



# Ritt Kellogg Memorial Fund Registration

Registration No. T92J-YWKQT  
Submitted Jan 4, 2016 2:20pm by Margaret Bursch

## Registration

Sep 1, 2015-  
Aug 31

Ritt Kellogg Memorial Fund

### **RKMF Expedition Grant 2015/2016/INDIVIDUAL**

This is the individual application for a RKMF Expedition Grant. If your group has received approval, you may fill out this application individually. In this application you will be asked to provide important details concerning your experience and eligibility for your proposed expedition.

**Waiting  
for  
Approval**

Sep 1, 2015-  
Aug 31

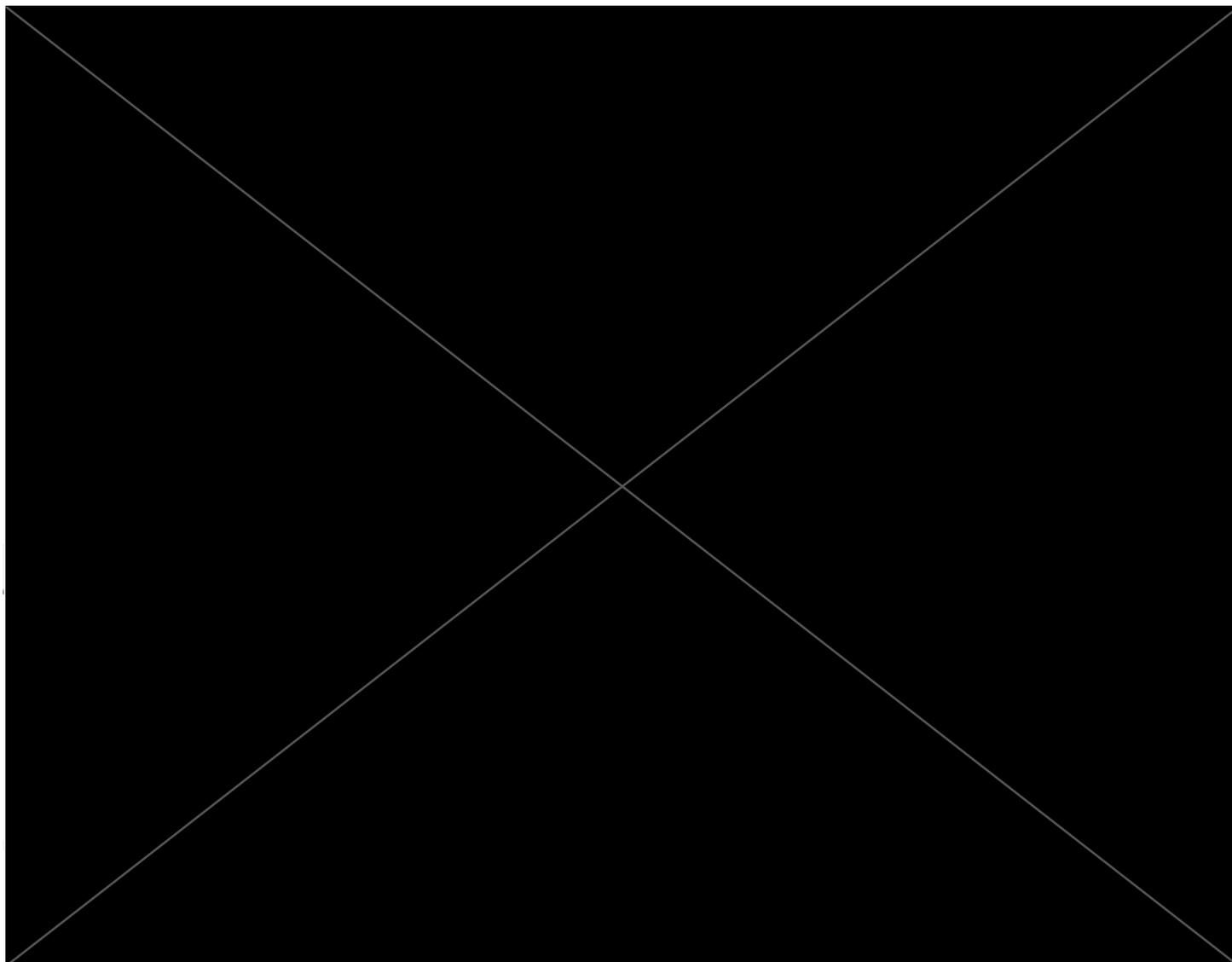
Ritt Kellogg Memorial Fund

### **RKMF Expedition Grant 2015/2016/Group Application**

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

**Waiting for  
Approval**

## Participant





## I. Expedition Summary

### Expedition Name

The Raw Immediacy of the Sound: Sea Kayaking in Prince William Sound

### Objectives

We propose a sea-kayaking expedition in Prince William Sound, Alaska, through the critically beautiful tidewater glaciers, surrounded by the both familiar and foreign grandeur of the Alaskan wilderness. By kayaking with enough supplies to not need a re-ration, we intend to isolate ourselves from the civilized world and immerse ourselves in nature as thoroughly and safely as possible. This backcountry expedition will act as a seminal point of both our lives thus far, in which we will reflect on our college experience in a context that incorporates our lifetime goals, as an Alaskan commercial salmon fisherman and a wildlife research biologist. Our paddling route will begin in Chenega Bay and end in Whittier, AK, and encompass 128.6 miles over 15 days in August, 2016. We will merge our lifelong yearning to explore of the wilds of the earth with our fervency for sustainability and environmental action on this voyage, which could not be possible without the generosity of the Ritt Kellogg Memorial Fund.

### Location

The coastlines of Prince William Sound between Chenega Bay and Whittier.

**Departure Date**

Aug 4, 2016

**Return Date**

Jan 19, 2016

**Days in the Field**

15

**Wilderness Character**

Prince William Sound encompasses 4,400 miles of Alaskan coastline. The Sound contains 150 glaciers, including 17 tidewater glaciers. Much of the land surrounding PWS is incorporated into the Chugach National Forest, and the sound is ringed with the steep glaciated Chugach Mountains. The Sound is renowned for its calving glaciers, and populations of wildlife that thrive on the region's unstable geography.

Prince William Sound embodies the wild and isolated beauty that we imagine intrepid adventurers like Ritt Kellogg would have cherished. The Sound has a spectacular and varied natural history. The region's Sitka spruce forests are abundant with fruiting plants and fungi, and the landscape is varied and compelling. The sea teems with Orca whales, porpoises, sea otters, Stellar sea lions, and salmon. Around 200,000 seabirds and a population of Bald Eagles return every spring to populate the sky, and the rocky intertidal zones are home to starfish, anemones, snails, and barnacles. Black bears, brown bears, and moose are among 30 species of land mammals that live and forage in the region, undisturbed by human interference.

Prince William Sound embodies the spirit of a Ritt Kellogg Grant. This environment is wild and inaccessible. While there are few main access points by road, of the extensive 4,400 miles of shoreline, 2,240 miles are in a Wilderness Study Area and undisturbed by humans. Beginning our trip at Chenega Bay and ending in Whittier, we will drastically reduce our exposure to other humans. Chenega Bay is only accessible by boat or plane, making it most remote kayaking route.

## II. Participant Qualifications

**Participants' Graduation Date**

Margaret Bursch: May 16th, 2016

Rebecca Hunter: May 16th, 2016

**Medical Certifications**

- Becky is taking the WFR half-block course on the Colorado College campus from 1/4/16-1/13/16,
- Maggie is taking the WFR NOLs course in Talkeetna, Alaska on 4/1/16- 4/10/16 2016.

**Does your group have adequate experience?**

Yes

**Training Plan**

Although we both have experience kayaking both in freshwater and in the ocean, neither of us have undergone a multi-day sea kayaking expedition. We will spend the semester preparing for the summer separately, Becky in Colorado Springs, and Maggie at home in Homer Alaska. In conjunction to attending weekly roll sessions provided by the ORC at the Colorado College pool, Becky plans to attend a sea kayak touring session provided by the Boulder Outdoor Center where she will complete her knowledge on:

Competent launchings and landings in various conditions.

Paddle signals.

Basic paddling strokes: forward, reverse, sweep, draw, low and high braces.

Basic self and assisted rescues.

Responsible group travel and use of safety equipment.

Maggie will be living in Homer, Alaska with access to Kachemak Bay to practice sea kayaking. She will take private lessons from Allison Ohara, the owner of True North Kayak in Homer, AK, in order to learn the skills taught in classes that are not available in her small town. She will then continue to practice these skills with other locals to gain further experience. In early May, she plans to do a one or two night trip to familiarize herself with equipment, and assess what possible problems could arise in a longer expedition.

We will memorize the geography of our route, as well as acquaint ourselves with tidal patterns and the nature of the movement of glaciers in the bay. We will delineate our route on two digital GPS with solar powered battery chargers, and will carry paper maps and charts of the bay. We will study the area's coastal navigation to properly identify landmarks and the safest passages.

We vow to maintain a high level of physical fitness from the present until August, adopting a training regimen of regular lap swimming, mountain biking, hiking the Incline, and weight training. Through June and July, Maggie will be working on her fishing boat, which includes a high level of physical labor involving the back and upper body and is additional physical training before the expedition. Becky will work her second season as a research assistant on a physically demanding biological study of Flammulated owls in central Colorado. The job entails 10+ hours a day of hiking from drainage bottoms to ridgetops, hauling equipment, navigating using a compass and a Trimble GPS, and practicing safe and smart interactions with wildlife, such as owls, deer, black bears, and mountain lions. We anticipate that these jobs, on top of our additional physical conditioning, will prepare us for the vigor of the expedition.

