



Atmospheric Radiation Measurement Climate Research Facility/ North Slope of Alaska/Adjacent Arctic Ocean (ACRF/NSA/AAO)

Informal Introduction to Barrow and Atqasuk, Alaska

Barrow

- **Introduction:** The ARM Climate Research Facility/North Slope of Alaska/Adjacent Arctic Ocean Barrow Site is located a few miles to the east of Barrow, near the northern-most point of the United States. Barrow is typically accessible only by air or boat, although special “rollagon” trains have gone in and out of Barrow in past winters. The population of Barrow in the year 2000 was 4,500 residents. Since Barrow serves as the seat of the North Slope Borough government, it has many amenities that might not be expected in a town of its size: a hospital, supermarket, and a community college.
- **Facts for the traveler:** Visas – same requirements as for the continental U.S. Alaska is the 49th state of the union. Time zone: (Pacific minus 1 hour) or (Eastern minus 4 hours). Noon in Barrow is 1 pm in Seattle and 4 pm on the East coast. Daylight savings time is applied just like (most of) the rest of the US. Area code: 907 (land lines), 907 (cell phones). As of June, 2005, Alltel provided cell phone coverage in the Barrow area. Zip code: 99723. Longest day: 24 hours of daylight. Shortest day: 0 hours of daylight.
- **Money and costs:** Since there is no road into Barrow, perishables are flown in and non-perishables are barged in on the summer barge. Goods tend to be more expensive than in the lower-48 states, by perhaps 100% in some cases. Barrow has a well-stocked supermarket. You will notice that some items, such as milk or bottled juice, are expensive when compared to prices in the lower-48. Most restaurants and shops accept credit cards, and there is an ATM at the supermarket. Wells Fargo has a branch in Barrow and also has an ATM. You may want to have some cash on hand to purchase native items often for sale in the afternoon in the supermarket lobby or in display cases in the store.
- **Attractions and activities:** Inupiat Heritage Center, whaling (September and April/May), polar bear sight seeing (commercial trips by Hummer to Pt. Barrow), and Inupiat (Eskimo) culture.
- **History and culture:** Point Barrow, some ten miles out of town, is a point of land that divides the Chukchi Sea and Beaufort Sea. The coastline from Point Barrow

heads approximately to the south-east and south-west, respectively, effectively sticking out into the ocean current. This provides unique access to sea animals, a fact that natives have long recognized. The remains of a native village at the site of present Barrow date from more than 1000 years ago. Approximately one hundred years ago, the US Army established a meteorological station near Barrow. The Cape Smythe Whaling and Trading Station was built in Browerville, just east of Barrow, in 1893. The US Navy established the Naval Arctic Research Lab about 3 miles away from Barrow in the 1949. After it was decommissioned in 1981, the buildings became property of the local native corporation. They are used for the local community college, the Barrow Arctic Science Consortium, and the ARM Climate Research Facility Duplex building. Barrow became prosperous after the oil discovery at Prudhoe Bay, which sits on land within the North Slope Borough. Barrow is the seat of the North Slope Borough and is its largest town. Tax revenues from oil production were used to greatly improve the town's schools and civil infrastructure.

- **Environment:** Barrow sits on the North Slope of Alaska, a flat coastal plain bounded on the north by the sea and on the south by the Brooks Range. Due to the low average annual temperature, the ground is permanently frozen to a depth of more than 1000 ft, with a thin “active layer” thawing each summer. Barrow experiences nearly constant easterly wind. Before the sea freezes in late October/ mid-November, the climate could be considered somewhat maritime – cool during the summer, even with the 24 hours of sunlight. In winter, air temperatures can range from freezing to fifty below zero. During breakup (spring) and freeze-up (fall), local roads often fill with potholes and stretches of mud; some roads become impassable. During winter, the persistent wind buries roads in snow drifts.
- **Getting there and away:** Barrow is served twice-daily by Alaska Airlines, with flights in winter arriving in Barrow at either ~ 9:30 AM, or ~ 7:20 PM, with departures from Anchorage approximately 3 hours earlier. After unloading passengers and cargo, the jet then turns around and departs Barrow approximately half an hour later for Fairbanks and Anchorage, arriving not quite three hours later in Anchorage. A typical arrival and departure sequence is as follows: people on the arriving flight deplane, people on the departing flight go through security and board the plane, their bags get loaded, and only then do the bags of the arriving passengers show up at the baggage claim area. Expect a half-hour wait for your bags. The airport is within the city, meaning that one hotel is across the street (across the street and a 50 yard walk to the east), and several other hotels and restaurants are within a few minutes walk. Upon occasion, flights may not make it into Barrow due to fog conditions. Alaska Airlines considers this a weather event beyond their control. Their policy states “Amenities will not be given if a flight delay or cancellation is determined to be solely due to weather, air traffic control, or other circumstances beyond the control of AA and occurs in a customer's departure city or final destination.” This essentially means come prepared to pay for a hotel and other amenities when the flight is turned back to

