As partners of the Arctic Landscape Conservation Cooperative (Arctic LCC), we are creating a geodatabase of **meteorological, hydrological,** and **aquatic ecosystem** data from Arctic Alaska and Northwestern Canada (Figure 1). The Arctic LCC will use products generated from this effort to refine conceptual models, guide future research and monitoring efforts, and aid in informed and coordinated management of populations of fish and wildlife. More information about the Arctic LCC can be found at fws.gov/science/shc/pdf/DOIArcticLCCNarrative.pdf .

**Our first step is an inventory of existing data**. We will gladly accept any information regarding your dataset. If you have data or metadata to contribute, know of a potentially relevant database, are working toward a similar goal of data compilation, or have started to compile datasets, we would love to work with you to increase the availability of existing arctic datasets. To contribute information about your data to this inventory, please see Appendix A, call us, or send (arcticdata@gmail.com) the following information: **your contact information**, **brief description of variables**, **approximate dates** over which data was collected, and a **brief description of spatial extent (or shapefile)**. A finalized version of this inventory will help us determine where to focus additional database efforts.

**Our second step is to request and archive datasets**, perform data rescue efforts, create standardized metadata, populate a geodatabase that can be accessed online, and link datasets to existing platforms. By contributing data, you will not only help the Arctic LCC, you will also increase citation of the valuable datasets you have collected and ensure that they are archived for the future! Citation information for contributed data will be linked to datasets and proper citation of data will be required. Our team includes dedicated data rescue experts who are eager to turn daunting stacks of field notes, hand drawn maps, photos, slides, digital files and raw datasets into user-friendly, streamlined datasets! Please see Appendix B for instructions on contributing data. If you would like to restrict access to your data, please let us know. We cannot promise to rescue and include all datasets in the final database, but at the very least we will document the need for rescue of your dataset.

See below to view potential database categories and to see more details on contributing to the Arctic LCC inventory and database. Please let us know if you have any questions or comments. Thank you for your time.

Sincerely,
The Arctic LCC Hydrologic Database Team:
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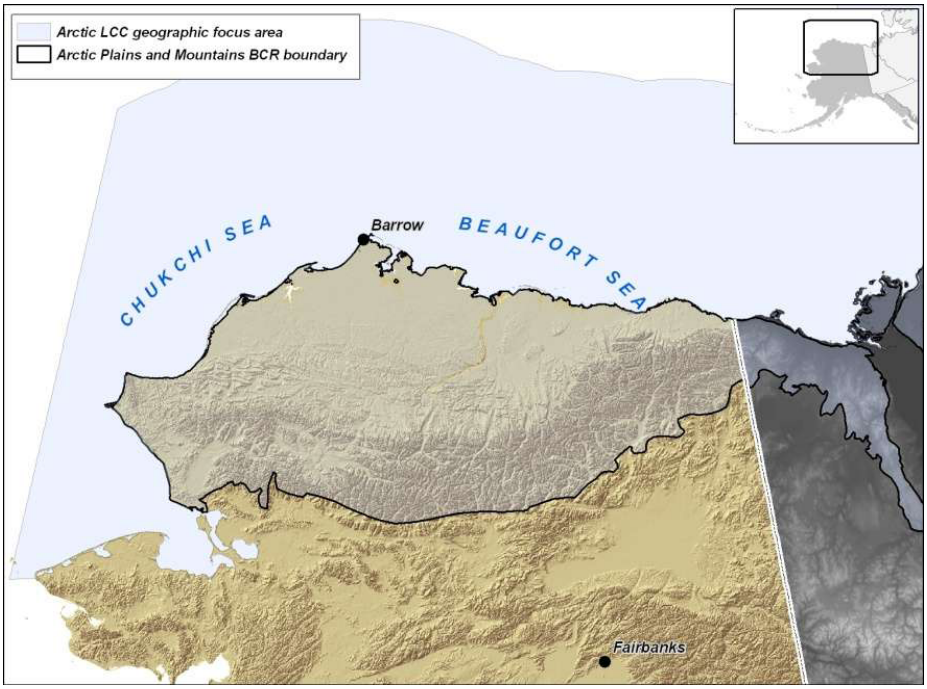
**Figure 1. Map of the Arctic LCC focus Area**




# Appendix A

## Phase 1: Data Inventory -- tell us about your data

To contribute information about your data to the initial Arctic LCC inventory, please call us or send (arcticdata@gmail.com) any of the following information (target date for data inventory: November 2010, though we will happily accept information at any time):

- Your **contact information** and affiliation.
- **Description** of datasets and variables (be as brief or detailed as you have time to be).
- **Format** data is currently stored in (e.g. notebook, spreadsheet, database, 8 track, HDF, slides, photos, etc.).
- **Time** over which data was collected (if collected over multiple years, indicate which seasons)
- **Spatial extent** of data using one of the following formats: your own preferred format, brief narrative description of general location, coordinates, shape file, kml file, or annotated map (e.g. creating and sharing a Google Maps using 'my maps').
- Other relevant information you might want to include about your data. This initial inventory will be updated and finalized at a later date.