### III. Expedition Logistics, Gear and Food

#### Travel Plan

August 2:

Maggie will drive from Homer to Anchorage and Becky will fly from Denver to Anchorage, Alaska. Maggie will drive safely, and have her truck checked out before making the journey.

Directions from Homer to Anchorage, AK:

Head south on Greatland St toward AK-1 N

367 ft

Turn right onto AK-1 N

220 mi

Turn left onto E 15th Ave

1.1 mi

Turn right onto I St

0.7 mi

We will spend two days in Anchorage grocery shopping, picking up the kayaks and any additional gear that we cannot for whatever reason travel with, purchasing bear spray, bear canisters, First aid supplies and kayak repair supplies, and making final preparations for the trip. We will stay the nights of August 2nd and August 3rd at Alaska Backpacker's Inn in Anchorage, which we will fund ourselves.

Late Morning: BH and MB meet in Anchorage at the Airport, where Becky will be flying into. We will drive 7.3 miles to our hotel for the first two nights. We will be sure to drive carefully, and anticipate traffic.

ANC Airport to Downtown Anchorage:  
17 min (7.1 miles)  
via W International Airport Rd and A St

Afternoon: We will grocery shop in downtown Anchorage, go by Alaska Kayak Academy and make sure everything is set for us to pick up our kayaks the next day, and begin organizing gear.

August 3:

Continue organizing gear, then pick up kayaks and any other remaining gear, and get all necessary charts and maps laminated and ready to go. Have all gear packed and ready to load before bed. We will be extra prepared in order to avoid unforeseen setbacks.

August 4: (Day 1 of paddling)

5:30 am: We will wake up, eat breakfast, then load our gear into Maggie's truck.

7:00 am: We leave Anchorage for Whittier AMHS Ferry terminal. We will leave 2 hours for the drive to anticipate heavy traffic in the Aton tunnel on the way to Whittier. The drive from Anchorage to Whittier is 1.5 hours and may be delayed due to traffic in the Aton Anderson tunnel to Whittier.

Directions from Anchorage to Whittier:

Take C St to AK-1 S  
10 min (2.7 mi)  
Turn right onto AK-1 S  
49 min (46.5 mi)  
Continue on Portage Glacier Rd. Drive to Billings Whittier

9:00 am: We arrive at the Ferry terminal.

10:30 am: We leave on the AMHS (Alaska Marine Highway System) ferry from Whittier to Chenega on Evan's Island that runs at 10:30 am. Chenega Bay is 67 nautical miles southwest of Whittier. It is important to distinguish between Chenega Bay and Chenega island; Chenega Bay is not on Chenega Island but in Sawmill Bay on the eastern shore of Evans Island. The ferry only runs on Thursdays during the summer, and aside from the pricier water taxi option, the only other way to reach Chenega Bay is by plane. Thus, making the Chenega Bay to Whittier passage more remote, and less accessible to tourists.

Ferry ride from Whittier to Chenega Bay:

~4:30 pm: The ferry lands on the eastern shore of Evan's Island in Crab Bay, which is part of the village of Chenega. We will load all of our gear in our vessels, and suit up for the first leg of our trip, a relatively short piece to get the feel of the water and arrive at camp before late evening. The put-in at Chenega Bay is located at the boat launch, which is a short haul from the ferry terminal. The boat launch is a steel ramp that floats up and down with the tides. If the sea level is too low to launch from the boat ramp, we will launch from the beach at the southern end of the dock.

## Expedition Itinerary

 Margaret Bursch

## Appendix A

### Re-Ration Plans

We do not plan to re-ration, we will bring all of our food with us from the beginning.

### Food Storage

Food storage is challenging on any backcountry trip, but especially so on a kayaking trip. Food that is confined to small spaces, and is never completely dry, makes it essential to have a well thought out food list and storage plan. To combat these challenges, we will divide and label all of our food into ziplocks for each meal each day. We will then employ a system of storage where each days food is accessible when it is needed, to avoid rummaging and potentially losing food or causing spillage at camp, and on the water. Individual bags will help to keep food dry, and will be useful as trash bags for waste pack out.

All of our food will be stored in 2 bear canisters per person. We will bring the entirety of our food load with us, to not have to re-ration at any point during the trip. We will begin the trip with a total of 89 lbs of food. We will not contaminate the bear canisters, and do our best to keep them clean and sanitary, and work to prevent food loss and food getting into our gear.

Some of our food will be canned, as sealed cans do not retain water, are easily crushed and carried out, and can be recycled. We will label the cans with the food that is inside incase the cans get wet and the labels fall off. We will also resort to dehydrated fruit, and lightweight food to reduce the weight of our kayaks, and ease the strain of loading and unloading gear. We plan to purchase food that will give us the maximum amount of energy. Furthermore, we will eat vegetarian, which will reduce our global impact, and eliminate meat waste on this trip. Our list includes foods that are easily transported, lightweight, and packaged in sustainable materials that can be recycled in Whittier at the end of our trip. We will practice Leave-No-Trace ethics, especially in regards to food, which will reduce our impact in the area and also protect us from odors that can attract bears.

We will be extremely careful to contain our food to the utmost degree, not leaving scraps of anything in our wake, on our clothes, or anywhere besides our bear canisters. Our food will be meticulously organized and sealed in bear canisters, and hung in bear hangs at night to avoid unwanted visitors. We will keep not only food but any trash, wrappers, gum, or toiletries in the bear canisters. We will also be cautious to keep food away from our sleeping equipment in all trips prior to this trip.

We will cook at a distance of 300 ft downwind of our sleeping area, and pack away all of our food after dinner each night, and when we leave camp for a walk, hike, or paddle. This is further outlined below in the hazard mitigation section. Food storage on kayaks and on land account for extra planning and preparation, but with organized storage, dry bags, waterproof containers, and bear canisters, we will manage these challenges.

#### Food List

[RKMFG Food List.docx](#) (94KB)

Uploaded Jan 4 12:52am by Margaret Bursch

**Appendix B**

#### Equipment List

[RKMFG Equipment List.docx](#) (3.2MB)

Uploaded Jan 4 1:04am by Margaret Bursch

**Appendix C**

#### Are all expedition members familiar with LNT principles?

Yes

#### Plan for Minimizing Impacts

In order to show respect for wildlife, and do our part to preserve PWS and the surrounding communities and land, we will abide by the six tenets of Leave-No-Trace ethics. We both understand all LNT principles, as we have used them many times before in backcountry and wilderness trips.

Travel and Camp on Durable Surfaces: While kayaking, we will recognize the depths of the water we are traveling through and know when light paddle strokes are necessary to avoid disturbing underwater communities. In most cases, we will be camping away from previously established trails and campsites, and we will be sure to minimize the number of paths we take to our bathroom, and focus all of our activities on durable rock and inorganic surfaces. We will plan camp sites, and on rest days when we will day hike, we will judge the route that is safest and appropriate for avoiding tramping on underbrush and colonizer plant species that are crucial to the ecosystem. We will not make our

presence known after we leave, especially leaving our campsites immaculate of our trash and trash left behind by others before us.

**Dispose of Waste Properly:** With regards to the second principle, we will pack out all of our food waste, and sanitary waste in an organized manner. Solid bodily waste will be disposed of at least 200 feet from ocean and streams, buried 6-8 inches in the ground, stirred with a stick to help integrate into the soil, near sturdy stemmed vegetation, and in sun exposed locations. Throughout the trip, we will collect microtrash in the water and on land, in order to positively impact the ecosystem, demonstrate our respect for the land we are visiting, and improve the experience of future visitors.

**Leave What You Find:** We anticipate that we will find many incredible biological specimens throughout the trip. Instead of collecting these, Becky plans to draw a host of the species we encounter in a naturalist diary. Apart from human traces we find, all aspects of the natural world (biotic and abiotic) shall be left untouched.

**Minimize Campfire Impacts:** We will be using two camp stoves to cook, but also intend to build campfires on occasion. These campfires will be infrequent and contained, they will be small and fueled by dead and fallen wood that we gather by hand. We will collect the wood at a distance from the campground in order to avoid creating a cleared, established-campground looking space for future visitors. We will use rings to contain the fire. Before bed, we will extinguish the fire completely, scatter the ashes and the rocks when finished, and scatter all remaining wood.

**Respect Wildlife:** To respect wildlife, we will use our knowledge about the complex ecosystems of PWS to dictate our encounters with any wildlife. Our food will be contained by day in bear canisters in our boats, and by bear hang at night. We will maintain distance from wildlife, so as to avoid disturbance or interaction. We will assess the vegetation and habitat when we arrive at camp each day, being mindful of the potential host of species that surround us, seen or unseen. We will camp upwind of our cooking area, at least 300 feet, so as to detract any attention from wildlife. We recognize that we will be intruders to the habitat of dozens of native species, and we must respect their primacy and claim to the land.

**Be Considerate of Other Visitors:** We expect to be relatively isolated, however, we will likely encounter others while paddling, or maybe even camping. If this is the case, we will respect our shared claim to PWS, and maintain friendly but distanced relations. We will keep conversation light, and be on our way.

### **Cultural Concerns**

PWS is historically home to the Alutiiq, Athabaskan, and Ahtna people, and is still home to the Chugachmiut people of the Alutiiq tribe. In fact, Chenega Bay, where we will be launching at the start of our trip, is one of two current tribal settlements for the main tribal division of the Alutiiq tribe. There are many native legends about Prince William Sound and the badarkas (native Alaskan kayaks) in which the native people used to travel. Infact, the creation story of Prince William Sound involves several sons and nephews of an old chief paddling their badarkis.

We are excited to kayak in PWS and remember the tradition of the people that first laid claim to the Sound, and used badarkas or transportation between villages and fishing in the bays of PWS. These native Alaskan traditions will provide us with context through history, and will remind us to be respectful of the area's vibrant heritage as we paddle through islands and bays.

