

# Y-K DELTA FIELDWORK SAFETY/EMERGENCY PLAN *(revised 13 October 2023)*

**NSF Projects:** Climate-induced sea-level rise, warming and herbivory effects on vegetation and greenhouse gas emissions, Y-K Delta  
& RAPID: Typhoon Merbok in coastal western Alaska: Extent of flooding and impacts on plant communities and ecosystem function

**Project Dates:** 15 May 2022 – 15 August 2024

**Supervisors:** Karen Beard (Principal Investigator)  
A. Joshua Leffler (Principal Investigator)  
Katharine Kelsey (Principal Investigator)

**Crew:** Matteo Petit Bon (Field Crew leader, Post-doctoral Researcher, returning crew member)  
Tyler Williams (MS student, returning crew member)  
xxxx (field technician)  
xxxx (field technician)  
xxxx (undergraduate technician)  
xxxx (undergraduate technician)

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## Project Background Information

**Project:** Climate-induced sea-level rise, warming and herbivory effects on vegetation and greenhouse gas emissions, Y-K Delta

**Project Dates:** 1 May 2022 – 20 August 2024

**Supervisors:** Karen Beard (Principal Investigator)  
A. Joshua Leffler (co-Principal Investigator)  
Katharine Kelsey (co-Principal Investigator)

**Crew:** Matteo Petit Bon (Field Crew leader, Post-doctoral Researcher)  
Tyler Williams (MS student, returning crew member)  
xxxx (field technician)  
xxxx (field technician)  
xxxx (undergraduate technician)  
xxxx (undergraduate technician)

**Project Mission:** The part of the project that will take place at the Refuge will be a field manipulation experiment to quantify how the independent and combined effects of flooding, warming and goose grazing influence vegetation community composition, C cycling and gas exchange. By manipulating the effects of flooding, warming and herbivory we will be able to anticipate how climate change will affect vegetation structure and the carbon source-sink strength of the ecosystem under future climate change. The experiment will be conducted over the summers of 2022, 2023 and 2024. We will take almost daily measurements in plots of aboveground biomass, belowground biomass, and CO<sub>2</sub> and CH<sub>4</sub> flux. We will collect soil samples to analyze microbial community and function.

**Location:** This project is located on Yukon Delta National Wildlife Refuge, Old Chevak Cabin (61°25'51.23"N 165°27'5.31"W). The action area includes the river, and coastal and tundra areas along the nearby rivers and sloughs. Daily fieldwork will be conducted by walking or boating to research sites along river (**Appendix A**).

**Transportation:** Anchorage to Chevak approx. 15 May by commercial air  
Chevak to field camp post-river break-up by boat  
Travel for fieldwork by walking and boating

**Mission Dates:** Mid-May: Camp put-in  
Mid-May to Mid-August: Fieldwork  
Mid-August: Camp take-out and extraction of personnel

**Communication:** Satellite phone (2) for contacts outside camp, (8) hand-held 2-way radio for within/camp, (3) InReaches, and (2) camp cell phones  
One satellite phone will remain in the boat and one InReach will go in the boat when it's used  
Cell phones for calls and text work in camp and in villages  
Note: Primary cell phone will be turned on for texts and calls

**Housing:** We will be living in the Old Chevak Cabin and using weatherports for food, scientific equipment and science processing. There will be one tent provided for individuals to sleep in who choose to sleep outside. For at least one week during the summer, we will all sleep outside.

**Crew Numbers:** Karen Beard 435-770-4748 (cell) 435-797-8220 (office)  
Josh Leffler 435-881-9141 (cell)  
Kathy Kelsey 253-219-7158 (cell)  
Primary Satellite Phone 88.162.143.4194  
Secondary Satellite Phone 88.162.243.2208

**Camp GCI Phone 907-727-0414 (updated May 20, 2023)**

Natty Abrahams GCI phone: 907-727-0427  
Cristina Chirvasa GCI phone: 907-727-0419  
Additional GCI sim: 907-727-0439

<b>Text Only:</b>	<b>Device</b>	<b>Number</b>
	Beard Garmin inReach	Device identifier: 300434035348540 Serial: 5TC133045

Jenna Ross Garmin inReach (personal)

Trevor Hoffman inReach (personal)

Account number: DL1544914

IMEI: 300434031399490

Serial: 5HT074068

IMEI:301434031529640

Serial: 78T121956

**For all emergencies, contact Alaska State Troopers 907-543-2294**

## **Best Safety Practices for Camp**

Updated March 2023

### **Introduction**

The part of the project that will take place at the Refuge will be a field manipulation experiment to quantify how the independent and combined effects of flooding, warming and goose grazing influence vegetation community composition, C cycling and gas exchange. By manipulating the effects of flooding, warming and herbivory we will be able to anticipate how climate change will affect vegetation structure and the carbon source-sink strength of the ecosystem under future climate change. The experiment will be conducted over the summers of 2022, 2023 and 2024. We will take almost daily measurements in plots of aboveground biomass, belowground biomass, and CO<sub>2</sub> and CH<sub>4</sub> flux. We will also sample plant biomass and measure vegetation community composition.

### **Communications**

In case of emergency, contact with the Alaska State Troopers (907-543-2294), and one of the PIs or home institutions, via cell or if necessary satellite phone (see communication and emergency plans for more details). Communications in the field will be provided by two-way radios with a maximum range of 2 miles, as well as satellite phones for longer trips from base camp. We will also have 3 InReachs. Estimated travel and return times, as well as trip itineraries (i.e., planned stops, destination, routes, alternate routes, etc.) will be established prior to any prolonged travel from base camp. Emergency contact phone numbers will be posted on the door of the main living space and in the boat.

