Day 23- 7/23:****Locations:** Deadmans Valley - Lafferty Creek**Mileage:** 28 km**Route:** Downstream on south Nahanni River**Hazards:** Georges Riffle, a class II/III rapid is the only potential hazard, though it is straightforward and should present no problem**Evacuation / notes:** Nahanni Butte is the closest Evac point 77 km downstream**Day 24- 7/24:****Locations:** Lafferty Creek - Km 510 / Chitu Yohin Lake**Mileage:** 27 km**Route:** Follow South Nahanni River downstream, stop at Kraus Hot Springs on river right ~4 km into the day for a dip.**Hazards:** No outstanding hazards, no rapids**Evacuation / notes:** Nahanni Butte is the closest evacuation point, 50 km south**Day 25- 7/25:****Locations:** Chitu Yohin Lake - Mattson Creek**Mileage:** 25 km**Route:** Follow the largest channel downstream on the South Nahanni**Hazards:** The last two days are accompanied by "the splits", meaning the river becomes very braided and winds through many channels. We will have to be extra cautious about where we paddle because of heightened potential to drag boats, scrape or get "stuck". It isn't a danger but could be a pain to deal with if we aren't prepared to navigate.**Evacuation / notes:** Nahanni Butte is the closest Evac point, 25 km south**Day 26- 7/26:****Locations:** Mattson Creek- Nahanni Butte**Mileage:** 25 km**Route:** Downstream!**Hazards:** No hazards that differ from anything previous, no rapids, some channel division but it looks like there are just two channels of equal size as opposed to the splits the day before.**Evacuation / notes:** Nahanni Butte, 0 km away.**Day 27 - 7/27:****Locations:** Nahanni Butte - Blackstone Landing

Mileage: 40 km

Route: Paddle downstream one last time!

Hazards: No rapids, slow and easy flatwater with very wide river channel. Longer river day as our final push.

Evacuation / notes: Blackstone Landing

PERSONAL GEAR :	QUANTITY (per person for personal gear)
Sun Hoodie/Synthetic shirt	1
Long Underwear Top	1
Fleece/wool layer	2
Puffy	1
Rain Jacket	1
Mosquito headnet	1
Sports Bra	1
Underwear	2
Long Underwear Bottoms (one to hike in)	2
Fleece Pants	1
Rain Pants	1
Quick Dry Shorts	1
Hiking socks	3
Sleeping socks	1
Trail runners	1
Sun Hat	1
Beanie	1
Gloves	1
Sunglasses	1
Buff	1
EVERYTHING BELOW IS A TOTAL AND NOT PER PERSON	

SLEEPING GEAR :	TOTAL:
Sleeping Bag (~15 degree)	2
Sleeping Pad	2
Stuff Sack	2
BACKPACKING :	
~50 Liter Pack	2
Trash compactor bag liner	4
Trekking Poles	2
Nemo Hornet 2P	1 (shared)
Tent Repair Kit	1
PADDLING :	
Packraft – Classic (CCOE)	2
Collapsible Paddle (CCOE)	2
Backup Hand Paddles	1
Internal Dry Bags (CCOE)	4
Extra Dry Bags - 15L (CCOE)	3
Packraft Repair Kit	2
Inflation Bag (CCOE)	2
Neoprene Booties (CCOE)	1
Pogies	2
Dry Suit	2
Whitewater Helmet	2
Throw Bag	2
Type V PFD	2
River Knife	2

Tow Tether	2
Locking carabiners	4
Pin kit	1
Whistle	2
COOKING :	
Pocket Rocket Stove	2 (1 backup)
1400 ML Pot w/cover	1 (shared)
Lighter	4
Pocket Knife	2
Sawyer Squeeze filter	1
Bleach	1 oz
Spoon	2
Collapsible bowl	1
4 oz MSR Fuel Canister	4
Tarp tent	1
Windscreen	1
TOILETRIES :	
SPF Lip Balm	2
Tooth Brush	2
Floss	1
Retainer	1
Insect Repellent	1
Sunscreen	1
Hand Sanitizer	1
Trowel	1