### **Land Management**

Of the 4,400 miles of shoreline in PWS, 2,240 miles are in a Wilderness Study Area and largely undisturbed by humans. Regions of PWS require a permit to camp and permission to go on land, as they belong to native Alaskan communities, but these are primarily in the eastern side of PWS and we will be mainly in the west and will not cross any of these lands. The surrounding land is the Chugach National Forest, and we will not need any permits for any leg of our trip.

## **IV. Risk Management**

## Objective Hazards

### Wildlife:

We do not underestimate the hazard wildlife poses on a trip such as ours. Bears are a primary concern for camping. Prince William Sound has rich salmon returns and copious berries in late summer, making it prime foraging habitat for bears. Prince William Sound is known to have high rates of black bears, and the highest numbers are seen roaming the beaches in early spring time. Populations of grizzlies around the PWS have also been documented for decades. Although we hope to observe wildlife from a safe and respectful distance, we will avoid encounters with bears. Bear encounters are possible when we are camping, resting or hiking on shore.

To confront this hazard, we have devised a strategy. When we first arrive to shore at the end of each day, we will perform a bear protocol. This protocol will include sweeping the area for recent signs of bear presence, such as partially eaten fish, tracks, scat, or distinct bear feeding trails (all of which we will acquaint ourselves with beforehand in a wildlife guidebook). If there are clear signs of a bear, we will either continue along shore for another place to camp. If there are no visible signs of bear presence, we vow to maintain constant attention to the tasks we are performing in the context of our surroundings, regardless of whether there is an immediate threat or not. This means staying together, making a decent amount of noise, and talking amongst ourselves so as to make potential bears aware of our presence, especially in densely wooded areas where our visuals are compromised.

If we are faced with a bear, we will first make the distinction between the type of bear it is, as black bears and brown bears typically have different responses to human presence. Secondly, we will determine if the bear is 1) unaware of our presence (meaning it is further than 100m from us, has its back turned, or does not appear to notice us), 2) disinterested with us (meaning the bear has seen us, but appears to continue on with its business, not likely to bother us), 3) inquisitive (meaning the bear is moving towards us, or is within 100m of us, actively checking us out or our equipment, but does not exhibit aggressive signals nor rapid pace), or 4) aggressive, (meaning the bear is looking directly at us, might be producing low, guttural noises, is approaching us at an advanced speed, or is standing up on its back legs, and an attack is probably imminent). When we classify the situation in this way, we can communicate the potential hazards and begin to react simultaneously and efficiently.

Another important distinction to make is the age and size of the bear. If the bear is a female with cubs, or we encounter cubs unattended, we will recognize that the potential for escalation is higher, due to the protective nature of mother bears. Furthermore, bears that appear greater than 700 lbs might indicate a dominant male, which pose a high threat.

When on land, we will carry readily available bear spray and marine distress flares in the case of an encounter with an aggressive bear. Bear spray has proven effective in stopping bear attacks or minimizing injuries when used properly at close range on bears. Distress flares produce a bright light and have been known to stun and ward off bears in a close proximity. We will administer bear spray only if necessary, and according to specific instructions laid out by the Yellowstone National Park forest service. When resting or taking a lunch break, we will choose open beaches so as to not surprise bears. We will keep bear spray and flares on hand, perform bear calls, and speak loudly every few minutes.

If we see a bear within 100m of us that has acknowledged us and is moving toward us, we will clump close together and make noise, so as to make ourselves bigger and more threatening to a potentially aggressive bear. If the bear attacks, we will spray bear spray in its face, and if this does not work, we will fight back, targetting the face and eye region of the bear.

If a bear does attack either one of us, we will lie facedown on the ground, completely silent, with our hands clasped behind our necks until we can confirm that the bear has retreated, so as to avoid a potential reattack (Alaska Forest Service Bear Safety). We will then use our WFR medical training to assess the victim's injuries and stability, to see how to proceed. We recognize that it is highly unlikely that we will be able to kill a bear, but to be safe, we are familiar with how to report the incident based on the Alaska state regulation Defense of Life or Property (DLP). Refer to emergency plan section for information about how we will deal with all minor and serious injuries.

Prince William Sound is also home to Orca, humpback, and grey whales. Although we hope to have whale sightings from a distance, we are aware of the rare but dangerous chance of a whale breaching too close to the kayak and capsizing it. To avoid this concern we will do our best to maintain a safe distance from the whales but if they appear too close to us we will brace our kayaks against one another to prevent capsizing. We expect that schools of Orcas will be evident, based on the species tendency to swim just below the surface of the water, with their dorsal fins visible above the waterline.

#### Weather:

Summer weather in PWS ranges between 40 and 70 F, and has an average of 15 feet of rainfall annually. While rain can be easily dealt with given the right equipment, if one is not prepared, extended cold and wet conditions could lead to a host of medical problems, such as hypothermia and trench foot. To limit the risk of hypothermia due to perpetual wetness, we will kayak in wet suits with spray tops, carry with us hardshell jackets, and wear synthetic layers to reduce water absorption. With tarps, the tent, effective raingear, and two sizes of dry bags for gear storage while on the water, we will minimize the effects of a potentially rain filled trip. We will be cognizant of the weather, and work to avoid getting stuck in the rain.

Along with rain, we will be exposed to midmorning and midday sun nearly every day. The reflection of the water on our faces as we kayak will put us at a higher risk of a sunburn. To avoid the discomfort and fatigue that comes with a moderate to severe sunburn, we will bring high SPF sunscreen, wear sun protective hats, and wear sunglasses each sunny day.

Wind is also a major concern with regards to our ability to kayak. Our route hugs the shoreline, where we expect winds to be less dangerous than in the middle of the bay, due to shelter from land. Our proximity to beaches means we can easily beach the kayaks if necessary. Our route is also mostly protected by islands or channels, reducing the risk of high winds. The most exposed paddle day will be Day 8, from Eshamy Bay to Port Nellie Juan. We will be carrying a handheld marine VHF radio from which we can get the local maritime weather forecast, and hear of any dangerous events or warnings in the area. Having this radio to tune into one of the ten NOAA weather channels will help us manage our exposure to storms or squalls in our path.

August mornings in Prince William Sound are typically calm, and followed by a day breeze in the afternoon with about 1-3 ft waves in more exposed areas. We will account for these day breezes and plan to do most of our paddling in the mornings, starting each day around 7 am. We have allowed several extra days in our planning of this trip to account for weather that prevents us from paddling. We will never travel in a small craft advisory or any weather in which we feel unsafe.

If we happen to get caught in a storm, we will move to shore as quickly as possible, which we do not expect to be very far, as we plan to travel within 100 m of the shoreline throughout the trip. We will then set up camp quickly and efficiently; we will tie down our gear and wait out the storm. If it is an electric storm, we will take shelter a distance from the water, and assume lightning position if the storm comes within 5 miles of our location.

Fog is our final major weather concern, especially for small vessels such as kayaks. Primarily, we will avoid traveling in thick fog, and use our rest days to avoid this danger. In less dense fog, we will stay within visibility of each other and the shoreline. Laminated marine charts for each day's journey will aid us in fog by showing us depths and detailed geography of our route, which we can then reference with our location on GPS to avoid collisions and bottoming out on rock ledges. We will equip our boats with fog lights on both of our bows, and carry a fog horn to make our presence more clear to each other and potential others. We will also use our hand-held GPS to insure we are following our set course, and are able to retrace our route back to our previous campsite if necessary.

## Tides, Waves and Currents:

Waves increase the likelihood of getting wet and if faced at the wrong angle, capsizing. Large and steep waves are especially dangerous and will be avoided whenever possible. Waves reflected off a cliff or waves where two currents merge tend to be steeper and less predictable. We will use extra caution in areas where currents intersect such as a bay opening into a larger bay in the middle of the ebb. In an area with large tidal currents, we will time our exposure with the slack tide. We will always paddle at 45 degrees or 90 degrees at waves to avoid capsizing. We will continue to monitor wave size and will stop paddling and safely get to the closest beach if waves exceed 3 feet from trough to crest. This can be determined by assessing the wave size in comparison to another kayaker. If the kayaker ever disappears completely behind a wave the wave is larger than three feet at its crest.

Surf can easily capsize a kayak. If there is surf due solely to a swell, but calmer waters further out, we will avoid the surf and kayak in deeper water. If the surf is due to wind and there are also large waves further on the water we will find a place to beach the kayaks with minimal surf and safely bring them on shore. Furthermore, large swells are produced by glacier calving, in which floating ice can roll in the current towards kayakers. To avoid this, we will maintain a distance of 0.5 miles from calving glaciers and floating ice in order to reduce our impact with large swells.

Tides in PWS have a range of up to 20 feet, and can be either a helping hand or a deadly trap in maritime travel. First of all we will each have a laminated tide book for the area so we can have it on us at all times without worrying about it getting wet. Many tide books in Alaska are for larger areas and may not be accurate in the exact area where we are, but by paying attention to the tide the first few days, we will be able to calibrate it to our exact area. We will use our GPS and geographical landmarks to be sure we are always on course, and be aware of any tide that is pulling us off course. We will look at the tide book and route each morning to determine where we will be going with the tide, where we will be going against it and where tide related risks could come up. Tides are also a concern with campsites and beaching the kayakers. We will be aware of how fluctuations in tide will affect us, our boats, and our gear. We will use our tide book to make sure we are camping outside of the tidal zone, and that our kayakers are secured away from the tidal zone.

To prepare for potentially high surf, we will assess the weather when breaking down and setting up camp each day. If the weather is unfavorable and surf is choppy, we will not camp on exposed beaches as we normally would. Tidal flats are also something to avoid when camping, moving gear, and launching each morning. We anticipate that tidal flats will be marked on our topo maps, but will take into account that most beaches have some slimy rocks to be wary of if we load our kayakers at low tide.