### **Food and Water**

All food will be shipped through an expeditor from Anchorage before the field season. Produce and perishables will be picked up every few weeks in Chevak. All crew food allergies and dietary restrictions must be taken into consideration when placing food orders. All crew must fill out a food allergy list prior to food orders. In the field, consumables will be secured in an auxiliary weatherport or the refrigerator in camp. Due to the saline nature of local water sources near the coast, water will be brought in via helicopter and herring boat from Chevak. Approximate camp consumption of potable water is a gallon per person per day. We will also have a portable water tank/filter on site as a backup water filtration system in case an adequate freshwater source is identified. Boiled pond water will be used for non-consumable water use when possible to conserve water.

### **Travel**

Motorized travel at the study site will be by boat or all-terrain vehicle (ATV). Refresher training for motorized vehicles will be provided at the beginning of the field season, and more extensive training will be made available for personnel without adequate previous experience. Personnel should wear ear and eye protection when operating motorized vehicles, and personal flotation devices will be supplied to personnel and are required when boating. Severe weather (see Weather) can significantly contribute to difficulty in motorized

vehicle operation. In addition, personnel should not attempt to maintain or otherwise modify vehicles without first contacting the PI or site supervisor.

### *Boat*

In the absence of previous adequate state or federal training, field crew members will be required to participate in a Boating Safety class taught by NSF or a field crew member prior to using boats for any purpose.

### *ATV*

In the absence of previous adequate state or federal training, field crew members at USU should do this online training before going to the field:

<https://learningmanager.adobe.com/app/learner?accountId=1538#/course/2181719>. Others should watch a safety video.

You will be required to participate in an ATV instruction taught by the most experienced crew member prior to using ATVs for any purpose. There are multiple helmet sizes and goggles provided.

## **Weather**

Weather in this region is extreme. Temperatures can range from cool temperatures in the spring to 80°F during the field season, and heavy rains, high (>50 mph) winds, and tidal flooding occur semi-annually. Adequate clothing is essential for working in these environments. We provide personnel a cabin, expedition tents for working, living, and sleeping in wet environments, and recommend that they procure waterproof waders or boots. Sun exposure can also be severe; sunglasses and hi-SPF sunscreen are essential to prevent severe eye and skin damage.

## **Physical Activities and Wildlife**

Physical activities conducted during the project include boating and hiking. Arctic foxes are known to contract rabies; however, we do not come into close contact with foxes, and would be able to evacuate any potentially affected individuals prior to onset. Bears are rarely observed at the study site (twice during the past 30 years). Moose are increasing in the area and can be a threat. As such, personnel will maintain a safe working distance from large mammals.

## **Medical Services and Health Considerations**

Basic first aid supplies and kits will be supplied at field camp, and at least one member of the field crew will be trained in cardiopulmonary resuscitation (CPR). Pre-purchasing the majority of our food allows for extreme flexibility with food allergies/intolerance so please communicate these before the food purchase. Personnel should be extremely proactive in communicating any known or suspected medical issues as soon as possible.

## **Emergency Response**

Boat access to and egress from camp are restricted by seasonal weather conditions and tidal flows. Careflight helicopters may also be unable to reach camp during periodic severe weather, and contact for outside assistance must be made by intermittent cell phones or satellite phone. As such, it is vital that personnel are constantly cognizant of personal safety issues, and proactively communicate safety concerns and issues clearly and quickly, in order to prevent the need for emergency response.

## **Equipment and Instrumentation**

Work at the field site may expose research personnel to a variety of job-related equipment safety concerns. These include, but are not limited to, chainsaw use, computer use, hand tool use and electrical equipment (solar panels). Specific recommendations and/or training requirements are listed below.

### *Chainsaws/Georipper*

In the absence of previous adequate state or federal training, field crew members will be required to participate in a Chainsaw Safety class taught by the most experienced field crew member prior to using chainsaws for any purpose. Chaps, eye protection and hardhat will be provided.

### *Computer Equipment*

Prolonged computer use can contribute to musculoskeletal problems for anyone who uses a computer for long hours, including *data entry workers and graduate students*. When working on the computer for long hours, pay attention to tension, discomfort or pain you feel, and take immediate action to relieve it. Make sure you stand up and walk away from your computer on a regular basis. Just walk around for a few minutes, stretch, and relax. This should be done at least every hour. The greatest risk for these problems occurs when people use computers intensely for long hours and work in poor postures.

### *Electrical Equipment*

Staff must be familiar with operating procedures for equipment, use safety equipment, and be diligent and aware of their surroundings when working with or before approaching electrical equipment. Avoid wiring systems in wet conditions. Miswiring the solar system could result in electrocution or severe burns, however, the system has been set up to minimize operator error. Get trained from PI Leffler in solar connection.

### *Hand and Power Tools*

Camp set-up and maintenance, as well as equipment repair and maintenance, will require the use of a variety of hand and power tools. In the absence of previous adequate state or federal training, or relevant work experience, field crew members will be required to participate in a Tool Safety class taught by the field crew leader prior to using hand or power tools for any purpose. As a general rule, please do not operate any tools you do not feel absolutely comfortable using them, and always notify a co-worker or supervisor when using tools. Safety goggles and gloves will be provided.