- the origination airport. Please take the timing of this into consideration when making your reservations – give yourself a little flexibility.
- Getting around: To get from the airport to the ARM Climate Research Facility Duplex, take a taxi and ask to go to NARL building 354 (note the building number!). The cost is \$10 one way. You must get in touch with Walter Brower, ACRF/NSA/AAO Site Facilities Manager, beforehand so that you can get *into* the duplex once the taxi drops you off. To get between the duplex and the site (The Great White), you will need to coordinate schedules with Walter. There is a Vehicle Use Policy that describes the requirements for use of ARM-owned vehicles in Barrow. If you plan to use one of these vehicles, you will need to meet these requirements and coordinate vehicle use with Walter Brower and Valerie Sparks.
 - Places to stay: The ACRF/NSA/AAO Project has a Duplex in Barrow which includes lodging possibilities for a limited number of people, with first priority given to site operations personnel. To use this duplex or to access the facilities at the ACRF/NSA/AAO Site, you must file a Site Access Request; this form is available on the ARM web site. If there is no space at the Duplex, the other Barrow hotels are listed on <http://www.arm.gov/sites/nsa/visit.stm>. Because the ACRF/NSA/AAO Duplex is leased by Sandia National Laboratories, foreign nationals are required to submit a Foreign National Visit Request at least 50 days prior to arrival. Foreign nationals can only access the duplex and other ACRF/NSA/AAO facilities after their Foreign National Request has been approved.
 - Amenities to bring: Bring your own sheets, pillowcases, towels, blankets and toiletries, as none of these are provided. A light sleeping bag might be easier than bringing bedding. There are pillows to use at the site. There is a mixture of double and twin beds at the Barrow ACRF/NSA Duplex.
 - Places to eat: Cook your own, or see the selection of Barrow restaurants at <http://www.arm.gov/sites/nsa/visit.stm>. The junior college which is located about a block from the ACRF/NSA Duplex has a cafeteria open to all.
 - **Shipping: Expect all shipping to take longer.** For example, Fed-Ex overnight means that your package will get overnight to Anchorage, where FedEx will hand it over to one of their contractors, who will fly it to Barrow – either the next day or the following day, depending on the amount of cargo they have to move. In any case, expect the shipping to take **an extra half week or longer**, depending on the shipping method. **If you have a very large package to send** (small subcompact car size or larger) **the delay may be longer and you're advised to keep on top of your shipment progress.**
 - Your first impression: Probably: Oh my, it's so flat! Where are the trees? How can people live here? Look at all the stuff lying around the houses! Where are the paved roads? While you may be unaccustomed to the region, please note that since there are no bushes or trees or fences behind which to store items, things are much more in the open. Also, dirt roads are easier to maintain in this climate than paved roads, so bring your rubber boots if you will be around during summer.

- Details: There is a hardware store in Barrow (Spenards) as well as the supermarket, but please come prepared with all the small details that you may require during your stay. If you forget something (e.g. a spare fuse) and cannot buy it in one of the stores, you may be delayed by days until your item, ordered over the phone or over the internet, arrives. However, if a Spenards store in Anchorage or Fairbanks stocks the desired item, you may be able to have it flown to the Barrow store for base price plus an overnight delivery charge. Be aware that cold can make things difficult – for example, batteries may freeze in winter unless you place hand warmers next to them. Get a phone calling card to call outside Barrow. Long distance calls are blocked from the ACRF/NSA/AAO Duplex.
- Mosquitoes: Mosquitoes are sometimes a bit troublesome at Barrow, but commercial products such as “OFF” or “DEET”, or something equivalent, usually are sufficient. The sea breeze most often suppresses mosquitoes in Barrow.
- Guns: No personal guns are allowed. The ACRF/NSA/AAO Project supplies shotguns for polar bear defense **ONLY** after a special gun-training class has been completed. This class is typically offered twice per year.