## Glaciers and Ice

Glaciers have played a major role in shaping the Chugach Mountains and PWS into their present forms. While we excitedly anticipate the Sound's magnificent glaciers, there are several precautions we must take when traveling amongst glaciers and floating icebergs. Prince William Sound has roughly 150 glaciers. These glaciers frequently calve ice, creating icebergs in the bay. One prominent glacier on our route is the Chenega tidewater glacier, which is two miles long. When passing glaciers on our route, we will maintain a safe distance of 1/2 mile from the glacier, as to avoid calving glaciers and the swells they produce. Ice can suddenly torpedo from below kayakers. The nose of the glacier can extend below the water and out into the bay some distance. Large pieces of ice can break off from this submerged tongue of the glacier and surface without warning. This is another reason why we will maintain a safe distance from the face of the glacier.

To judge our distance from the face, we will use the falling ice to count the number of seconds from when we see a piece of ice fall, to when we hear the sound of the ice hitting the water. Sound travels a mile in 5 seconds. Therefore, if we count 2 to 3 seconds from the time we see the ice fall to when we hear it, we know we are about one-half mile from the ice face. If we do indeed witness a glacier calving, we will receive the waves it causes head on. Another concern is getting trapped by floating ice while kayaking. We will avoid areas with a large amount of floating ice and keep our distance from large icebergs.

If we hit a floating iceberg and our boat is damaged, we will assess the damage to the vessel. If we decide the kayak is able to be repaired using our kayak repair kit, we will do so. If the kayak is retaining water rapidly, we will tow the leaking vessel to shore as quickly as possible. If the leak is large or the kayak is extremely compromised, we will call a water taxi to transport us to the nearest town where we can get the kayak repaired, or else find a new kayak to finish our trip

## Other Boats

PWS is traversed by fishing vessels, oil tankers, recreational boaters, charter fishermen, and cruise liners. Another danger of kayaking in this area is getting hit by another boat. To avoid collision, we will avoid travel in thick fog, travel close to the shore and carry a pressurized noise gun (fog horn) and affix fog lights to the bows of our boats to alert other boats of our presence.

Although kayakers have the right of way in boat traffic, and the areas we are planning to travel are quite remote, we understand that kayaks are often hard to see and do not appear on marine radar. The ferries, fisherman, and oil transporters that pass through Prince William Sound are particularly large and move at a clip. We will not cross the paths of any of these vessels, as we are less likely to encounter them close to the shore and out of major shipping lanes. We will also carry our marine VHF radio, and if needed, we can hail a nearby boat on channel 16 and notify them of our presence and travel path.

## Subjective Hazards

### Hypothermia and Cold Shock

Water temperatures in the Sound are between 40 and 50 degrees F, and even colder near glaciers. Hypothermia is a serious concern in the event of capsizing. We will be vigilant in our distance from the shore and be alert of waves produced by other boats or glacial calving. If a capsizing occurs, we will develop a protocol to efficiently and immediately remove the capsized paddler out of the water and to the nearest shore. Because hypothermia is such a threat, we will each wear wetsuits with spray tops to retain as much heat and dryness as possible if we capsize. Alongside hypothermia, we recognize cold shock as a serious hazard of capsizing. Cold shock produces uncontrollable rapid breathing and gasping for air that makes a person susceptible to inhaling water. The following panic typically causes increased blood pressure and cardiac strain that can lead to cardiac arrest. To avoid this, we will be sure to remove the person from the water as soon as possible, through an assisted rescue or a solo re-entry into the person's kayak. We will move quickly to the nearby shore. Once on shore, the other will change the wet person into warm clothing. We will also use supplies to deal with a chilled person, be it warming by a campfire, a space blanket, warming in a sleeping bag, and/or using hand warmers, depending on the severity of the condition.

### Dehydration

Dehydration is common in saltwater travel, however, PWS is a typically mesic ecosystem with plenty of freshwater streams and rivers. We do not anticipate that fresh water will be inaccessible at any point. Despite the high availability of fresh water, we will meticulously plan where our water will come from each day based on our land maps, and approximately how much we will need given the mileage we are traveling, how much we are cooking, and our needs for personal hygiene. We will always carry at least a half gallon of water per person to mitigate the risk of dehydration. We will treat all of our water with iodine and pump it through a filter in order to kill bacteria.

### Trench Foot

Trench Foot is a condition caused by extended exposure to cold water, and is common in long kayaking or fishing expeditions. A severe case of Trench Foot typically ends in amputation. To reduce the risk of trench foot, we will check ourselves for symptoms, and avoid extended exposure to cold water that might exacerbate trench foot. If one of us does get Trench Foot, we will take extra care to keep our feet and socks dry, use polypropylene sock liners, and wear

camp shoes with plenty of ventilation. If a case of Trench Foot progresses to an extreme case, where blisters and ulcers develop, skin starts to peel off and tissues begin to die, and there is the potential for gangrene, we will evacuate via water taxi and rush to the nearest hospital in Anchorage.

### Overexertion

With seakayaking being a strenuous physical activity, overexertion is a hazard that proper management and awareness will help us avoid. Furthermore, it is unsafe to kayak when exhausted, as we will be less effective physically and therefore slower and less powerful. When overtired, we also will have delayed reaction time, increased irritability, and our decision making and judgement will be hindered. To mitigate the effects of overexertion, we will recognize the symptoms of physical and mental exhaustion, and rest and snack appropriately in order to reduce the effects of over exhaustion. We will also use our strategically scheduled layover days for rest and reenergizing.

### Wet Exits

We classify wet exits as subjective hazards due to the danger that comes with poor execution. If we are unable to roll back upright or perform a T-rescue due to the weight in each of our kayaks, we must be able to quickly and effectively wet exit. Due to the ~40 degree F water temperature, extended time in the water could be seriously dangerous. In case of a wet exit, we will work to get the person back into their boat using the assisted rescue methods we will learn in the respective classes we will take. Immediately following, we will paddle to shore as quickly and safely as possible. If the wet exit is in the surf, we will swim away from boat because being in the surf with a kayak can be very dangerous. We will then wait for the surf to deliver the kayak back to shore. Once the person is safely to shore the other person will work to warm the person to prevent hypothermia. The other person will assess the capsized individual's circulation, breathing, and vitals. We will prepare for this potential hazard by perfecting our wet exit and kayaking skills in the months leading up to our expedition. In the case of a lost paddle, we will bring a fold up spare paddle in our boats.

### Hazard Mitigation

We have included our hazard mitigation plans into the objective and subjective hazard sections. First we describe the hazard, then extensively explain how we will mitigate this hazard and how we would act in the case that we could not mitigate it completely. The hazards we cover in Objective Hazards are: Wildlife, weather, tides and currents, glaciers and ice, and other boats. The subjective hazards we have covered are: hypothermia, dehydration, exhaustion, trench foot, and wet exits.

### Special Preparedness

Becky sometimes experiences poor circulation in her hands and feet in cold weather, and realizes that her poor circulation could be a potential hazard at points during the trip. She deals with cold extremities that take an extended amount of time to warm back up. She anticipates that on the water, her hands will experience extended exposure to spray while paddling, and to combat this she will wear sea kayaking gloves. Furthermore, she will be sedentary while kayaking, meaning reduced circulation to her feet while in the boat. For this reason, she will wear neoprene socks and neoprene booties in the boat. On land, Becky will wear wool gloves and bring 4 pairs of wool socks to reduce chill on land. She will also bring a few packages of hand warmers, in the event of extreme discomfort. Becky also knows how to do the circulation dance, and can readily perform it to warm herself back up.

Maggie is still recovering from a lumbar spine injury that occurred the summer of 2012 due to commercial fishing. Although the recovery is a long process she has improved significantly through physical therapy and other measures. Through the recovery process her biggest success has been learning to better understand her body and her limitations. She has been able to pin-point the activities and intensities that will be harmful to her back and those that won't. Kayaking does not have any of the compression movements that are damaging, such as aggressive skiing or running. Although there is some lifting required for moving the kayaks, she will use proper form and never lift a load that is too heavy for her.

Training is the best way for her to avoid injury from a repetitive physical activity and she will take training very

seriously because of this. She will not only take kayaks out on Kachemak bay to train, but also return to a physical therapist to get specific information on how to best prepare herself. In the rare case that she does worsen her injury, the consequences will not be severe. Even at the worst the injury ever was, she was still able to perform day to day activities with only minimal pain. If she re-injures herself on the trip, after a day or two of resting, stretching and physical therapy she will be able to resume kayaking and be able to finish the trip. We have allowed 5 rest days for such events and there are also ways to make our route to Whittier more direct in case it is needed to kayak less and finish sooner.

### **Emergency Preparedness**

Depending on the severity of the injury we will use different strategies of evacuation. For a portion of the trip we will be further than a 6 hour boat ride from Whittier, which is a two hour drive from the major hospitals in Anchorage. Due to the distance and remoteness of our location, we recognize the potential threat small injuries could have if they escalated in the backcountry. Isolation is one of the principal attractants of the expedition, but this means that accessible medical aid is not always available. For this reason, we will address and take care of all cuts, bruises, aches, and blisters so that no small malady escalates. We will assess the severity of the injury, see if we can deal with the injury with the supplies in our First Aid kit, and decide if it warrants a visit to Chenega Bay Clinic or the Whittier Hospital. There is a small clinic in Chenega Bay that can handle minor injuries and assess the severity of an injury and order a medevac. Eshamy Lodge is marked on our maps and is about 2 miles from our campsite our 7th night. Eshamy Lodge does not have any medical facilities but they have cell phones and fast motor boats and could assist us in case of a type I or type II injury.