### *Fuel Safety*

Only designated persons shall conduct fueling operations. Smoking and open flames shall be prohibited in areas used for fueling, fuel storage or enclosed storage of equipment containing fuel. Equipment shall be refueled only at designated locations. Liquid fuels not handled by pump shall be handled and transported only in portable containers or equivalent means designed for that purpose. Portable containers shall have tight closures with screw or spring covers and shall be equipped with spouts or other means to allow pouring without spilling. Leaking containers shall not be used. Equipment shall not be fueled or stored near places where gas or fumes might accumulate. Containers shall be examined before recharging and again before reuse for the following: dents, scrapes and gouges of pressure vessels; damage to valves and liquid level gauges; debris in relief valves; leakage at valves or connections; and deterioration or loss of flexible seals in filling or servicing connections. Extra fuels will be stored in leakproof containers stored in a fuel containment area at a safe distance (~100 ft) from the primary housing area. As per our permit, we will have an area designated for fuel to contain spills. You will use the spill cleanup supplies if a spill occurs.

# Communication Protocol

## Daily Safety Check-In

The crew will check-in once daily by texting or calling between 1000-1200 AKDT. This schedule may be adjusted depending on the timing of fieldwork. Any adjustments to check-in times will be communicated 24 hours in advance. The default contact for camp daily check-ins is **Karen Beard 435-770-4748 unless an alternate contact is pre-arranged**. Back up calls will go to Josh 435-881-9141 and Kathy 253-219-7158 if Karen can't be reached.

If Crew does not check-in by appointed time the following actions will take place:

1. The primary followed by secondary cell phones will be called every hour and text messages will be sent to the cell phones, satellite phones and all camp InReachs hourly.
2. If there is no response from the field crew by 1700 AKDT, the contact will assess if severe weather is a possible issue by examining local weather data and contacting the refuge for local on-the-ground information. If the weather is deemed threatening, the Alaska State Troopers will be contacted and apprised of the situation.
3. If weather is nominal and the field crew has not contacted the designated check-in person for 24 hours, the Alaska State Troopers will be contacted to initiate emergency actions.

## Weekly phone call

Each week on Monday at 10 AKDT call Karen Beard 435-770-4748 unless an alternate contact is pre-arranged.

## Within-Site Travel Check-In

The crew will communicate with each other via the hand-held radios, particularly when crew members have used the boat to travel to other sites. They will communicate float plans before leaving and estimate time of return. If they are not heard from one hour beyond the estimated time of return, other members will attempt to contact them with hand-held radios. If the field crew is 8 hours beyond the estimated time of return and cannot be reached via radio, the PIs will be contacted and will respond accordingly.

Make sure all hand-held radios and satellite phones are charged daily.

## Weather Protocol

The crew will use the cell or satellite phone to check the NOAA weather forecast every day (907-266-5145; options 2,2,1). Daily fieldwork and boating decisions must take weather predictions into consideration. Use the InReach weather forecast as well.

## Satellite phone mini-guide

Calling to / from satellite phones	Texting to / from satellite phones
For full user instructions refer to the printed guide located inside the satellite phone case.	

Test the satellite phone before leaving to ensure calling is turned on:

- To test voice calls, turn on the phone and call 1-480-752-5105

To direct call a satellite phone from a landline or cellphone:

**Dial 011** followed by satellite phone number (e.g., 0118816#####)

There is ~\$5/minute charge to the cellphone or landline.

Calling between satellite phones:

**Dial 00** followed by satellite phone number (e.g., 008816#####).

Calling the US and international phones (if outside of the US):

- **Dial 00.** Enter the Country Code, Area Code, 7-digit phone number. Press **OK**.

Test the satellite phone before leaving to ensure texting is turned on:

- To send SMS messages, enter and save the number for the SMS Service Center into satellite phone (Iridium 9505A):
  - Press the **Envelope** key
  - Scroll to **Message Settings** and press **OK**
  - Compose a message using the keypad and press **OK**
  - Enter **00881662900005** and press **OK**

Texting to satellite phone:

Visit <http://messaging.iridium.com> and enter the satellite phone number and follow instructions for 160-character text.

To send email to the satellite phone, send message to "[number](mailto:number@msg.iridium.com)"@[msg.iridium.com](http://msg.iridium.com) (e.g., [8816#####@msg.iridium.com](mailto:8816#####@msg.iridium.com)).

- Keep it short, there is a 160 character limit
- Subject line is not transmitted

Texting from satellite phone (Iridium 9505A):

Scroll through the menu to message editor. Type email address of recipient, space, and then message. Send message to number 00\*2. Wait for confirmation that message sent.



# Boating Safety Plan

Operation of 16' Lund with 30 HP motor will be used to move personnel and equipment throughout the YK Delta as well as for resupply in the local village of Chevak. **In an emergency, call Alaska State Troopers 907-543-2294.**

**Training:** All individuals operating the boat must attend the Polar Service boat training.

**Float Plan:** This project requires regular use of watercraft for fieldwork; boating activities are tide dependent. A general float plan is in **Appendix C**. On days boating will occur, the field crew will file a verbal float plan during the daily check-in. Float plan will include departure time, expected time of return, and location of expected field site(s).

## Primary Safety Concerns

*Boat operation:* The primary concerns with traveling in a remote wilderness setting is the possibility of injury, craft collision, or falling overboard.

*Precautions:* Boat operators and passengers will wear PFD/Mustang coats at all times. Boat drivers will be familiar with the operation and maintenance of the craft.

