Safety and Logistics Support

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ARCTIC BOREAL VULNERABILITY EXPERIMENT

safety@cce.nasa.gov

NASA

Logistics and Safety Support

- New Website Safety Resources
  - Hazard Assessment
  - Safety Training
  - Safety Library
- ArcGIS Online Web Maps
- Research Permits
- Logistics Hubs

Website Safety Resources

National Aeronautics and Space Administration

› Visit NASA.gov
› Visit NASA's Terrestrial Ecology Website

ABoVE
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Field Operations — Safety and Logistics

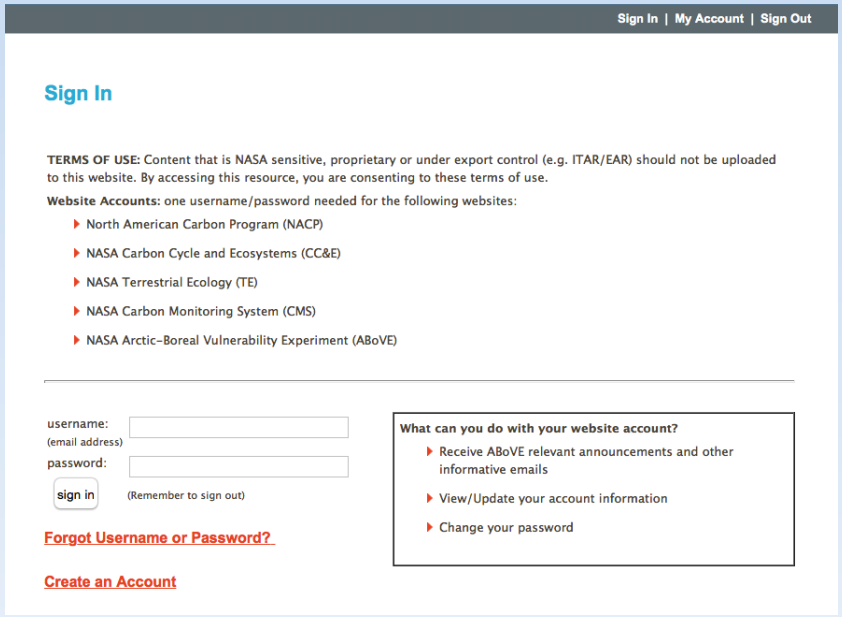
It is important to plan for safety and logistics prior to departing for the field. While the Principal Investigators (PI) are responsible for their field operations, the CCE Office will be coordinating various logistical needs and safety resources.

- Hazard Assessment/Safety Training
- Planning your trip
- Logistics Support
- Safety Library

Please Contact us with any questions.

