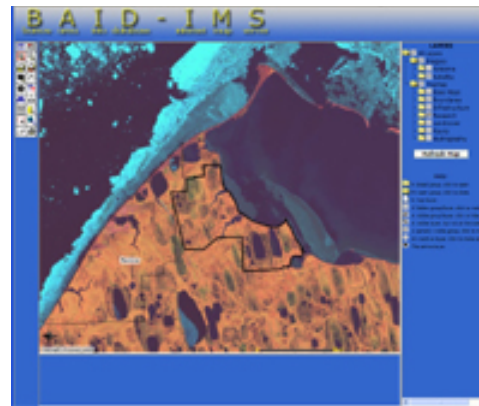


Barrow Area Spatial Data Infrastructure

A collaborative effort of the
Barrow Arctic Science Consortium Digital Working Group



On a global scale, the “Establishment of Spatial Data Infrastructures (SDI) is emerging as a major endeavor. The SDI encompasses the policies, organizational remits, data, technologies, standards, delivery mechanisms and financial and human resources necessary to ensure the availability and access to spatial data.” - Global Spatial Data Infrastructure web site: www.gsdi.org



Funding for this effort has been made possible through cooperative agreements with the Office of Polar Programs at the National Science Foundation and the US Geological Survey.





Barrow Arctic Science Consortium Digital Working Group

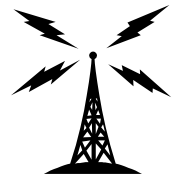
Who are we? Arctic researchers reliant on Information Technology (IT) actively conducting research in the Barrow area

What do we do? Advise, coordinate, facilitate and promote:

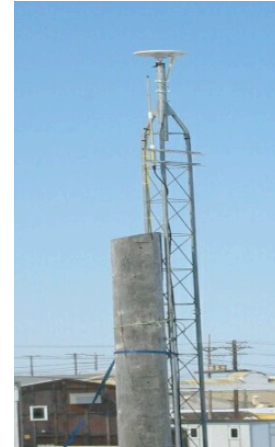
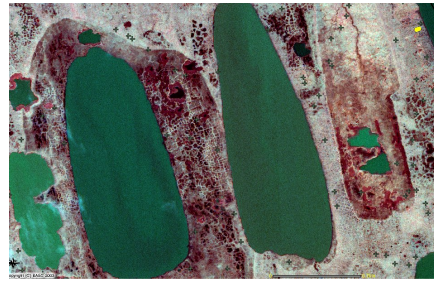
- Information Technology at BASC
- Barrow Area Spatial Data Infrastructure
- Development of the Barrow Area Information Database (BAID)
- Linkages to local, regional and external interest groups such

As the Barrow High School, NSB GIS facility, NSIDC, ALIAS, University research community, etc.

Barrow Area Spatial Data Infrastructure

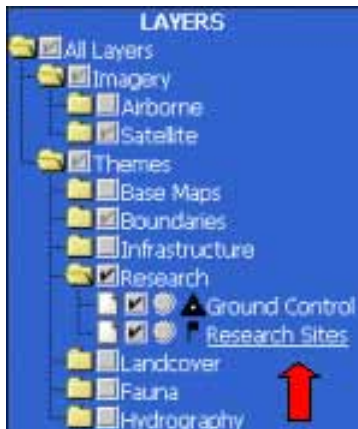


Hardware, software, DGPS, GIS framework data, remote sensing data acquisition including ground control points, framework data with common standards, data sharing, online data access, user resources, support for wireless mapping technologies, cooperative agreements

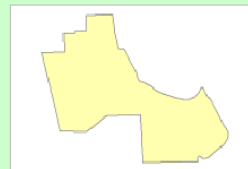


Barrow Area SDI Data Standards

- File naming conventions and directory structure
- Standard file formats: ESRI shape files, GeoTiffs, MrSID, etc.
- Compression: Winzip
- ESRI Software: ArcGIS, ArcIMS
- Data access via ArcIMS and FTP
- Map Projection and Datum: UTM zone 4, NAD83
- Federal Geographic Data Committee (FGDC) Metadata
- Data archive: National Science Foundation's Arctic System Science (ARCSS) Data Coordination Center (ADCC) at the National Snow and Ice Data Center



Barrow Environmental Observatory Science Research District



Data format: Shapefile

File or table name: beo_srd

Coordinate system: Transverse Mercator

Theme keywords: BEO, arctic science, atmospheric monitoring, tundra, permafrost, climate change

Abstract: This data set represents the boundary of the Barrow Environmental Observatory (BEO) Science Research District (SRD) which encompasses an area of approximately 7,644 acres.