- Weather conditions in the Delta are highly variable. Wind and weather inland can be very different near the coast. Call the NOAA weather forecast (1-800-472-0391)
- Check daily tide chart before departing (NOAA – Dall Point)
- If wind speeds exceed 15-20 mph within camp, use extreme caution when going out. If wind speeds exceed 15 mph, **DO NOT TRAVEL IN THESE CONDITIONS to Chevak.**
- Be aware of your surroundings at all times. Wind and waves can build quickly.
- Keep an eye out for obstacles and give hazards a wide berth to avoid collisions.
- Drive the boat in a straight line. Take turns wide to avoid shallow bars.
- Accelerate the throttle with a smooth consistent motion. When decelerating, give enough time to slow down in the water.
- Use extreme caution when crossing the main channel. Take breaking waves on the bow and avoid getting broadsided on port/starboard or the stern.
- Always have the GPS unit out and available for navigation. Do not rely on navigational aids to mark the bays/channels.
- Passengers must remain sitting and alert. Passengers must wear PFDs at all times.
- When boarding, passengers must remain aware of the boat and weather/water conditions.
- Keep anchor and bowlines tidy and secure during travel. If the anchor chain gets caught by bow waves, stop the boat immediately and secure lines.
- Avoid damaging or catching flotsam in the propeller.
- Be aware of the daily shifting tide schedule. Don't use shortcut sloughs unless absolutely sure of peak high tide.

## Field checklist

- Mustang float coats
- GPS, charged
- Extra batteries
- Satellite phone, charged with emergency contact numbers
- First aid kit & tourniquets (x2)
- Emergency repair kit and tools
- Fire extinguisher
- Shaker tube & bung wrench
- Spare paddles & 2"x4"

- Throw bag
- 5-gallon bucket
- Boat operation manual
- Extra food and water
- Extra change of clothing, in dry bag
- Full 15-gallon fuel tank & 5-gallon auxiliary tank

# Medical Emergency Plan

In the event of an emergency requiring care and/or evacuation of one or more personnel, please adhere to the following protocol.

The primary point of care in-camp is the crew member who has received Wilderness First Aid/Responder training. In the event the crew leader is unavailable, contact one of the other crew members who has taken Wilderness First Aid/Responder/CPR.

The in-camp point of care is: **Everyone on the crew. Everyone has had WFR or WFA training. Those with WFR include: Cristina Chirvasa, Forrest Lambert and Natty Abrahams.**

## In Case of a Medical Emergency

1. Assess the situation and if safe, administer first aid/CPR as necessary (see list of First Aid Kits as necessary)
2. If the emergency is serious contact Alaska State Troopers in Bethel **(907-543-2294)**. Communicate the problem and any pre-existing medical conditions listed for the crew member. The troopers can assist with medical treatment and mobilize evacuation from the field if needed. If in doubt about seriousness of the issue, contact the Troopers.
3. See additional contact numbers if Troopers cannot help.
4. Use Emergency Contacts List to inform PIs of incident as soon as possible.

Emergency Contacts:	Karen Beard	435-770-4748 (cell)	435-797-8220 (office)
	Josh Leffler	435-881-9141	
	Kathy Kelsey	253-219-7158	
	Mike George, (USU Risk Management)		435-797-0483 (office)
	Beth Byre (SDState NRM Office)		605-688-6122 (office)
	Peter Anthamatten (UCD GES Office)		303-315-7525 (office)

## Medically trained personnel in camp

Matteo Petit Bon (Wilderness First Aid)  
 Jenna Ross, (Wilderness First Aid/CPR)  
 Briana Barr, (Wilderness First Aid)  
 Tyler Williams (Wilderness First Aid)  
 Nathaniel Abrahams (Wilderness First Responder)  
 Forrest Lambert (Wilderness First Responder)  
 Cristina Chirvasa (Wilderness First Responder)  
 Trevor Hoffman (Wilderness First Aid)

## Local Clinics and Hospitals

	Travel time*	Location	Phone
Chevak Clinic	10 min	61.53°N 165.59°W	907-858-7029 907-858-7069
Hooper Bay Clinic	10 min	61.53°N 166.12°W	907-758-3500
Y-K Regional (Bethel)	65 min	60.79°N 161.78°W	907-543-6395

\*Travel time is from camp to care via air and does not include mobilization and travel to camp

**NOTE: All employees through USU with work-related injuries are covered by USU Workman's Compensation and evacuation/medical procedures (except COVID-19 and other communicable diseases).**

# In-Camp Illness Assessment

**Recommended guidelines from the Alaska Public Health Office of Epidemiology regarding illness in camp.**

When assessing and monitoring for illness, **document times and reassess at 30-minute intervals.** Be prepared to read this information to a health care provider if you have to call for advice or instruction. If patient is sent to clinic or hospital, send documentation with them.