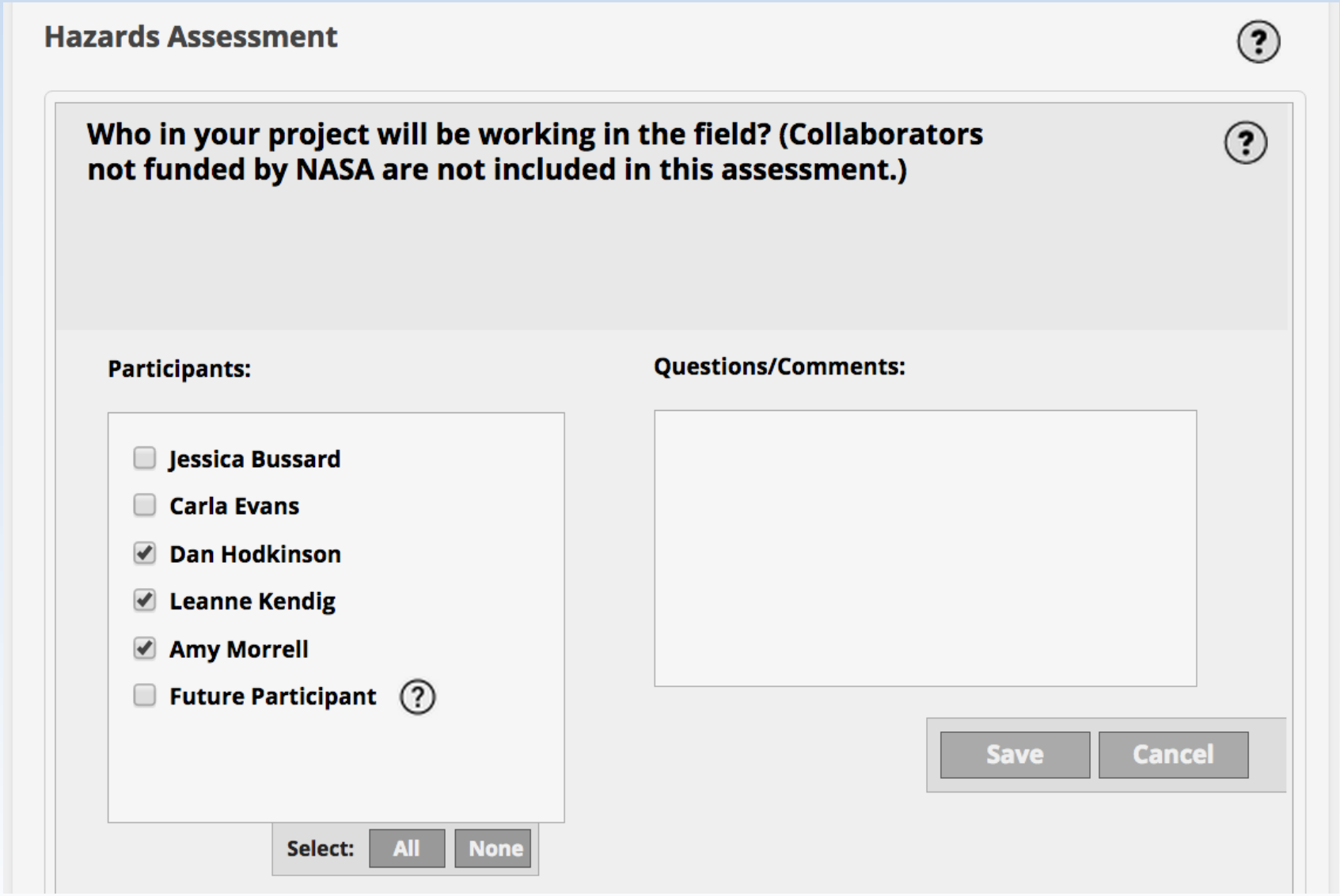
Hazard Assessment Form

- PI responsibility to identify hazards of team
- How to access it?
  - Log in to ABoVE ‘My Account’



- Email safety@cce.nasa.gov with any problems or questions
- Hazard Assessment generates individual safety training plans for each team member

Hazard Assessment Form



Hazard Assessment Form

Will anyone on your project be camping in freezing temperatures away from established camps?

Yes

No

Will anyone on your project be using ATVs?

Yes

No

Will anyone on your project be using snow machines?

Yes

No

Safety Training Plan

Includes:

- Training assignments, based on PI identified hazards for the team or individuals
- On-line training and links to practical safety training course providers.
- Archival of training dates for all trainees
- Training certificates from past courses submitted by participants
- Assistance with finding a course provider or creating a new course.

Safety Training Plan

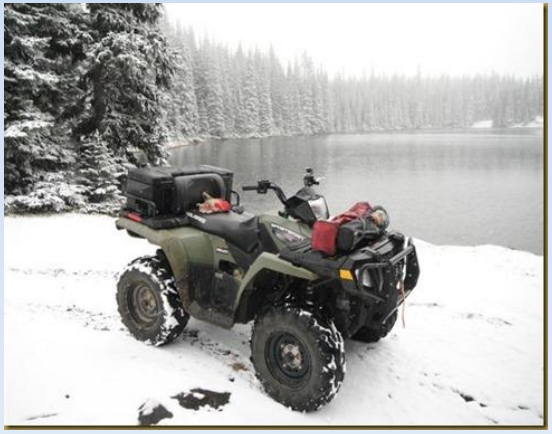
Safety Training Plan: Print Safety Training Plan

The CCE Office recognizes that you may have previously taken training that is now being assigned to you below. You may be exempted from taking the same training again by providing a dated training certificate, or proof of competency to safety@cce.nasa.gov.