Toilet Paper	1 roll
Toothpaste	1
Hair Ties	5
Tampon	Few extra
Campsuds	2 oz.
Diva cup	1
Ziplocs	6
MISCELLANEOUS :	
Waterproof Watch	2
Headlamp w/batteries	2
Extra AAA batteries	2
1-Liter Water Bottles	4
Compass with mirror	1
50 ft. P-cord	2
8 ft. Duct Tape	2
Sewing Kit	1
3' Cam Strap	2
Bear Vault BV500 Canister (CCOE)	2
15L Ursack All-Mitey XL	3
Bear Spray	2
Air Horn	2
Maps & Waterproof bags	2 sets
Garmin inReach (CCOE)	1
Charging Bank	1
InReach Charging Cord	1
Journal/Pen	2

Bandana	2
First Aid Kit	1
Zip ties	5
Backcountry permit	1

FIRST AID :

Nitrile gloves (2 pair)
12 cc irrigation syringe
Ziploc bag (4)
Trauma shears 4" (1)
Medical waste bag (2)
Hand sanitizer (1)
Emergency blanket (1)
Tweezers (1)
Safety pins (4)
Guide to wilderness medicine (1)
SOAP note outline (1)

Acetaminophen 500mg (20)
Ibuprofen 200 mg (30)
Aspirin 325 mg (4)
Tums (10)
Antihistamine (diphenhydramine 25mg) (5)
Sting stop (1oz)
Oral antibiotics (Rx)
Loperamide HCL 2 mg (3)
Sam splint (1)
Sunscreen (1 tube)
KT Tape (4 strips)
Foam blister donuts (4)

Trauma pad 5" x 9" (1)
Non-adherent dressing 3x4" (2)
Sterile gauze dressing 2x2" (3)
Sterile gauze dressing 4x4" (3)
Wound closure strips 1/4" x 4" (10)
Triangular bandage (2)
Transparent dressing (4)
Adhesive bandages 1" x 3" (10)
Butterfly bandages (10) X
3" conforming gauze (3) X
Mole skin (10 pieces) X
Medical tape roll 1" (5 yards)
Athletic tape roll (Leuko) (5 yards)
Antiseptic wipes (6)
Cotton tip applicator (3)
Antibiotic ointment (1 tube)
Benzoin tincture (2)
Iodine tincture (2)
Hand cream (1)
Vaseline (1)

LEG 1: Days 1-9

BREAKFAST	CALORIES	QUANTITY	
Granola	250 cal/ ½ cup	6 cups	
Oatmeal	339 cal/cup	5 cups	
Powdered Eggs	230/ 3 egg	18 eggs	
PB	200 cal/ 2 tbs	1 jar	
Powdered milk	350 cal/ ½ cup	2 cup	
Dried/dehydrated Fruit	332 cal/ 1 cup	2 cup	
Coconut Flakes	185 cal/ oz	8 oz	
Mixed nuts	170/ oz	2.5 cups	
Tortillas	120 each	6	
Dehydrated veggies	70 cal/ .25 cup	1 cup	
Summer sausage	120 cal/oz	8oz	
	Granola (x3)	Oatmeal (x3)	Breakfast burritos (x3)
CALORIC VALUE PER MEAL:	920 cal	880 cal	1010 cal
LUNCH	CALORIES	QUANTITY	
Sausage (3oz dev, 2oz zin)	300-400 cal	15oz	
Tuna Packet (1x zin, 2x dev)	150 cal	9 tuna packets	
Cheese (1.5oz each)	115 cal/ oz	27oz	