## **Baseline Vitals should include**

- Time of Vitals
  - Temperature - Normal: 97.6-99.6 F; use a thermometer
  - Heart Rate - HR=# radial pulse beats in 15 sec x 4; Normal: 60-100 bpm; Strong, weak, thready, slow, or irregular?
  - Respiration Rate - RR = # chest rises in 15 sec x 4; Normal: 12 to 20 bpm; Document respirations without patient knowing you are doing so
  - Blood Pressure - BP = assess strength of systolic radial pulse; Strong, weak, or none?
  - Level of Responsiveness (LOR) using AVPU:
    - o Alert to person, place, time, and event (A&Ox4); Person, place, time (A&Ox3); Person, place (A&Ox2); Person (A&Ox1)
    - o Verbal stimuli
    - o Pain stimuli
    - o Unresponsive
  - Skin Color and Temperature (SCTM) – Normal: Pink, warm, dry; Document if skin feels hot and dry, hot and sweaty, cool and clammy, blue, grey, or normal.
  - Circulation-Sensory-Motor (CSM) –
    - o Circulation: assess distal pulses & capillary refill
    - o Sensory: assess by touching fingers/toes and asking if sensation is present
    - o Motor: asses by asking patient to wiggle fingers/toes, squeeze hands, push/pull with feet
  - Pupils Equal, Round, Reactive to Light (PERRL)?
1. **Document signs and patient symptoms.** i.e., headache, nausea, fever, sore throat, achy muscles. At the first sign of sore throat – gargle with salt water.
  2. **Document allergies/pre-existing conditions**
  3. **Document patient last ins/outs**

**Individual Medication Needs (Prescriptions):** Reminder provided to all personnel.

**Extra Eyewear (Prescription):** Reminder provided to all personnel.

If someone experiences COVID-19 symptoms in camp, use a COVID rapid test kit to verify. The sick person should be isolated from others immediately. If a person tests positive, the symptomatic patient should:

- Minimize interactions with others
- Be required to wear a mask
- Be kept at least 6 feet from others.
- Sleep in a separate isolation tent with a dedicated sleep kit
- Use a single set of utensils
- Be advised to cough into elbow creases
- Be kept well hydrated

***If symptoms worsen or persist, evacuate via float plane to Bethel Regional Hospital (907-543-6395). It is critical to communicate to Bethel Regional prior to arrival that the patient is COVID positive or suffering from COVID symptoms. Seek immediate evacuation to Bethel Regional if the patient has:***

- Trouble breathing
- Persistent pain or pressure in the chest
- Confusion
- Inability to wake or stay awake
- Bluish lips or face

## **COVID SAFETY REQUIREMENTS PER NSF**

- All travelers MUST be familiar with this COVID safety plan.
- All travelers must be familiar with NSF's COVID restrictions: <https://usu.app.box.com/file/1176154716848>

### **Minimizing Exposure**

- All travelers must be fully vaccinated (had 2 doses) at least 3 weeks before traveling.
- All researchers will familiarize themselves with the signs and symptoms of COVID-19: <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>.
- All researchers need to have received the COVID Bivalent Booster after September 2, 2022 and at least 2 weeks before traveling.

### **10 days before departure**

- You can only travel if you have not been exposed or suspected of having been exposed to the coronavirus for 10 days. If you suspect you have been exposed, you must wait 10 days from your date of exposure to be tested for coronavirus and then start this 10-day preparation from the beginning.
- 10 days prior to departure to Alaska, face coverings will be required to be worn within public indoor settings and outdoors when physical distancing of 3-foot is not possible. Masks must be worn over both the nose and mouth, and must fit securely around the face. Before and after using your mask, wash/sanitize hands. Please use N95s that are new and have a supply around to replenish.
- If physical distancing is not possible (i.e., within a vehicle), every care should be taken to increase ventilation (i.e., drive with windows down).
- Close contact should be prevented. If possible, employees will work from home as often as feasible.
- Daily self-assessment must be conducted by all researchers. If you are feeling ill, report it to your supervisor immediately, schedule a test with a COVID testing center and work from home until notified of a negative tests and symptoms are no longer present.

### **Testing before departure**

- All travelers must do an at-home COVID test 24 hrs prior to departure for Alaska. A negative test result is required to continue travel. It does not have to be PCR test if one is not available at your university.
  - If test results are received and positive, travelers will not continue on to the next port of entry, and will begin quarantine procedures (see Quarantine section).
  - If test results are received and negative, it is recommended that travelers carry proof of negative test results with them, regardless of reporting to the Alaska Travel Portal. All travelers with negative results from tests taken within 72 hours of departure must follow strict social distancing for **five** days after arrival into Alaska, or until they leave Alaska, whichever occurs first.
- Traveler COVID test results will be filed with Dr. Beard prior to departure on Box.

## **EN ROUTE TO ANCHORAGE AND CHEVAK**

### **Minimizing Exposure**

- Two facial coverings or a N-95 mask are required to be worn within public indoor settings and outdoors when physical distancing (<3 ft) is not possible. Masks must be worn over both the nose and mouth, and must fit securely around the face. Before and after using your mask, wash/sanitize hands. Wash masks daily. Masks must be worn on planes, within airports, and at any and all times where the travel is in the presence of another person.
- Employees should maintain a 3-foot social distancing while gathered together. If physical distancing is not possible (i.e. within a vehicle), every care should be taken to increase ventilation (i.e. drive with windows down).
- Close contact should be prevented.
- Travelers should sanitize hands after touching shared surfaces with hand sanitizer that contains >60% alcohol.

## **WHILE CONDUCTING BUSINESS IN CHEVAK**

- Travelers will stay in the cabin located ~10 miles outside of the town of Chevak, in Old Chevak which is owned by the US Fish and Wildlife Service as opposed to in town.
- Two facial coverings or a N-95 mask are required to be worn within public indoor settings and outdoors when physical distancing (<3 ft) is not possible.
- Travelers will sanitize hands after touching foreign substances with hand sanitizer that contains >60% alcohol.
- We anticipate no indoor interactions required conducting business in Chevak during put-in. We will not go into any indoor space and will request that all interactions that need to occur, occur outside.