FGDC and ESRI Metadata:

- [Identification Information](#)
- [Data Quality Information](#)
- [Spatial Data Organization Information](#)
- [Spatial Reference Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
- [Metadata Reference Information](#)
- [Binary Enclosures](#)

<http://ims.arcticscience.org/dwg/Text/SDI.html>

[more search options](#) [contact us](#) [site map](#)

- [About BASC](#)
- [About Barrow](#)
- [Why study the Arctic?](#)
- Science & Research**
- [BASC facilities](#)
- [Logistics & permitting](#)
- [Barrow-based research projects](#)
- [Other research entities in Barrow](#)
- [Digital Working Group](#)
- Research Bases**
- [Barrow Environmental Observatory](#)
- [Atqasuk](#)
- [Chukotka](#)
- [Related websites](#)
- [Glossary](#)
- [Site map](#)
- [BASC home page](#)

Barrow Area Spatial Data Infrastructure

Differential Global Positioning Systems


- [Differential GPS Base Station Specifications](#)
- [**Barrow Differential GPS Support Request Form**](#)
- [Differential GPS Check Out Form](#)
- [Differential GPS Handbook](#)
- [SuomiNet GPS archive](#)

Standards, Data, Links and Tools

- [Datum and Projection Standards](#)
- [Data Dictionary](#)
- [Geospatial Data Links](#)
- [Barrow Area Information Database - Internet Map Server \(BAID-IMS\)](#)



The Barrow Arctic Science Consortium has entered into a cooperative agreement with the United States Geologic Survey to document spatial data that is essential to scientific endeavors in the Barrow - Atqasuk area. This project will focus on the development of metadata written to the Federal Geographic Data Committee (FGDC) standard. This data will be archived and made available through a server at BASC and at the Arctic System Science (ARCSS) Data Coordination Center (ADCC) at the National Snow and Ice Data Center (NSIDC) in Boulder, Colorado.