Flour Tortilla	120 cal	27 tortillas	
Hot Sauce (travel bottle)	~5	One bottle	
Mayo and Mustard (deli)	~100 calories	18 deli packets	
Dehydrated Hummus	45 calories/ tbs	2.5 cups	
Pepperoni	140 cal/ 14 slice	15oz	
Chips (jalapeno)	300 cal/ 30 chips	1 bag	
	Sausage/Tuna wrap	Zinnia lunch (wrap x1)	Devan lunch (wrap x2)
CALORIC VALUE PER MEAL:	700 cal	700 cal	1290 cal
SNACKS	CALORIES	QUANTITY	
Trail Mix	700 cal/cup	4.5 cups	
Bars	200-300 cal	18 bars	
Jerky	160 cal/ 2 oz.	1 large bag 36 oz	
	All snacks		
CALORIC VALUE PER PERSON/DAY	576 cal		
DINNER	CALORIES	QUANTITY	
1. Curry rice (2)			
Instant rice	675 cal/cup (uncooked)	2.5 cups	
Turkey Jerky	70 cal/oz	8oz	

Dried chickpeas	750 cal/cup	1 cups	
Dehydrated veg	70 cal/.25 cup	3/4 cups	
Curry powder	0 cal	1 Tbsp.	
Bullion Cubes	16 cal/ cube	2 cubes	
2. Quinoa & Chili (2)			
Dehydrated black beans OR chili (2)	662 cal/cup (uncooked)	2 cups	
Dehydrated quinoa	90 cal/oz	2.5 cups	
Spices for beans/chili	0 cal	2 Tbsp.	
Potato chips topping	120 cal/oz	1 small bag (4 servings)	
3. Cheesy couscous (3)			
Couscous	600 cal/ cup (dry)	3.5 cups	
Salmon	70 cal/ package	6 packets	
Cheese	120/oz	6 oz	
Dehydrated Pesto	100 cal/ ¼ cup	3 packs	
Bullion Cubes	16 cal/ cube	3 cubes	
Dehydrated Veggies	280 cal/ cup	1.25 cups	
4. Alfredo pasta (2)			
Ramen noodles	380/ packet	6 packets	
Spam	174 cal/ packet	2 packets	
Pepperoni	100 cal/oz	4 oz.	
Dry alfredo mix	15 cal	2 packets	
Cheese	120/ oz	4 oz	

Red pepper flakes	5 cal	A few servings	
Parmesan crisps	100/ oz	A few servings	
	Rice (x2)	Couscous (x3)	Alfredo (x2)
CALORIC VALUE PER MEAL	1120 cal	1050 cal	1230 cal
And..... Chili (x2)	1090 cal		

LEG 2: Days 10-27

BREAKFAST	CALORIES	QUANTITY	
Granola (5)	300 cal/ ½ cup	5 cups	
Oatmeal (9)	339 cal/cup	11.5 cups	
Powdered Eggs (4)	230/ 3 egg	24 eggs	
PB	200 cal/ 2 tbs	1 jar	
Powdered milk	350 cal/ ½ cup	3.5 cup	
Dried/dehydrated Fruit	332 cal/ 1 cup	4 cup	
Nuts	170/ oz	5 cups	
Coconut Flakes	185 cal/ oz	16 oz	
Tortillas	120 each	8	
Dehydrated veg	70 cal/.25 cup	1.5 cup	
Summer sausage	120 cal/oz	15 oz	

	Granola (x5)	Oatmeal (x9)	Breakfast Burritos (x4)
CALORIC VALUE PER MEAL:	920 cal	880 cal	1010 cal
LUNCH	CALORIES	QUANTITY	
Sausage (x9 days) (3oz dev, 2oz zin)	300-400 cal	5 sausages (45oz)	
Tuna Packet (x9 d) (1 for zin, 2 for dev)	150 cal	27 packets	
Cheese (1.5oz each)	115 cal/ oz	55 oz	
Flour Tortilla (1 zin, 2 dev)	300 cal	54 tortillas	
Cholula (travel bottle)	~5	One bottle	
Mayo and Mustard (deli)	~100 calories	34 packets	
Dehydrated Hummus	45 calories/ tbs	4 cups	
Pepperoni (4)	140 cal/ 14 slice	2 packages 20oz	
Chips (jalapeno)	300 cal/ 30 chips	3 bags	
	Sausage/Tuna wrap	Zinnia lunch (wrap x1)	Devan lunch (wrap x2)
CALORIC VALUE PER MEAL:	700 cal	700 cal	1290 cal
SNACKS	CALORIES	QUANTITY	
Trail Mix	700 cal/cup	8.5 cups	
Bars	200-300 cal	34 bars	