## **IN CASE OF EXPOSURE WHILE IN THE FIELD**

- In the event of exposure at the field site, or if one of the researchers begins displaying the symptoms of COVID-19, researchers in the field will immediately contact:
  - Karen Beard
- Researchers with symptoms, or who suspect they have been exposed, will self-isolate as much as possible at the field site, and follow the guidelines for minimizing exposure.
- There is a COVID test in camp. The researcher will take this test to determine if they have COVID.
- If symptoms worsen and condition deteriorates, researchers will follow the Yukon-Kuskokwim Health Corporation guidelines. Currently this includes the following:
  - If you have symptoms like a fever, chills, cough, shortness of breath, diarrhea, and diminished sense of taste or smell, do not go to your village clinic and do not go to the Emergency Room in Bethel. Instead, call the village clinic in Chevak (907) 858-7069.
- Follow all guidance from the clinic in Chevak.
- Medi-Evacuation will be determined following the advice of the Chevak Village clinic, Polar Field Services, and project PIs.
- Following the exposure of a crew member. All individuals will quarantine at the field site for a minimum of 10 days or until all symptoms have subsided. Researchers will not visit Chevak or interact with the locals until quarantine has been completed.

## **RETURNING HOME**

- Upon return from Alaska, travelers must follow all travel guidelines for the State of Utah (<https://coronavirus.utah.gov>) and Utah State University or their respective state and university.
- All travelers should monitor their health on a daily basis for COVID-19 symptoms for at least 10 days after returning from travel.
- All travelers need to be tested 5-7 days following travel from Alaska
- If the traveler comes into close contact with an individual who has tested positive for COVID-19, they must quarantine for 10 days.
  - If the traveler begins to show symptoms of the virus, they must stay home and away from others. Anyone showing symptoms should be tested. In either case, the traveler should immediately submit a USU or appropriate university COVID-19 Questionnaire.

## **RESOURCES:**

Resources on COVID-19 transmission, guidance, and prevention are available.

Utah COVID-19 Transmission Index: <https://coronavirus.utah.gov/utah-%20health-guidance-levels/>.

State of Alaska 'Safe Travels' Program information: <https://covid19.alaska.gov/travelers/>

Centers for Disease Control and Prevention COVID-19 Homepage: <https://www.cdc.gov/coronavirus/2019-ncov/index.html>



# **Crew Member Pre-Existing Conditions/Medications /Allergies/Emergency Contact/Insurance Info**

Emergency contact info:

# Weather/Flood/Fire Emergency Plan

In the event of a Natural Threat emergency please adhere to the following protocol.

Self-evacuation from camp is by boat. The boat should be in a 'ready-to-go' state at all times. The boat should always be fueled and contain a satellite phone, emergency water and rations, first aid kits, compass, float coats, and other safety gear. If any incident requires you to leave camp and seek safety elsewhere, contact Alaska State Troopers in Bethel (**907-543-2294**) followed by the emergency contacts below. Bring warm, waterproof clothing and satellite phones with charged spare batteries.

## Severe Weather

Seek shelter in the cabin, stay dry and use the stove as necessary to stay warm. If weather damages the cabin, use additional weather ports and sleep tents as backup shelters. Travel by boat is not advised unless absolutely necessary.

## Storm Surge/Tidal Flood

In case of flood, seek refuge in the boat equipped with emergency supplies. Muster at a centralized camp location (kitchen in cabin), double-check camp personnel via a headcount, and travel inland up the river to higher ground or where flooding is not evident. The inland safety location is our, Old Chevak Cabin at the junction of the Keoklevik & Kashunuk Rivers (61.431112°N 165.45055°W), or Kanagyak Cabin (Aprun River) (61.36167°N, 165.12683°W). If possible, try to prepare for flooding by securing structures and loose items in camp. If there is additional time, retrieve the gas analyzers and get LiCORs to higher ground.

## Fire in Camp

In case of fire that cannot be immediately contained and controlled with fire extinguisher (i.e., kitchen fire or gasoline spill), evacuate camp immediately and travel inland a safe distance or to the inland safety location at Old Chevak Cabin or the Village of Chevak. Treat all burns with immediate care. In the event of evacuation meet at muster site and take a headcount. Travel together to evacuation site.

## Fire Visible from Camp

If a fire is visible from camp, report and monitor the fire. If fire conditions change, report the change as necessary. See **Appendix E** for fire reporting procedure. If the fire threatens to reach camp, evacuate camp immediately traveling away from the fire.

## Initial Emergency Contacts

- |                                   |                              |
|-----------------------------------|------------------------------|
| 1. Alaska State Troopers, Bethel  | 907-543-2294 or 800-478-9112 |
| 2. Rescue Coordination Center     | 1-800-420-7230               |
| 3. US Coast Guard Search & Rescue | 1-800-478-5555               |

## Secondary Emergency Contacts

- |   |                  |
|---|------------------|
| 1. Karen Beard – PI                           | 435-770-4748 (m) |
| 2. Josh Leffler - co-PI                       | 435-881-9141 (m) |
| 3. Kathy Kelsey – co-PI                       | 253-219-7158 (m) |
| 4. Michael Dyer – USU Field Safety Officer    | 435-797-0929 (w) |
| 5. Cara Ferrier – PFS Science Project Manager | 303-503-3875 (m) |