Activity	Required Training	Status
Working in the field	Orientation Module: A general orientation on a wide variety of common field safety issues.	Completed 2015-09-30
	Staying Safe in Bear Country: An overview of bear behavior and the protection of people and property.	Completed 2015-09-30
	Basic First Aid/ CPR: To give general information on how to treat a sick or injured person until full medical treatment is available.	Not completed
Operating motor boats	Boat Safety Training: This course will give you hands on experience with safely operating a motor boat. It will also review needed safety equipment and general navigation.	Completed 2014-12-08
Carrying Firearms	Firearms Safety Training: Gun protocol in camp/ lodging/ vehicles, 12 gauge maintenance and safety, appropriate 12 gauge rounds for bear situations.	Not completed

Courses

- Safety Orientation Video
- Staying Safe in Bear Country
- Chainsaw Training
- ATV Training
- First Aid Training
- Boat Operation
- Snow Machine Operation
- Aviation Safety



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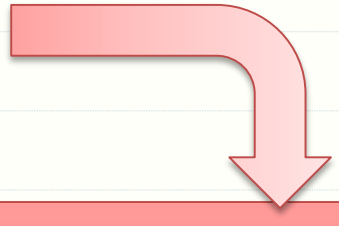
Safety Library

EMERGENCY MANAGEMENT/ FIRST AID

PLANNING/PACKING

VEHICLE



EMERGENCY MANAGEMENT/ FIRST AID

First Aid Kit list

Trauma Bandage Demonstration (ITS Tactical)

Compression Only CPR Video (University of Arizona Sarver Heart Center): In a remote situation, standard CPR is a more powerful tool than compression only CPR because the ability to input Oxygen into the blood stream. In many situations, compression only CPR is an appropriate method if help is within 10 minutes. As this method is not taught in standard CPR courses and has been proven to save lives, we recommend you watch this video.

Satellite Phone instructions (Iridium)

PLANNING/PACKING

Daily activity safety planner

Packing List: this list should only be used as a guide. All gear is personalized to the person, location of travel and field work needs

TOOL MAINTENANCE

ADDITIONAL READING

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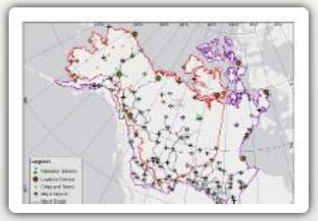
NASA ABoVE ArcGIS Online

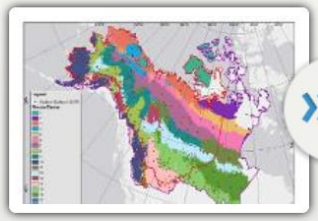
Home Gallery Map Scene Groups Sign In

ABoVE Concise Experiment Plan (ACEP) Figures as Web Maps


ACEP Figure 1.1: ABoVE Study Domain


ACEP Figure 4.1: Spatial Hierarchy


ACEP Figure A01: Research stations and logistics centers


ACEP Figure A02: Principal climatic zones and weather

Climate change in the Arctic and Boreal region is unfolding faster than anywhere else on Earth, resulting in reduced Arctic sea ice, thawing of permafrost soils, decomposition of long- frozen organic matter, widespread changes to lakes, rivers, coastlines, and alterations of ecosystem structure and function. NASA's Terrestrial Ecology Program is in the process of planning a major field campaign, the Arctic Boreal Vulnerability Experiment (ABoVE), which will take place in Alaska and western Canada during the next 5 to 8 years. ABoVE will seek a better understanding of the vulnerability and resilience of ecosystems and society to this changing environment.

The NASA ABoVE ArcGIS Online account is an interactive web mapping platform used for planning and visual display of datasets relevant to ABoVE. The Gallery showcases a number of different web maps relevant to the ABoVE Concise Experiment Plan (ACEP).

The information available from this website is subject to change on a regular basis, without notice. Please contact us with questions or comments. For more information, please see the NASA ABoVE website.