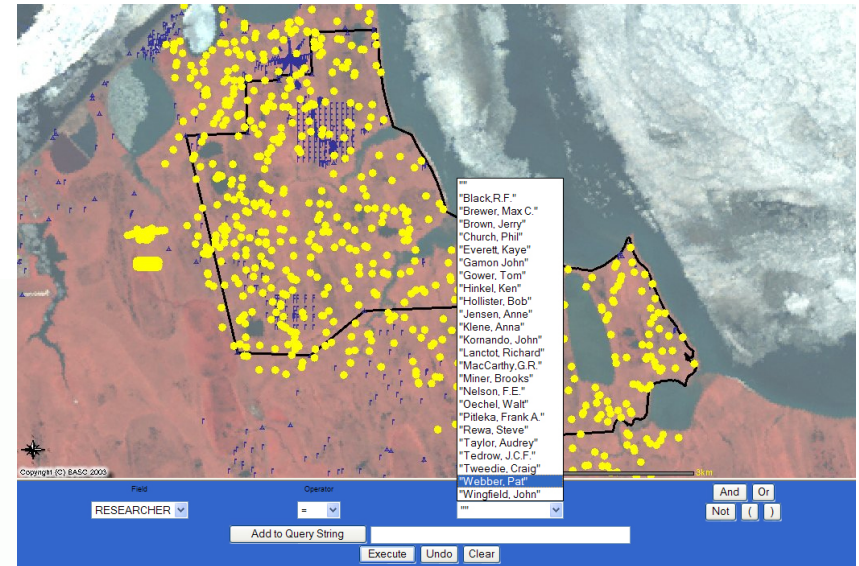
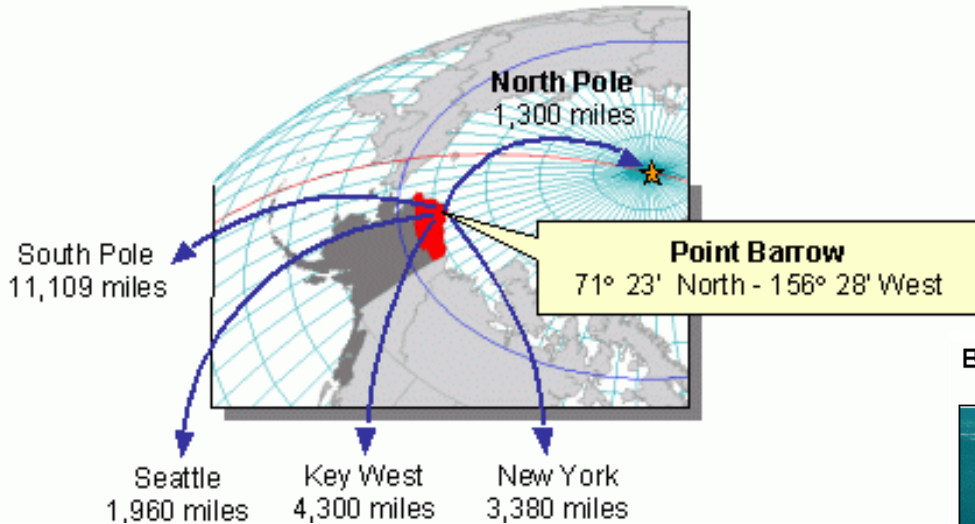
[NSF acknowledgement and disclaimer](#)

Barrow, Alaska

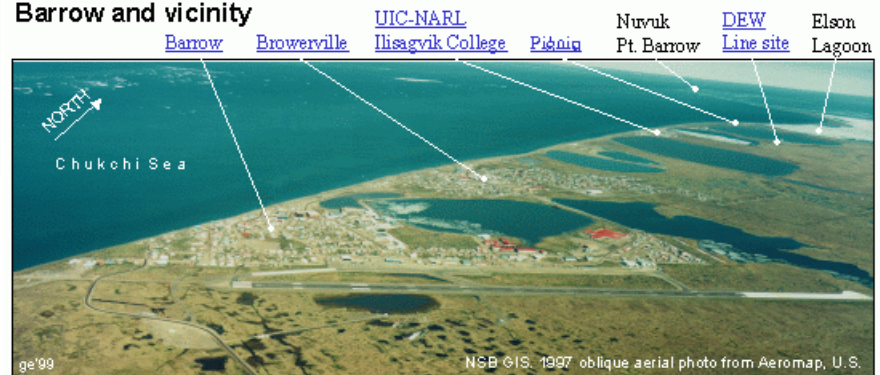
A Legacy of research

Develop a tool for logistical support and planning, as well as, a means to connect researchers

Distances from Point Barrow



Barrow and vicinity



Barrow Area Information Database (BAID)

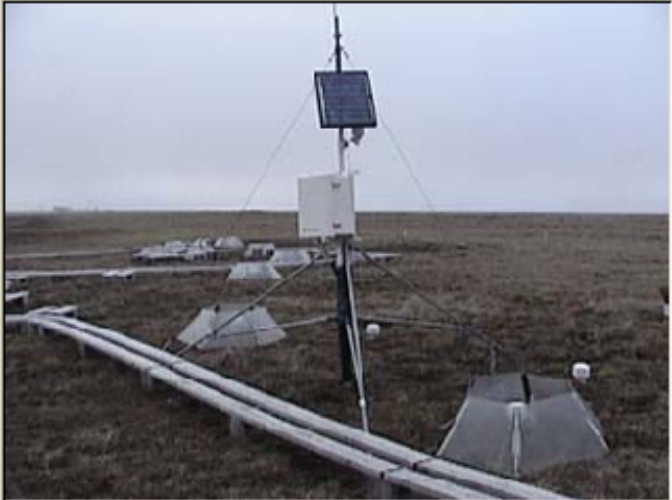
Microsoft Access - [fmrSiteInfo]