## Additional Emergency and Useful Numbers

Public Safety:	Alaska State Troopers, Bethel	907-543-2294
	Alaska State Troopers, Statewide	907-269-5740
	Bethel EMS	907-543-3781
Tribal Organizations:	Chevak Tribal Council	907-858-7428
	Hooper Bay Sea Lion Corporation	907-758-4415
Clinics/Hospitals:	Chevak Clinic	907-858-7029
	Hooper Bay Clinic	907-758-3500
	Y-K Regional (Bethel)	907-543-6395
Safety/Rescue:	Coast Guard Search and Rescue	800-478-5555
	Rescue Coordination Center	800-420-7230
Aircraft:	Papa Bear Adventures	907-545-1155
	Ptarmigan Air	907-543-5275
Weather Forecast:		907-266-5145(options 2,2,1)
Y-K Delta Refuge:	Main Office (M-F, 800-1630)	907-543-3151
	Boyd Blihovde (Manager)	907-543-1002
	Edward Davis (Deputy Manager)	907-543-1003
	Spencer Rearden (Wildlife Biol.)	907-543-1023
	Kyra Neal (Ranger)	907-543-1004
	Robert Sundown (Pilot)	907-543-1007

# Signature Page

By signing below, you acknowledge that you have read, understand, and approve of the safety plan for this project.

Primary Investigator: \_\_\_\_\_ Date: \_\_\_\_\_

Co-Principle Investigator: \_\_\_\_\_ Date: \_\_\_\_\_

Co-Principle Investigator: \_\_\_\_\_ Date: \_\_\_\_\_

Post-doctoral Researcher: \_\_\_\_\_ Date: \_\_\_\_\_

MS Student: \_\_\_\_\_ Date: \_\_\_\_\_

MS Student: \_\_\_\_\_ Date: \_\_\_\_\_

MS Student: \_\_\_\_\_ Date: \_\_\_\_\_

Field Crew Member: \_\_\_\_\_ Date: \_\_\_\_\_

Field Crew Member: \_\_\_\_\_ Date: \_\_\_\_\_

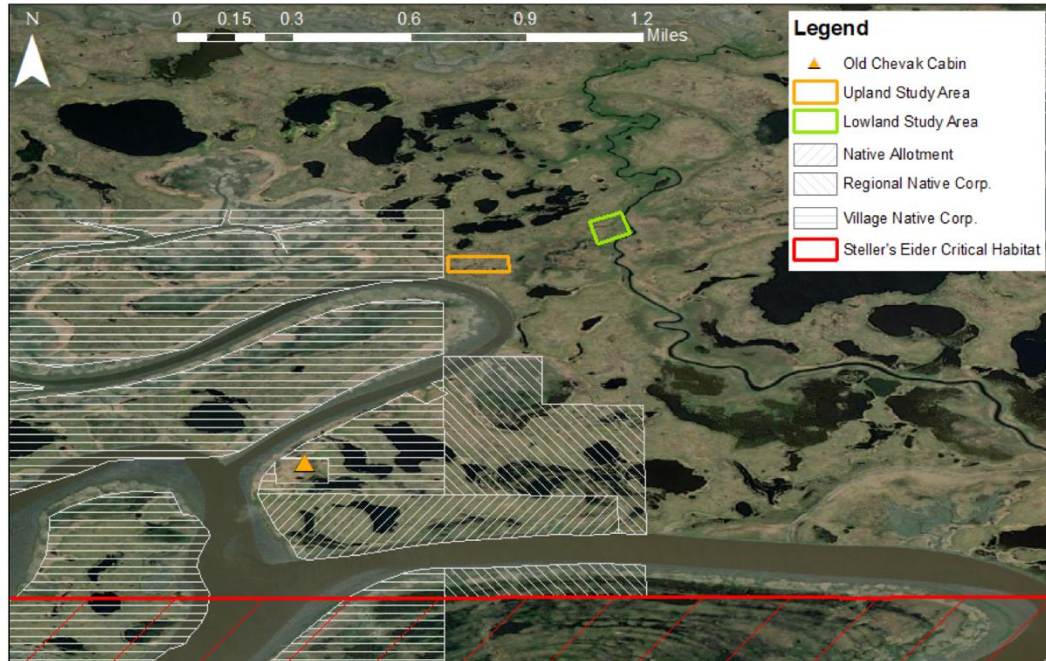
Field Crew Student: \_\_\_\_\_ Date: \_\_\_\_\_

Field Crew Student: \_\_\_\_\_ Date: \_\_\_\_\_

# Appendix A. Map and Coordinates of Camp

**Coordinates: (61°25'51.23"N 165°27'5.31"W)**

We have marked on this map the camp site and research sites in Old Chevak to minimize the disturbance of creating a new camp.



**Old Chevak Cabin Proposed Study Areas:** The research would take place within the orange and green rectangles; only 1700 ft<sup>2</sup> within each area would be used for the flooding treatment.