If one of us is injured, and it is a "life or limb" situation, we will use the VHF radio, satellite and EPIRB to immediately call for an emergency evacuation by helicopter to a hospital in Anchorage. With a VHF, we can hail nearby vessels and the coastguard using channel 16. An EPIRB (Emergency Position Indicating Radio Beacon) is a location tracking device that, when activated, alerts search and rescue services in the event of an emergency. It does this by transmitting a coded message on the 406 MHz distress frequency via satellite and earth stations to the nearest rescue coordination center.

Some EPIRBs also have built-in GPS which enables the rescue services to accurately locate us to +/- 50 metres. EPIRBs must be registered with NOAA, and false signals on unregistered EPIRBs can result in fines up to \$10,000. EPIRBs typically retail between \$200-\$1,500. Fortunately, Maggie already has an EPIRB that we can use. However, because the EPIRB will be changing boats from Maggie's fishing boat to our kayaks, we will have to re-register the EPIRB with NOAA. As we said before, if evacuation is necessary, we will use our EPIRB to call for emergency evacuation to the nearest hospital in Anchorage.

If a limb or life is not in danger, we will go to the closest location where we can contact a water taxi to take us to Whittier or use the medical assistance offered in that location. Listed below are our medical resources at each stage of the trip:

Day 1-5: We will paddle back to Chenega and go to the medical clinic in Chenega which is located at 1 Main st. (less than ¼ mile walk from the Chenega Harbor)

Day 6-11: We will paddle to Eshamy Lodge and use their phone and medical equipment until a water taxi can bring us safely to Whittier

Day 11- Day 15: If it is a minor injury that does not need immediate attention, we will continue paddling directly to Whittier and use the medical facilities there. The Whittier hospital is located at 9080 Colima Road, Whittier Alaska.

We anticipate that standard First Aid Kit contents will be necessary, such as bandages, gauze, antibiotic cream, ibuprofen and acetaminophen tablets, as well as a number of items that are specifically important to a sea kayaking trip. The following paddling first aid kit is adapted from a paddling first aid kit from another sea kayaking trip, and changed to better fit our trip's needs:

## First-Aid Kit Contents

### BANDAGES, WOUND CARE

Latex gloves (4)  
Adhesive bandages (10, assorted sizes)  
2 X 2-inch sterile gauze pads (4)  
4 X 4-inch sterile gauze pads (4)  
2-inch rolled gauze (1 roll)  
4-inch rolled gauze (1 roll)  
Butterfly wound closure strips (10, assorted sizes)  
Second-Skin Dressing Kit  
2"x2" Water Jel all-purpose burn dressing, sterile (3)  
Cotton swabs (5)  
1/2 inch adhesive surgical tape (1 roll)  
Safety pins (10, assorted sizes)  
Superglue (cyanoacrylate)

### MEDICAL INSTRUMENTS

Microshield CPR face shield  
Finger splint  
Foil Blanket  
Digital thermometer  
Tweezers  
Magnifier  
Liquid soap  
Antiseptic cleansing wipes  
Iodine (1 oz)  
Hydrogen peroxide  
Tourniquet  
First Aid Reference Booklet  
Accident/SOAPA report, notepad, pencil & pen

### MEDICATION

Aspirin, 20 tablets  
Acetaminophen (Tylenol), 20 tablets  
Ibuprofen (Motrin), 20 tablets  
Diphenhydramine (Benadryl) 25 mg, 20 tablets  
Dimenhydrinate (Dramamine) 50 mg, 20 tablets  
Loperamide HCl (Imodium A-D), 20 tablets  
Burn relief gel (1 tube)  
Bacitracin ointment (Neosporin) (1 tube)

### COMPACT FIRST AID KIT (inside Bailout Bag, PFD, or hydration pack)

Butterfly wound closure strips (2)  
Adhesive bandages (6, assorted sizes)  
2 X 2-inch sterile gauze pads (2)  
2-inch cohesive elastic wrap/bandage (1 roll)  
Insect-sting relief (1 pkt)  
Bacitracin ointment (Neosporin) (1 pkt)  
Antiseptic cleansing wipes  
Moleskin  
Ibuprofen (Motrin), 6 tablets  
Mini Tweezers

**Safety pins (2)**

We recognize that we should also bring things to mend minor problems with our kayaks and rips in our gear, so we will bring a roll of ½ inch electrical tape, and a roll of duct tape.

**Emergency Resources**

911 Emergency

Chenega Bay Clinic  
Chenega Bay, AK 99574  
(907) 573-5129

Whittier Hospital  
9080 Colima Rd, Whittier, CA 9060  
(562) 945-3561

Anchorage Regional Hospital  
2801 Debarr Road, Anchorage, AK 99508  
(907) 276-1131

US Coast Guard (Cordova base)  
PO Box 691, Cordova, AK 99574  
(907) 424-5987

Channel 16 on VHF radio

Alaska Search & Rescue Coordination Center  
Emergency Long Distance: 1 (800) 420-7230  
Local Anchorage Number (emergency and nonemergency) 1 (907) 551-7230

**V. Budget****Budget**

[RKMFG Budget.docx](#) (96KB)  
Uploaded Jan 3 10:33pm by Margaret Bursch

**Appendix D****Transportation**

\$886.00

**Food and Fuel**

\$490.28

**Maps and Books**

\$27.95

**Communication Device Rental**

\$54.00

**Permits/Fees**

\$0

**Gear Rentals**

\$1666.00

**Total Funding Request**

\$3,000

**Cost Minimization Measures**

We are willing to cover the difference for how much the expedition will cost and the amount we have requested. We recognize that the estimated costs associated with our trip are merely estimates, and can be manipulated as we finalize our gear list and move forward with preparations. We expect these costs to change slightly as we receive feedback about our trip and how to be more efficient in our budgeting.

Cost Mitigation:

In planning and budgeting this expedition, we have made several measures to reduce cost.

We are using Maggie's personal vehicle as transportation from Anchorage to Whittier. Using Maggie's car saves us transportation money because we can both drive to Whittier for much cheaper than taking the public transportation options: the shuttle (\$25 per person) or train (\$80 per person). Because we have a car, we have more options for kayak rentals. We found the cheapest sea kayak rentals in Whittier to be \$625 per person for 15 days. But because we have transportation, we can go to a less expensive rental place in Wasilla for \$480 per person for 15 days. This saves us \$125 per person because we can drive to Wasilla (48min from Anchorage) to rent the kayaks.

We will be using a good deal of equipment from Maggie's fishing boat and home in Homer (VHF radios, GPS, distress flares, fog lights, wetsuits and EPIRB).

Because we already have access to this equipment, we are familiar with its operation, and we will save significant money in rentals or purchases. We will bypass the rental fees that come with renting a VHF radio (\$90), buying an EPIRB (\$250-\$1,000), and renting handheld Garmin GPSs (at least \$200). Flares typically cost \$50 to rent for an extended trip such as ours, but we anticipate that Maggie will have leftover flares following the end of her fishing season in late July. Flares expire after one season of use. Finally, we can use two of Maggie's wetsuits, should we decide to wear wetsuits instead of dry suits.

We will download, print, and laminate our own maps and charts instead of buying them.

We will take the AMHS ferry to Chenega Bay instead of a water taxi

The ferry ride costs total of \$261 for two kayaks and two people, whereas taking a water taxi to Chenega Bay would be approximately \$1,600, and flying by prop plane would be \$235 per person, not including kayaks.

We will rent neoprene booties, neoprene gloves, a trowel, bug spray and sunscreen from the Ahlberg Gear House at CC, and hopefully will receive the 100% employee discount because Maggie was an employee at the Gear House for a few years. Furthermore, if we donate a lot of our purchased gear at the end of our expedition, we hope the gear house will be generous with letting us rent gear from them.

We have worked to design the most affordable trip for everyone involved. Generous funding from the Ritt Kellogg Memorial Fund is very important for us to be able to do this trip, and for that reason we have made efforts to reduce cost.

**VI. Expedition Agreement**

**Expedition Agreement**



**Appendix E**

## Appendix A

~4:30 pm: The ferry lands on the eastern shore of Evan's Island in Crab Bay, which is part of the village of Chenega. We will load all of our gear in our vessels, and suit up for the first leg of our trip, a relatively short piece to get the feel of the water and arrive at camp before late evening. The put-in at Chenega Bay is located at the boat launch, which is a short haul from the ferry terminal. The boat launch is a steel ramp that floats up and down with the tides. If the sea level is too low to launch from the boat ramp, we will launch from the beach at the southern end of the dock.

5:00 pm: We begin paddling approximately 3.8 miles north east along the shoreline to our first campsite, located in an inlet ('Camp 1' on the map). We anticipate we will reach camp around 5:30-6 pm, where we will first secure our boats outside of the tidal zone, find a spot to set up camp, do so, then locate water and begin cooking. Sunlight typically lasts until ~10:30 pm in early August in Alaska, so the extended daylight will allow us to get everything done before nightfall.

Day mileage: 3.8

Total mileage: 3.8



*August 5 (Day 2):*

7:00 am: Wake up, make breakfast, break down camp, fill up water for the day, and go over the day's itinerary.

Load up boats and launch.

We will paddle a total of 11.9 miles northwest to a small cove on the east side of Square Island. We will take a lunch break after the first 8.3 miles at the tip of Evans Island, before we cross Prince of Whales passage. We will paddle the remaining 3.6 miles to the east side of Bainbridge Island, where we will camp.

Day Mileage: 11.9

Total Mileage: 15.7



**August 6 (Day 3):**

Begin paddling 10.0 miles to the tip of Dual Head Point, after we cross Whale Bay. We will paddle 4.1 miles to a small scenic cove across Bainbridge Passage for lunch, then continue the final 5.9 miles to Dual Head Point where we will camp for the night.