File Edit View Insert Format Records Tools Window Help

MS Sans Serif 8 B I U

Research Site Information:

Project Number	<input type="text" value="102"/>
Site Name	<input type="text" value="ITEX Dry Site Tower"/>
Site Marker No.	<input type="text"/>
Latitude^	<input type="text"/>
Longitude^	<input type="text"/>
Elevation^	<input type="text"/>
DGPS Latitude	<input type="text" value="71.313496491"/>
DGPS Longitude	<input type="text" value="-156.598711836"/>
DGPS Northing	<input type="text" value="7914065.9239"/>
DGPS Easting	<input type="text" value="585847.5521"/>
DGPS HASL	<input type="text" value="4.333"/>
Date Recorded	<input type="text" value="7/7/2002"/>
Primary Investigator	<input type="text" value="Hollister, Bob"/>



Comments

Internet address: ims.arcticscience.org

Open a folder to view an expanded list of layers and themes that you can view and/or query

Overview map

Online Tutorial

The screenshot shows the BAID-IMS web application interface. At the top, the logo "BAID-IMS" is displayed with the text "browse area info database internet map server" below it. A dropdown menu labeled "How Do I...?" is highlighted with a red circle and an arrow pointing to it from the "Online Tutorial" label. On the left side, there is an "Interactive toolbar" with various icons for map navigation, highlighted with a red circle and an arrow. An "Overview map" is shown in the top-left corner, also highlighted with a red circle and an arrow. The main map area displays a satellite image of a coastal region with labels for "Barrow", "BEO Science Research District", and "Barrow". A scale bar at the bottom of the map is highlighted with a red circle and an arrow. On the right side, there is a "LAYERS" panel with a tree view of folders and layers, highlighted with a red circle and an arrow. Below the layers panel is a "Redraw Map" button. A "Help" section is also highlighted with a red circle and an arrow, containing a list of symbols and their functions. At the bottom of the map, a status bar displays coordinates and scale information: "Map: 596011.91, 7914878.29 -- Image: 820, 283 -- ScaleFactor: 28.667227313767675", highlighted with a red circle and an arrow.

Interactive toolbar

Help

Note coordinates of locations to load as waypoints in your GPS.


The scale bar can be changed to read in miles, feet, kilometers and meters.

Future Plans

1. Enhance help files, user guide
2. Provide IMS training for local interest groups
3. Integrate BAID into the permitting process for the new BEO SRD
4. Incorporate more data (record more research site locations, more imagery, infrastructure, coastlines, etc.)
5. Increase application performance (using *.sid, SDE/SQL)
6. Archive Barrow Area spatial data; provide FTP access to data
7. Enhanced Searching capability
8. Use BAID-IMS in the classroom

Barrow Area Information Database - Internet Map Server (BAID-IMS)

BAID-IMS
barrow area info database internet map server



LAYERS

- All Layers
- Imagery
 - Airborne
 - Satellite
- Themes
 - Base Maps
 - Boundaries
 - Infrastructure
 - Research
 - Landcover
 - Fauna
 - Hydrography

Refresh Map

Help:

- A closed group, click to open
- An open group, click to close
- A map layer.
- A hidden group/layer, click to show
- A visible group/layer, click to hide
- A visible layer, but not at this scale
- A partially visible group, click to toggle
- An inactive layer, click to make active
- The active layer.

Copyright (C) BASC 2003

0 Km

Research Sites							
Rec	PROJECT_NO	CAP_NO	SITE_NAME	RESEARCHER	COMMENTS	REGION	START_Y
1	116		Drill Site-NML West	Brown, Jerry	North meadow lake number 2	Barrow	
2	116		Drill Site-NML East	Brown, Jerry	North meadow lake number 1	Barrow	