Jerky	160 cal/ 2 oz.	2 large bags 70oz	
Peanut M&M's	140 cal/ serving	3 bags	
	All Snacks		
CALORIC VALUE PER PERSON/DAY	576 cal		
DINNER	CALORIES	QUANTITY	PRICE
1. Curry Rice (5)			
Rice	675 cal/cup (uncooked)	8 cups	
Turkey Jerky	70 cal/oz	25oz	
Dried chickpeas	750 cal/cup	3 cups	
Dehydrated veg	70 cal/ .25 cup	2.5 cups	
Curry powder	0 cal	2.5 Tbsp.	
Bullion Cubes	16 cal/ cube	5 cubes	
2. Quinoa & Chili (4)			
Dehydrated black beans OR chili	662 cal/cup (uncooked)	4 cups	
Dehydrated quinoa	90 cal/oz	4 cups	
Spices for beans/chili	0 cal	2 Tbsp.	
Potato chips topping	120 cal/oz	1 bag (8 servings)	
3. Cheesy Couscous (4)			
Cous Cous (4)	600 cal/ cup (dry)	6 cups	

Salmon	70 cal/ package	8 packets	
Cheese	120/oz	8 oz	
Dehydrated Pesto	100 cal/ ¼ cup	4 packs	
Bullion Cubes	16 cal/ cube	4 cubes	
Dehydrated Veggies	280 cal/ cup	1.5 cups	
4. Alfredo pasta (5)			
Ramen noodles	380/package	15 packets	
Spam	174 cal/ packet	4 packets	
Pepperoni (meat for zin)	100 cal/oz	8 oz.	
Dry alfredo mix	15 cal/serv	4 packets	
Cheese	120 cal/ oz	8 oz	
Red pepper flakes	5 cal	A few servings!	
Parmesan crisps	100 cal/oz	A few servings	
	Rice (x2)	Couscous (x3)	Alfredo (x2)
CALORIC VALUE PER MEAL	1120 cal	1050 cal	1230 cal
And..... Chili (x2)	1090 cal		
FATS (for entire trip)			
Olive oil		16oz	
Coconut oil		16oz	
Ghee		16oz	

FOOD BUDGET:

Leg 1:

- Breakfast: \$57.55
- Lunch: \$73.08
- Dinner: \$92.12

Leg 2:

- Breakfast: \$95.50
- Lunch: \$122.71
- Dinner: \$139.11

TOTAL = \$580.07

TRANSPORTATION- gas & flights:

██████ to Finlayson Lake (drive 2,400 mi): \$654 gas
Float plane to Island Lake- Kluane Airways: \$1714
Vehicle shuttle Finlayson Lakes to Blackstone takeout: \$1,267
Blackstone takeout to ██████████ (2755 mi): \$801 gas
TOTAL: \$4,436

FOOD & FUEL:

Food: \$580.07 (~\$11/day/pp)
Resupply: \$150
Fuel: (5.99 x 4) = \$23.96

GEAR RENTALS:

Cam straps (2): \$81
Pogies (1): \$27
(All other needed rentals are free with RKMF)

MAPS & BOOKS:

South Nahanni River Touring Guide: \$15
South Nahanni River Topo Maps- Island Lakes to Nahanni Butte- (1:50000): \$150

PERMITS:

Backcountry permit: (\$147.20 x2) = \$294.40

TOTAL TO OFFSET CARBON EMISSION:

\$17.98

EXPEDITION TOTAL: \$5,775.41