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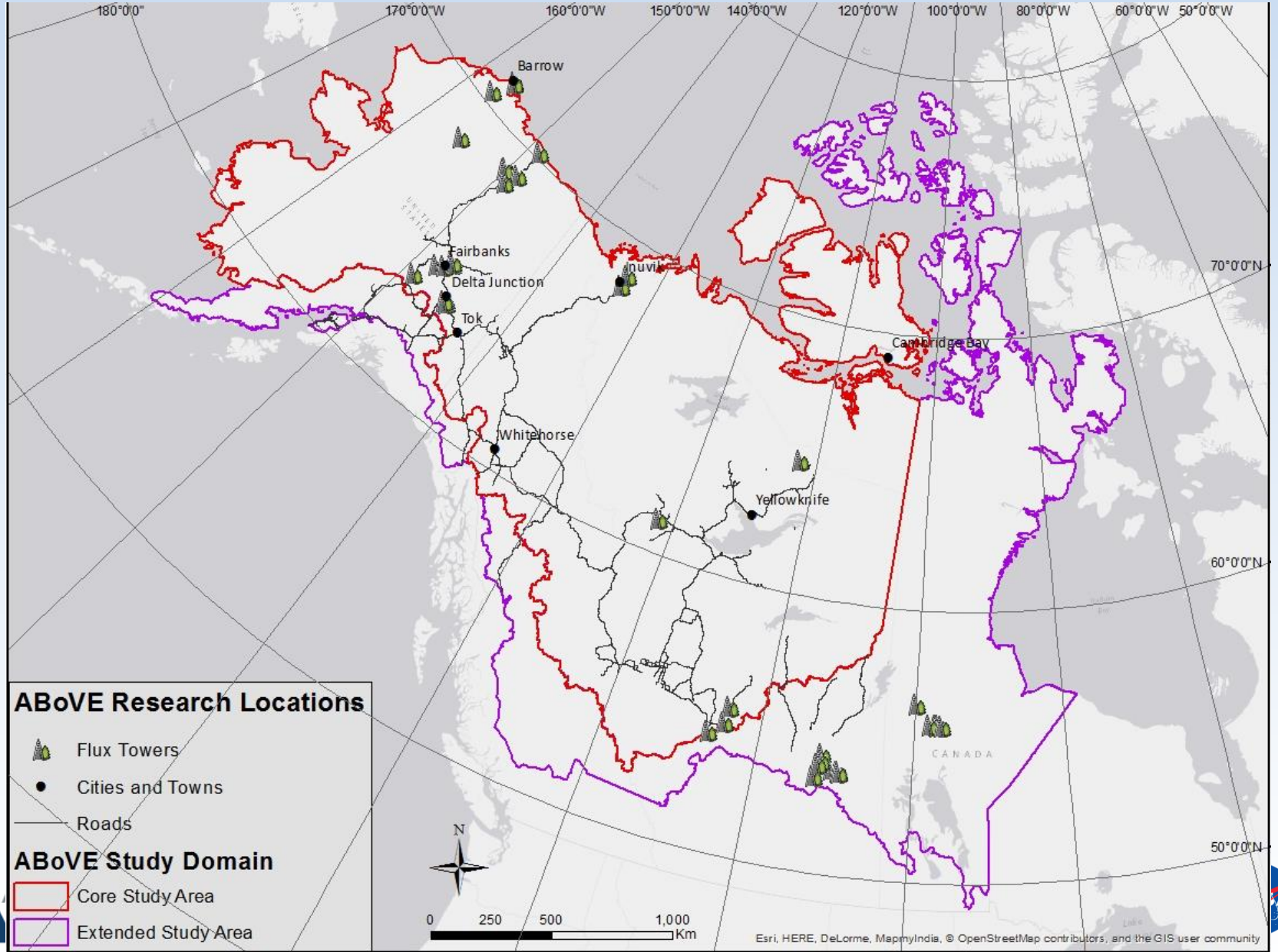
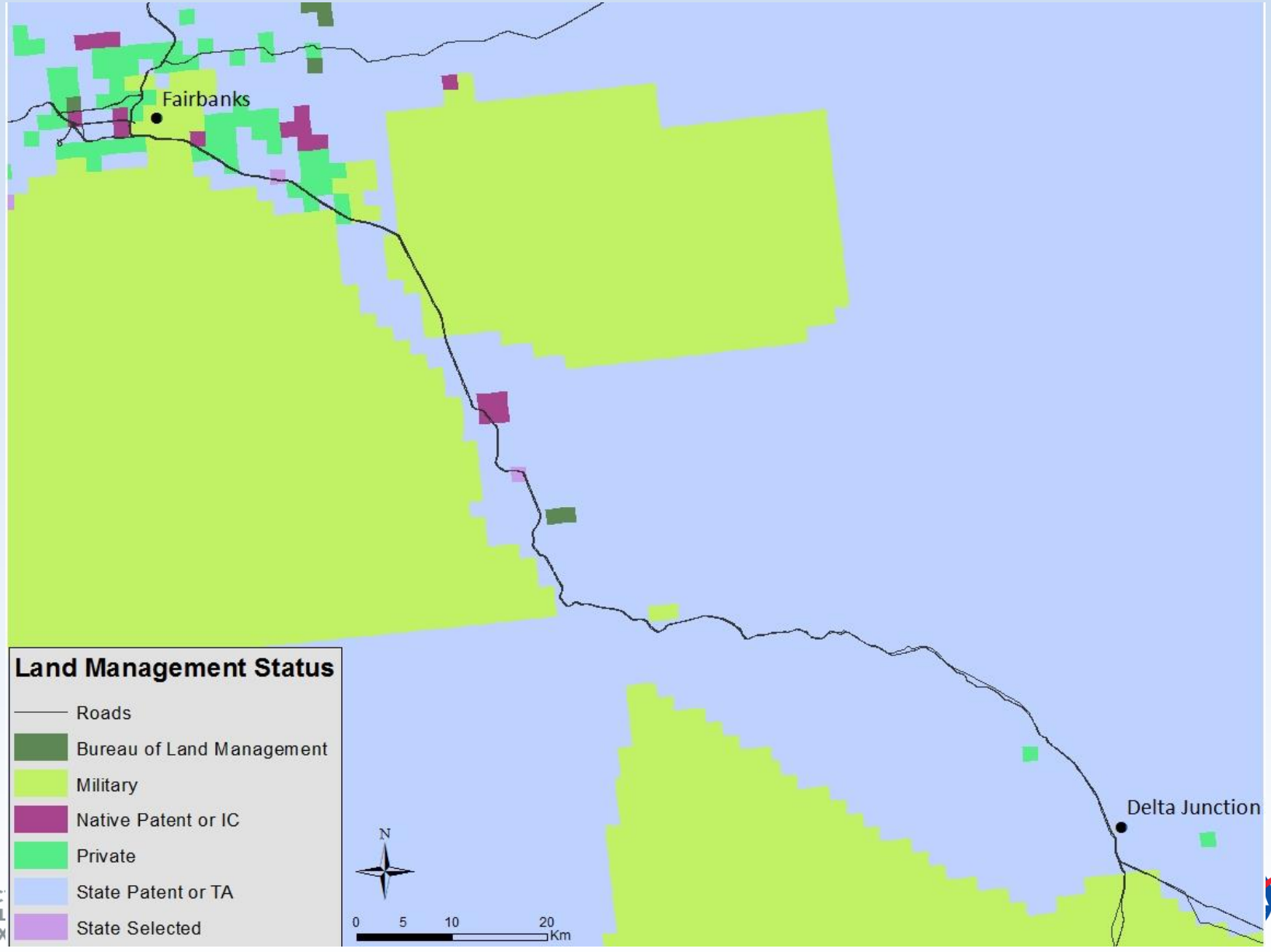
Tower Locations