Day mileage: 10.0

Total mileage: 25.7

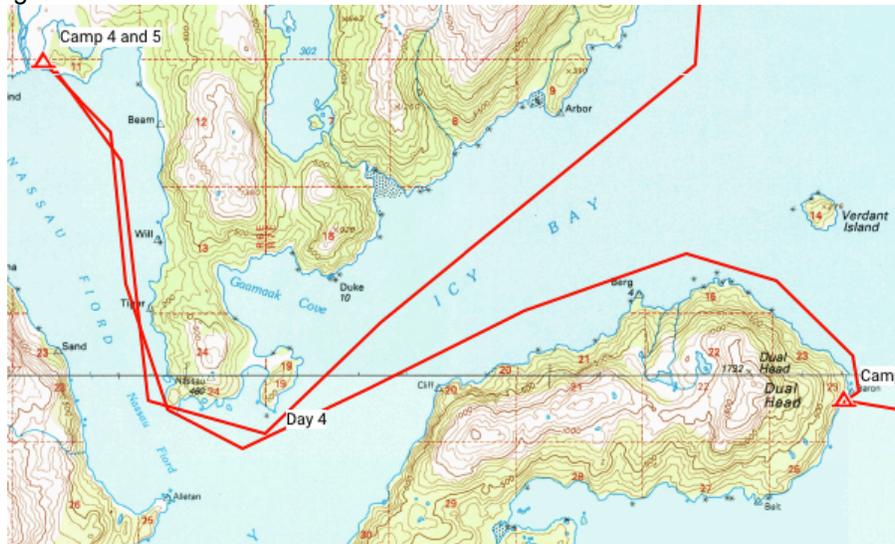


**August 7 (Day 4):**

We will paddle around the tip of Dual Head Point into Icy Bay to connect with Nassau Fjord, circumnavigating Chenega Glacier. We will paddle 9.6 miles to our campsite at the end of Nassau Fjord, stopping to take a lunch break just before entering Nassau Fjord, after about 6 miles of paddling.

Day mileage: 9.6

Total mileage: 35.3



*August 8 (Day 5):*

We will use this day as a rest day, where we will read, write, and re-organize gear before continuing on. This day is potentially interchangeable with any poor weather days throughout the trip.

Day mileage: 0

Total mileage: 35.3

*August 9 (Day 6):*

We will paddle 15.0 miles into Dangerous Passage, taking a lunch break after 9 miles on the southeast face of Jackpot Peak. We will camp that night in a lagoon, well protected from the east by Chenega Island.

Day mileage: 15.0

Total mileage: 50.3



*August 10 (Day 7):*

8:00 am: We will paddle up Dangerous Passage, taking a lunch break after 10 miles of paddling before rounding the point into Eshamy Bay. We will camp on the protected beach of Eshamy Bay after paddling a total of 14.5 miles.

Day mileage: 14.5

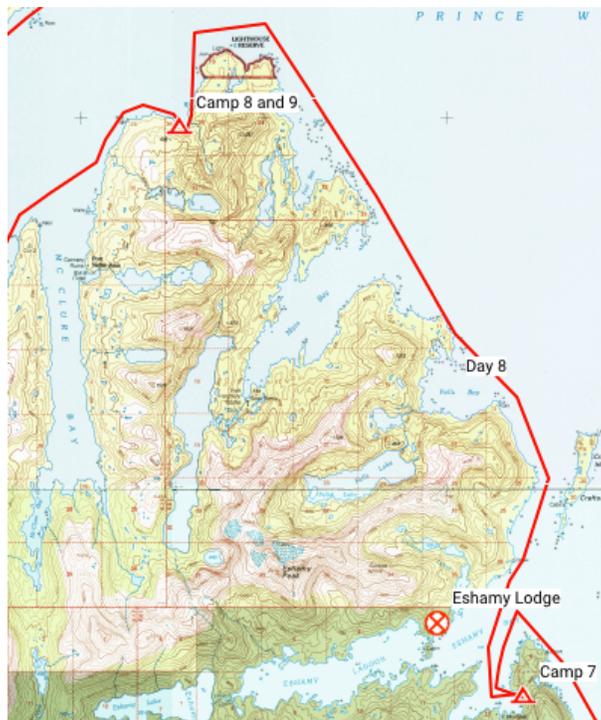
Total mileage: 64.8



*August 11 (Day 8):*

We will face the most exposure on Day 8, therefore we follow it with a rest day, in case we need to wait for weather in Eshamy Bay. On Day 8 we will paddle from Eshamy bay around the Lighthouse Reserve to a small protected cove just southwest of the Lighthouse Reserve. We will paddle 15.2 miles to near Lighthouse Reserve. We will stop for lunch after 7 miles on a beach just outside of Falls Bay.

Day mileage: 15.2  
Total mileage: 80.0



*August 12 (Day 9):*

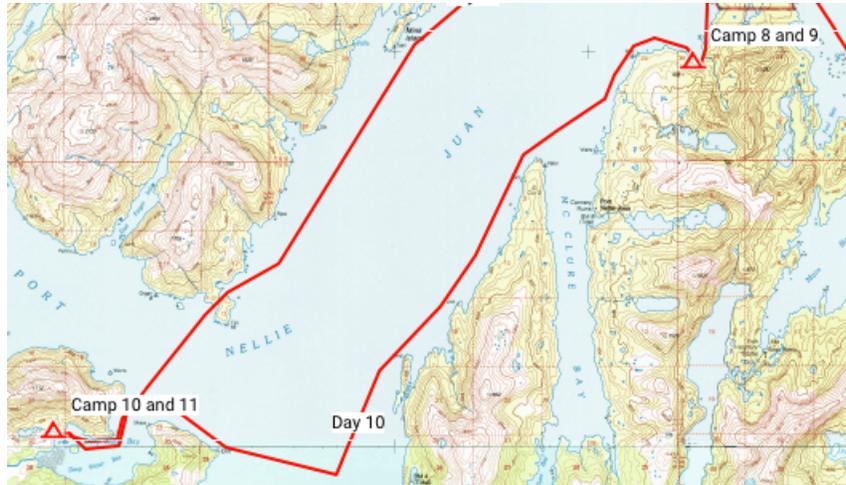
This will be a rest day. If we are on schedule, we will spend this day relaxing around camp.

Day mileage: 0  
Total mileage: 80.0

*August 13 (Day 10):* We will paddle 13.6 miles Into Port Nellie Juan Bay, taking a lunch break after 7 miles and ending our day in Deep Water Bay.

Day mileage: 13.6

Total mileage: 93.6



*August 14 (Day 11):* We will probably use this trip as a rest day. Depending on how the trip has been going, if we lost days to weather, or need another break, we will take another rest day.

Daily mileage: 0

Total mileage: 93.6

*August 15th (Day 12):*

This is one of our longest days. we will paddle from Deep Water Bay, across Nellie Juan Bay into Culross Passage. We will camp on the west side of culross passage on the North side of long bay.

Daily mileage: 17.8

Total mileage: 101.4



*August 16th (Day 13):*

We will paddle out of Culross Passage and across Cochrane Bay to our final camp in Blackstone Bay beside Tebenkof Glacier. We will stop for a break 7 miles into the paddle for lunch before crossing Cochrane Bay.

Daily mileage: 14.5

Total mileage: 115.9



*August 17th (Day 14):*

This day is another optional paddle (marked in blue). Depending on how the weather has been and whether we have been able to stay on schedule as well as our well being we will either rest, or paddle up Blackstone Bay to Northland Glacier. This detour would be a total of 24.6 miles round trip if we went all the way to Northland Glacier and back.

Daily mileage: 0

Total mileage: 115.9

*August 18 (Day 15):*

For the final day of our paddle trip, we will cross Blackstone Bay into Passage Canal, past Shotgun Bay and into Whittier! We will stop for a lunch break after the first 7.7 miles, outside of Shotgun Bay.

Daily mileage: 12.7

Total (Final) mileage: 128.6





In Whittier, we will collect Maggie's car, return all of our gear, and officially finish our trip.

### *Charts & Maps*

We will acquire USGS topo maps for small scale land navigation, particularly for locating streams and rivers for freshwater. The inch to a mile scale maps give the coastal detail needed for kayakers. Large and small scale marine charts are necessary for this trip. We will download a set of marine charts from NOAA, which will give us detailed information about water depths, the locations of rip tides and strong currents, heavily used shipping channels, and the locations of aids to navigation like buoys and light stations in PWS. We will laminate these charts and place the appropriate large and small scale charts on our kayak deck each day. Below are a few screen shots from charts, plus links to full NOAA PWS charts we will need:

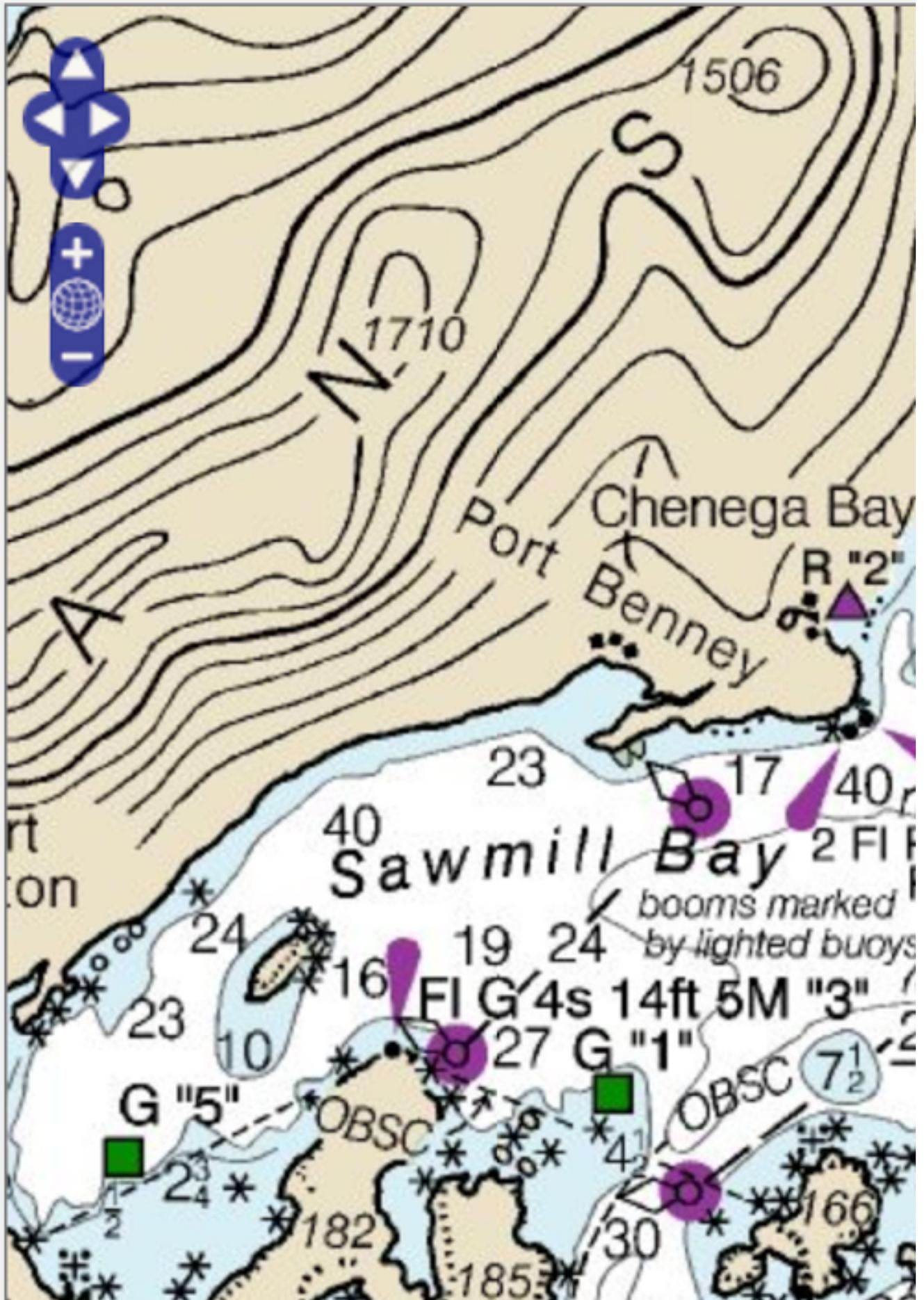
<http://www.charts.noaa.gov/OnLineViewer/16700.shtml> (All of PWS) (Large scale)

<http://www.charts.noaa.gov/OnLineViewer/16701.shtml> (PWS Western Entrance) (Contains routes for days 1, 2, 3, and some of day 4)

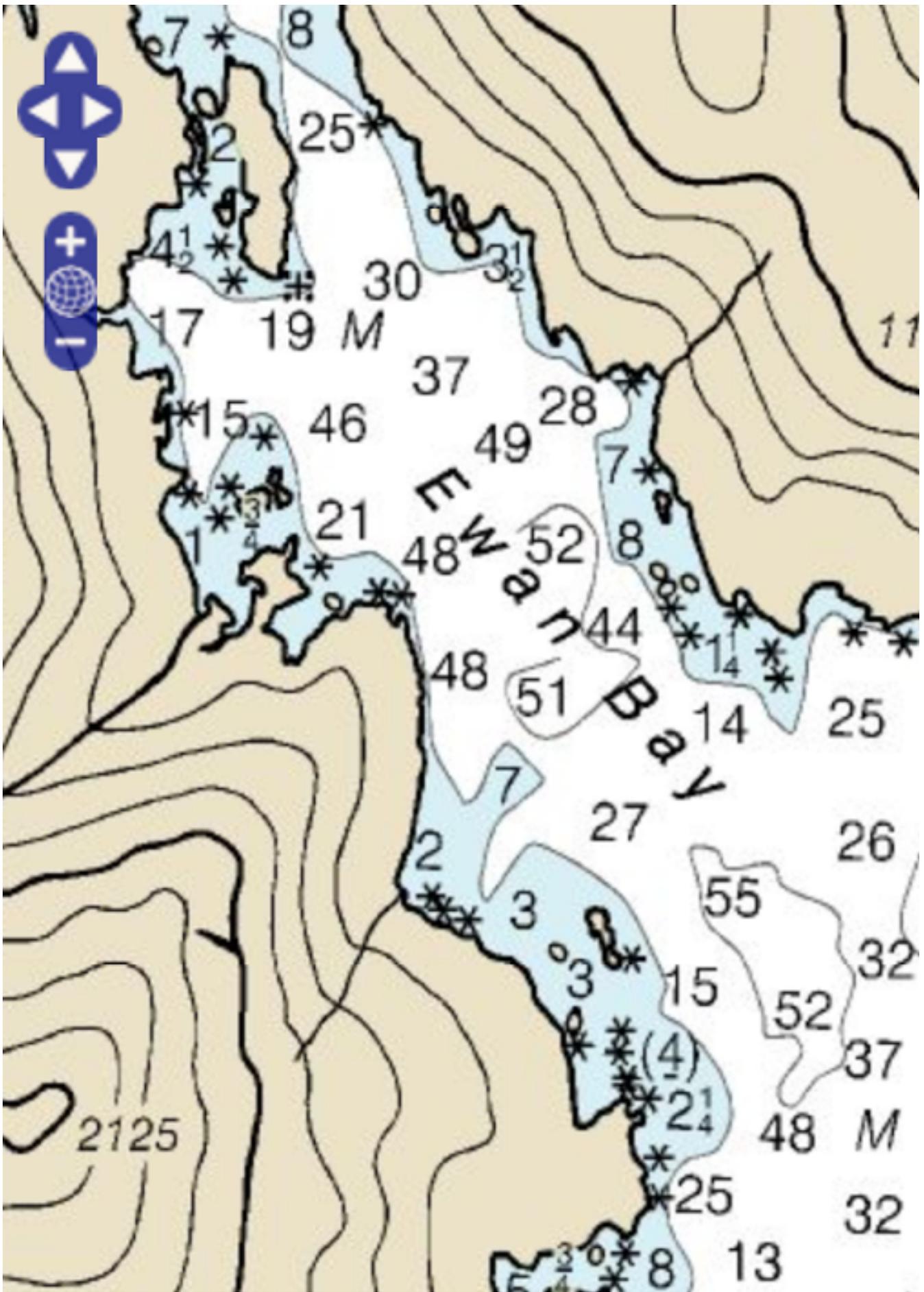
<http://www.charts.noaa.gov/OnLineViewer/16702.shtml> (Latouche Passage to Whale Bay) (Small scale)

<http://www.charts.noaa.gov/OnLineViewer/16705.shtml> (PWS- Western Part) (Contains routes for rest of days)

<http://www.charts.noaa.gov/OnLineViewer/16706.shtml> (Passage Canal incl. Port of Whittier) (More detailed chart of final stretch of Day 15 into Whittier)



Day 1 Chart



## Appendix B

### *Food List*

We will do our grocery shopping at the Safeway on Fairbanks st. in Anchorage before we depart for our trip. We came up with price estimates based on amazon.com and shopping.google.com. Food is divided among the categories: breakfast, lunch, dinner, snack, and drinks. We estimate that we will consume about 2,500 calories per person per day, and our food is divided up accordingly. The quantities of each item are measured in pounds in order to have a clear breakdown and total poundage. The resources we used to compile this food list were Food List for Backpack and Kayak Trips, and Maggie's knowledge of portions and meal planning from 10 years of planning, shopping for, and preparing large meals for fishing crews on commercial fishing boats.

| <b>Food</b>                              | <b>Amount (lbs)</b> | <b>Cost</b> |
|--|---------------------|-------------|
| <b>Breakfast</b>                         |                     |             |
| Pancake mix                              | 1.5                 | \$8.53      |
| Coconut Oil                              | 0.33                | \$12.99     |
| Chia seeds (egg substitute for pancakes) | 1                   | \$4.89      |
| Oatmeal                                  | 4.5                 | \$12.50     |
| Cream of Wheat                           | .75                 | \$9.47      |
| <b>Snacks</b>                            |                     |             |
| Raisins                                  | 1.25                | \$2.95      |
| Dried blueberries                        | 1.25                | \$13.88     |
| Dried cranberries                        | 1                   | \$8.04      |
| Dried apricots                           | 1                   | \$9.68      |
| Walnuts                                  | 3                   | \$21.71     |
| Almonds                                  | 3                   | \$25.36     |
| Chocolate chips                          | 1.5                 | \$15.28     |
| KIND bars                                | 2.25                | \$13.51     |
| Nature Valley bars                       | 4.3                 | \$24.58     |
| Crackers                                 | 1.25                | \$9.08      |
| <b>Lunches</b>                           |                     |             |
| Peanut butter                            | 2                   | \$12.00     |
| Jelly                                    | 0.75                | \$7.99      |
| Cheese                                   | 3                   | \$30.69     |