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# Appendix B

## Phase 2: Contributing Data to the Database

To contribute information, datasets and other material for the second phase of this project see the options listed below. If the following options will not work for you, give us a call and we will figure something out. Prior to sending datasets and other information, please call us or send us information about your data as described in Appendix A. Please let us know if you would prefer to limit access to your dataset.

- Email: arcticdata@gmail.com (size limit: 25 megabytes for Gmail accounts)
- Postal Mail: If sending packages via mail, please let us know via email. We will make copies of your data and return the originals to you. Please send packages to:
  Jessica Cherry
  PO Box 757340
  Fairbanks, Alaska 99775
- Secure FTP site (with a connection speed of 1000 Mbps it should take approximately 5 minutes to upload 10 gigabytes). If you are having trouble, please contact us or seek additional support for using Filezilla: http://wiki.filezilla-project.org/Using.
  - Add files to a single folder named '**yourlastname**'.
  - **Compress** (i.e. zip) the folder.
  - If you do not have an **FTP client**, you will need to download and install one (i.e. http://filezilla-project.org/).
  - Use FTP client to **upload your folder** to our secure ftp site – instructions for upload using Filezilla follow:
    - **Open the Filezilla** client.
    - Type in the '**Host**' name (**ArcticLCC.IARC.UAF.edu**), leave everything else blank, and click on '**Quick Connect**'.
    - In the '**Local site**' and '**Filename**' windows on the left, browse to the compressed folder that you want to upload.
    - In the '**Remote site**' window on the right, **browse to and open** the '**incoming**' folder.
    - **Drag and drop** your compressed folder into the 'incoming' folder.
  - When the upload is complete, please make sure the **size of the folder that you uploaded matches the size of the original compressed folder**.
  - **If the upload fails**, a folder will be created that cannot be deleted. Pease rename it '**yourlastname_failed**' before attempting to upload the file again.
  - When the upload is complete, **send us an email (arcticdata@gmail.com) indicating the name and size of the folder uploaded**. Note whether or not you suffered failed upload attempts that resulted in partially uploaded files.

# Appendix C

**Table 1. Data relevant to our efforts includes but are not limited to the following categories:**

| Potential Categories |
|---|
| Traditional ecological knowledge relating to any of the following categories |
| Air temperature, relative humidity, precipitation, evaporation, evapotranspiration, transpiration, wind speed and direction |
| Snow (i.e. depth, redistribution, snow water equivalent) |
| Ice (i.e. extent, onset, break-up, thickness, timing of ice-free season, thickness, glacier mass balance) |
| Permafrost (active layer depth) |
| Digital elevation models |
| Soil temperature, moisture, thermal conductivity, hydraulic conductivity, infiltration rates, ice content |
| Location, extent and expansion rates of thermokarst features, solifluction activity, and shoreline erosion for a particular region or at particular locations. |
| Surface water dynamics, connectivity, distribution, and morphometry (i.e. bathymetry, water level and volume, channel morphometry, maximum depth, shoreline complexity, surface area, stage, discharge, knik point inititation, run-off flow paths) |
| Water temperature (i.e. thermal profiles) |
| Water clarity, color, and light (i.e. Secchi depth, UV radiation, turbidity, light attenuation) |
| Water chemistry (i.e. pH, alkalinity, cations, anions, dissolved organic matter, dissolved oxygen, methane, other gases, isotopic signatures, and soluble and particulate forms of carbon, nitrogen and phosphorus, etc.) |
| Contaminant data (methyl mercury, polychlorinated biphenyl concentrations, etc.) |
| Paleolimnological data (diatom community composition, sedimentation rates, fire history) |
| Benthic and pelagic algae (i.e. chlorophyll concentrations, primary productivity rates, algal species composition, biovolume, isotopic composition) |
| Benthic and pelagic invertebrates (i.e. secondary production, growth rates, species richness, biomass, relative abundance, nutrient concentrations, isotopic composition, individual and community grazing rates) |
| Aquatic microbial community (i.e. productivity, genetic diversity, etc.) |
| Bryophytes and riparian, emergent, and submerged vegetation (i.e. species composition, percent cover, nutrient concentrations, isotopic composition) |
| Shorebird, waterfowl,and other wildlife activity |
| Fish (i.e. presence, growth rates, productivity, catch per unit effort, mortality rates, health, diet, isotopic composition, movement, life stage, life history, etc.) |
| Fish habitat quality |
| State and federal water rights status |

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