https://above.maps.arcgis.com



Map of Land Management

https://above.maps.arcgis.com



ABoVE Logistics Hub - Fairbanks

- Project Vehicle (Being stored/maintained at Alaska Auto Rental)
- Vehicle rentals – 4x4, ATV, snowmachine
- Storage and equipment shipments (shipping/ receiving)
- Office space
- Possible tower/logistics/safety tech

ABoVE Logistics Hub - Yellowknife

- Looking for similar model as Fairbanks
  - Place to store equipment
  - Shipping depot
  - Workspace out of the weather
- International Shipping Challenges
  - Shipping soil, foliar samples to/from U.S. and Canada
  - Hazardous materials/ batteries

Sturm's 9 Rules

1. **Own It** - everyone must be responsible for their own safety

2. **Know Your Enemy** – Don't focus on the wrong hazards

3. **Forget Technology**-Self-reliance and resourcefulness may be the last resort

4. **Take It Easy**-Don't push the limits

5. **Embrace The Craft**-You must master the requisite skills to survive in the Arctic; learning those skills should not be considered an impediment

6. **Elder Speak**-Learn from the experts who have gone before you
7. **Profit From the Misfortunes of Others**
8. **Acceptance**-Willingly accept the knowledge others have to pass on
9. **Full Bore Mentoring**-It takes many years to be competent and safe in the field. Pass along your knowledge. He suggested the following experience levels for Arctic field work:
    - Three years experience to be a competent member of a group
    - Five years to go on your own
    - Eight years to lead small groups
    - Twenty years to lead large groups

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