|                      |      |         |
|----------------------|------|---------|
| Dried Hummus         | 0.75 | \$6.38  |
| Carrots              | 3    | \$4.46  |
| Apples               | 5    | \$9.67  |
| Mustard              | 0.75 | \$2.98  |
| Oranges              | 5    | \$11.99 |
| Tortillas            | 1.25 | \$9.40  |
| Bagels               | 2.5  | \$15.98 |
| Pita bread           | 2    | \$14.99 |
| <b>Dinner</b>        |      |         |
| Quinoa               | 1.5  | \$9.38  |
| Lentils              | 1.5  | \$4.76  |
| Canned pinto beans   | 2    | \$2.98  |
| Canned refried beans | 2    | \$4.18  |
| Tortillas            | 1.5  | \$9.40  |
| Salsa                | 1    | \$3.25  |
| Brown rice           | 1    | \$3.49  |
| Canned corn          | 2    | \$2.18  |
| Cheddar cheese       | 1.5  | \$14.97 |
| Coconut milk         | 2    | \$4.72  |
| Carrots              | 1    | \$9.95  |
| Cabbage              | 4    | \$11.99 |
| Onions               | 3    | \$7.78  |
| Canned tomatoes      | 2    | \$3.35  |
| Ramen noodles        | 1.5  | \$2.98  |
| Pasta                | 3    | \$7.57  |
| Red sauce            | 2    | \$2.15  |
| Parmesan cheese      | 0.75 | \$10.60 |
| Dried pesto mix      | 0.5  | \$5.67  |

|                |                  |                                      |
|----------------|------------------|--------------------------------------|
| Couscous (2)   | 1                | \$4.30                               |
| Taco seasoning | 0.3              | \$1.89                               |
| Curry powder   | 0.2              | \$4.67                               |
| Garlic Powder  | 0.1              | \$2.96                               |
| Salt           | 0.3              | free                                 |
| Pepper         | 0.1              | free                                 |
| <b>Drinks</b>  |                  |                                      |
| Tea            | 0.3              | \$4.72                               |
| Hot chocolate  | 0.3              | \$14.14                              |
| Lemonade mix   | 0.3              | \$4.98                               |
| Gatorade mix   | 0.3              | \$3.99                               |
|                |                  |                                      |
| <b>Total</b>   | <b>89.48 lbs</b> | <b>\$481.98 (\$15.87/person/day)</b> |

## Appendix C

### Chart of Dangerous Passage (Part of our Day 6 Itinerary)

#### *Equipment list*

##### Kayaking Gear

Kayak (1 per person)  
Main paddle  
Foldable spare paddle (1)  
Laminated charts, and tide book  
Cockpit cover  
Spray skirt  
Bilge pump  
Wet suit  
Spray Top  
Hardshell/Rain jacket  
PFD  
PFD Strobe light  
Whistle  
Rescue knife  
Neoprene booties  
Neoprene socks  
Sea kayaking paddling gloves  
Compass  
Paddle float (1)  
Foam towline  
Deck Bag (1 small dry bag)

##### Deck bag contents

Handheld Marine GPS  
45+ SPF Sunblock  
First aid kit  
Kayak repair kit  
Fog light  
Fog horn

##### Personal Gear (1 of each per person)

Dry Bag (Large)  
Dry Bag (Small)  
Hiking boots  
Camp shoes (sandals, crocs, etc.)  
4 pairs wool socks  
3 pairs synthetic underwear  
2 sports bras  
2 Synthetic/wool t-shirt  
Synthetic/wool long-sleeved shirt  
Fleece jacket  
Down/Synthetic insulated jacket  
Rain/Wind Jacket, or Hardshell  
Synthetic/wool long underwear  
Fleece pants  
Leggings  
Quick dry pants  
Quick dry shorts  
Water containers (2 gallons per person)  
20° or lower synthetic sleeping bag (with dry bag)

Sleeping pad  
Watch  
Neoprene gloves  
Mosquito net  
Sunglasses  
Billed sunhat  
Wool cold weather hat  
Wool cold weather gloves  
Sunscreen  
Lip balm  
Lighter  
Stove fuel  
2 Steel Carabiners  
Hand sanitizer  
Iodine  
Camera with waterproof case  
Camera battery  
Toiletry kit (toothbrush, toothpaste, floss, unscented soap, diva cup)  
Headlamp  
Extra batteries  
Knife  
Mess kit  
Space blanket  
Camp towel  
Thermos/Mug  
Journal  
Pen, pencil, colored pencils  
Leisure reading  
State issued Photo ID  
Medical insurance card  
Ziplock bag for identification cards, money, and travel documents

Group Gear (expedition brings one unless otherwise specified)

2 person, 3 season tent  
12x12 Tarp (2)  
4 paracord lines  
Pocket Rocket & Whisperlite stoves  
Fuel bottles  
5 L Fuel ( $\frac{1}{2}$  L per day)  
Bug Spray  
Hand warmers  
Pot  
Pan  
Spatula  
Wooden spoon  
Pot grips  
Measuring cup  
Cutting board  
Reusable grocery bag  
Canvas food bags  
Unscented dish soap  
Water filter  
Dromedary  
Trowel  
Binoculars  
GPS

Marine VHF radio (2)  
EPIRB  
Satellite Phone  
Smart phone  
Solar charger  
Fog horn  
Distress Flares (9)  
30m braided nylon line for bear hangs  
4 bear canisters  
Bear spray  
PWS maps  
Wildlife guidebook  
PWS Kayaking book  
Compasses (Hanging on cords)

#### Gear Repair Kit

Marine Goop  
Tent repair kit  
Duct Tape  
Electrical Tape  
Plastic Repair Kit  
Extra bungee cord  
Extra nylon line and paracord  
Zip Ties  
Caribiner

(Plus, well versed in how to properly and effectively fix small issues with kayaks)

### **First-Aid Kit Contents**

#### BANDAGES, WOUND CARE

- Latex gloves (4)
- Adhesive bandages (10, assorted sizes)
- 2 X 2-inch sterile gauze pads (4)
- 4 X 4-inch sterile gauze pads (4)
- 2-inch rolled gauze (1 roll)
- 4-inch rolled gauze (1 roll)
- Butterfly wound closure strips (10, assorted sizes)
- Second-Skin Dressing Kit
- 2"x2" Water Jel all-purpose burn dressing, sterile (3)
- Cotton swabs (5)
- 1/2 inch adhesive surgical tape (1 roll)
- Safety pins (10, assorted sizes)
- Superglue (cyanoacrylate)

#### MEDICAL INSTRUMENTS

- Microshield CPR face shield
- Finger splint
- Foil Blanket
- Digital thermometer

- Tweezers
- Magnifier
- Liquid soap
- Antiseptic cleansing wipes
- Iodine (1 oz)
- Hydrogen peroxide
- Tourniquet
- First Aid Reference Booklet
- Accident/SOAPA report, notepad, pencil & pen

#### MEDICATION

- Aspirin, 20 tablets
- Acetaminophen (Tylenol), 20 tablets
- Ibuprofen (Motrin), 20 tablets
- Diphenhydramine (Benadryl) 25 mg, 20 tablets
- Dimenhydrinate (Dramamine) 50 mg, 20 tablets
- Loperamide HCl (Imodium A-D), 20 tablets
- Burn relief gel (1 tube)
- Bacitracin ointment (Neosporin) (1 tube)

#### COMPACT FIRST AID KIT (inside Bailout Bag, PFD, or hydration pack)

- Butterfly wound closure strips (2)
- Adhesive bandages (6, assorted sizes)
- 2 X 2-inch sterile gauze pads (2)
- 2-inch cohesive elastic wrap/bandage (1 roll)
- Insect-sting relief (1 pkt)
- Bacitracin ointment (Neosporin) (1 pkt)
- Antiseptic cleansing wipes
- Moleskin
- Ibuprofen (Motrin), 6 tablets
- Mini Tweezers
- Safety pins (2)

We recognize that we should also bring things to mend minor problems with our kayaks and rips in our gear, so we will bring a roll of ½ inch electrical tape, and a roll of duct tape.

## Appendix D

### **Budget:**

#### Transportation:

Becky will need a roundtrip plane ticket from DIA to Ted Stevens Anchorage Airport, which will be approximately \$450-\$650, according to some preliminary research.

The two of us will drive:

1. Homer to Anchorage
2. Anchorage to Wasilla to pick up the kayaks
3. Anchorage to Whittier
4. Whittier back to Anchorage after our trip ends

These car trips will amount to a total of 672 miles. Thus, we estimate that the total price of gas will be: (600 miles/20 miles per gallon times \$2.50 per gallon) : \$75

Ferry fee for both people plus kayaks: \$261

**Transportation Total: \$886**

#### Food and Fuel:

Food: \$475.98

5 L Fuel (1/3 L per day): \$14.30

**Food and Fuel Total: \$490.28**

#### Maps, Charts, and Books:

Alone in the Sound by Denis Dwyer \$12.00

Wildlife guidebook: \$15.95

**Maps, Charts, and Books Total: \$27.95**

#### Communication Device Rental:

Satellite phone (\$18/wk x 3 weeks): \$54

**Communication Device Rental Total: \$54**

Permits and Fees: \$0

#### Gear Rental:

| Item                    | Quantity | Price Breakdown:<br>16 days | Total price | Details                                     |
|-------------------------|----------|-----------------------------|-------------|---|
| Fiberglass Single Kayak | 2        | \$200/wk,<br>\$40/day       | \$960       | includes: paddle, skirt, paddle float, pump |
| PFD (x2)                | 2        | \$35/wk, \$5/day            | \$160       |   |
| Dry Bags (Large)        | 2        | \$25/wk \$5/day             | \$120       | Large 11.5" X 24"                           |
| Dry Bags (Small)        | 2        | \$15/wk, \$2/day)           | \$68        |   |
| Spray Top               | 2        | \$10/week                   | \$40        |   |
| Waterproof case         | 2        | \$8/wk, \$1/day             | \$38        |   |
| Solar charger           | 1        | \$28/wk, \$2/day            | \$64        |   |
| Bear Spray              | 1        | \$15/wk, \$2/day            | \$32        |   |
| Bear Containers         | 4        | \$21/wk, \$3/day            | \$184       |   |

**Gear Rentals total: \$1,666**

**Total budget: \$3,124.18**

**Total Funding Request: \$3,000**