# Appendix B. Polar Field Service In-Camp Medical Kits

University of Colorado Denver First Responder Kits		CALL: 1-844-285-4555		
#	Content	Brand names	#	Content
<b>BLACK POUCH</b>				
25	acetaminophen 325mg or 500mg or non-aspirin (2/pk)	Tylenol	5	gloves, non latex
25	ibuprofen, 200mg pills (2/pk)	Advil	10	wipes, germicidal disinfectant or alcohol
5	aspirin, 325 mg pills (2/pk)	Aspirin	20	towelettes or wipes, antiseptic
20	diphenhydramine, 25mg pills, or antihistamine	Benadryl	15	bandages, adhesive, 1"x3"
24	loperamide, 2mg pills or anti-diarrheal	Imodium	5	bandages, adhesive, fingertip
24	Famotidine 20 mg or Zantac or stomach acid blocker	Peppid	5	bandages, adhesive, knuckle
8	meclizine HCL, 25mg or dramamine or anti-nausea--	Dramamine	6	wound closure strips, 1/4" x 3" or 1/4"x4"
15	phenylephrine 5mg & acetaminophen 325mg or cold/sinus free (2/pk)	Sudafed	2	bandages, elastic 4"
20	bismuth subsalicylate, 262mg or Pepto or calm indigestion	Pepto Bismol	1,2	bandages, triangular with safety pins
25	(triple) antibiotic ointment packets (Bacitracin)	Neosporin	2	gauze, confirming 2" rolls
15	hydrocortisone acetate 1% or itch relief cream, 0.9g		2	gauze, confirming 4" rolls
1	eye wash or eye saline, 4oz		5	gauze, petrolatum, 3"x9"
1	glucose, oral gel, 15gm or insta-glucose tube, 31gm		3	pad, abdominal, 5"x9" or 8"x7.5"
5	salts, oral rehydration		10	pads, gauze 4"x4" (2/pk)
1	sunscreen, 1oz		5	pads, non adherent, 2" x 3"
<b>BLUE POUCH</b>				
5	gloves, non latex, pairs		2	dressings, burn gel-soaked, 2"x6" or 4"x4"
1	mask, CPR pocket		1	scissors, trauma
<b>ORANGE POUCH</b>				
1	blanket, emergency survival		1	tape, 1" roll
1	blood pressure cuff		1	irrigation syringe, 30ml and catheter
1	ice pack, instant		5	burn gel or first aid cream, 3.5gm
1	pen light		<b>PERIMETER</b>	
1	stethoscope		1	splint, SAM malleable
1	thermometer, digital, oral		<b>LID POCKET</b>	
1	tweezers		1	patient assessment form & pencil
1	dental first aid kit		1	guide, FDA medication
			2	bags, biohazard

## Appendix C. General Float Plan

1. Name of Operator and Telephone Number TBD

2. Description of Boat:

Type: Aluminum Open Skiff    Color: Silver    Trim Color: Red    Make: Lund

Length: 16-18    Name: N/A    Registration Number: None

3. Type of Vehicle Used: None \_\_\_\_\_

4. Purpose of Trip

Travel around camp following breakup

5. Persons on Board: Names, Ages, Address

TBD

6. Radio Equipment and Frequencies

TBD

7. Communication Schedule

An updated float plan will be conveyed to office contact via phone or text each morning prior to boat crews departure from Camp; crew leader will text office contact each evening upon arrival back at Camp.

8. Departure Date and Time: variable, depending on tides and weather \_\_\_\_\_

From: breakup

To: 15 August



## Routes and Stops

TBD.

9. Time of Weather Briefing: morning of boating\_\_\_\_\_

10. If not returned by (date and time): evening of boat trip, call the Coast Guard or Notify the following:

1. Karen Beard 435-770-4748 (m)
2. Josh Leffler 435-881-9141 (m)

Boats are used on a regular basis for this project. This is a general float plan for vessel and contact information. A current float plan will be conveyed to our daily office check-in contact on the day of boating activity.

## Appendix D. Personal Protective Equipment

<b>Flotation, Coats, Vests Etc.:</b> Floatation coat or vest provided for each person. To be worn at all times when in watercraft and wading unfamiliar, deep or swift waters.	Watercraft Float planes Wading
<b>Hip Boots/Chest Waders:</b> Each person will have these items to be worn as appropriate to the situation.	Wading Watercraft Float planes
<b>Ear Protection:</b> To be provided for each person and worn when operating or traveling in aircraft and watercraft or working around loud machinery.	Outboards Aircraft Ships
<b>Safety goggles/glasses:</b> To be used when sawing, hammering, or handling hazardous materials	Carpentry Tree cutting Field lab
<b>Bug Protection Jackets:</b> Recommended along with bug spray.	Insect areas
<b>Work Gloves &amp; Boots:</b> Each person will have work gloves, neoprene gloves, hip waders, and chest waders.	Exposure Field chores
<b>Helmets:</b> Provided.	ATV's

# Appendix E. Fire /Smoke Reporting Procedures

Contact: (Protecting Agency listed below first, then Refuge FMO or AFMO):

**Yukon Delta NWR (south of the Yukon River)**

DOF Matsu/McGrath Area (MSS/SWS) Fire Reporting (907) 524-3366

**Yukon Delta NWR (north of the Yukon River)**

AFS Galena Area (GAL) Fire Reporting (907) 656-1222 or (800) 237-3633

*General Fire reporting in Alaska is 1-800-237-3633*

Size-up the fire; include items listed below:

- Your Name
- Your telephone number or contact information
- Your location and direction of the smoke
- Location of smoke or fire and best access route (approx GPS Coordinates, landmarks)
- Color of smoke
- Size
- Types of fuels involved and in the vicinity (spruce forest, grass, brush, etc.)
- Fire behavior (running, smoldering, torching, etc.)
- Is anyone fighting the fire?
- Was any person seen in the vicinity or leaving the area? Is there any other information about the origin?
- Current weather conditions at the fire (wind speed, direction, clouds, etc.)