Atqasuk

- Introduction: The secondary ACRF/NSA/AAO facility is near the inland village of Atqasuk. Atqasuk is a small village some 60 miles south of Barrow, with a population of about 250 people. Like many villages, there is a public school in the community, as well as police station, fire station, utilities, post office, and a small store. Just like Barrow and other villages, Atqasuk is only accessible by air year-round. In winter, Atqasuk can be reached via snow machine from Barrow, but only by those who know the area well. The lack of access other than by air creates conditions to which most people from the “lower 48” are not accustomed to.
- Phone Facts for the traveler: Same as for Barrow, except phone – 907-633-xxxx (land lines), and zip code - 99791.
 - Get a long distance phone calling card to make calls outside of Atqasuk. Long distance calls are blocked from the ARC House.
 - The telephone lines at the ARC House and the Pumpkin are intended for business purposes and emergencies and use of these lines for non-business or non-emergency reasons should be limited.
- Money and costs: Everything that enters Atqasuk must first fly to Barrow before flying to Atqasuk. Prices are even higher than in Barrow. You should **bring all of the food you expect to eat and items you expect to use. Do not expect to be able to buy anything at the store** – the selection is not very large in the first place, as most people in the village shop in Barrow. When the store is out of something, it may be weeks before new stock or supplies arrive. Since everything moves by airplane, anything that can have water added later, such as powdered drinks or food, will save you some money. **There are no ATMs in Atqasuk, so**

- your best bet is to bring cash.** Vendors may accept a check but it is best to have cash with you.
- **Attractions and activities:** Fishing (if you have the right license and a local guide). **Bring your own books and hobbies;** Atqasuk is a great place for someone writing their thesis!
 - **History and culture:** Atqasuk was established as a caribou-hunting village by Barrow natives, once the pressure on the caribou population around Barrow itself became too large. It also has a very small open pit coal mine, only sporadically operational (one front end loader). We've been told that the name Atqasuk means "place of the rock that burns."
 - See <http://www.north-slope.org/nsb/HomeruleBrochure/AtqInfo.htm>.
 - **Environment:** Similar to Barrow, except no sea.
 - **Getting there and away:** There are two commuter airlines which fly from Barrow (BRW), to Atqasuk (ATK) and to Wainwright (AIN - another village some 80 miles west of Atqasuk), before returning back to Barrow, with the Atqasuk and Wainwright service sometimes switched. These are Hageland Aviation, and Frontier Flying Service. Each has two flights a day. A one way ticket costs approximately \$90. The flight takes between 20 and 30 minutes, depending on the plane used. If the flight first goes to Wainwright (BRW to AIN to ATK), the trip takes about an hour longer. Same goes for return flight – a direct ATK to BRW flight is shorter than a flight that has yet to go to Wainwright before returning to Barrow. The flights depend on local weather conditions, which can change quickly, at the departure location and arrival location. Thus, it is better to buy a one-way ticket to Atqasuk, and then a one-way ticket back, when you know which airline is flying that day (call the airlines for the latest info). Phone numbers: Frontier Flying Service: 1-800-478-6779 or 1-907-450-7200, <http://www.frontierflying.com>. Most airlines flying to Atqasuk require 1 hr. advance check-in before the flight and the requirements put in place by the commercial airlines, may not apply in terms of what is allowed on a flight. **Don't count on a tight schedule, as delays have gone as long as 3 days, in or out, due to fog. When the plane arrives, people get off, items are unloaded, new items and passengers are loaded and the plane is back in the air. Most often this is done in less than 15 minutes so if you are not there, you may miss your flight.**
 - **Getting around:** Your visit should be prearranged, so that you can get picked up at the airstrip by the ACRF/NSA/AAO Atqasuk Operator, Doug Whiteman. The airstrip is about a mile from the village and has no facilities; there is no building, phone or toilet. You must call Doug from Barrow before you leave Barrow so that he knows when to pick you up. You should call Doug several days before you depart Atqasuk as a heads-up, and the day of your flight once you check in and are clear on how on-time or late your flight will be – as well as the airline that you are flying on. It is *critical* that you keep Doug notified of your Atqasuk plans and any changes that might affect those plans. His phone number at the ACRF/NSA/AAO Atqasuk Site (The Pumpkin) is 907-633-3200. There is a truck in Atqasuk, but it does not belong to the ARM Program or to ACRF/NSA

- Operations. If there are no other visiting science people at Atqasuk, there is a possibility that the truck might be made available for your use. Arrangements for a key to the truck must be made with Walter Brower, ACRF/NSA/AAO Site Facilities Manager while you are in Barrow. Use of the truck is not guaranteed. Researchers planning to use the truck are responsible for obtaining the keys from Walter Brower in Barrow and returning the keys to Walter. The ACRF/NSA/AAO Project has a 6-wheel ATV and a 4-wheel ATV in Atqasuk that are occasionally used by visiting researchers. Use of the ATVs must be arranged in advance with Doug Whiteman. Prior to you using the ATVs, Doug will give you a lesson on safe operation. If you use the truck or ATVs, drive slowly and courteously. Do not cut across people's lots when operating the truck or ATVs.
- Places to stay: The ACRF/NSA/AAO Project has an agreement with the NSF-sponsored Barrow Arctic Science Consortium to use the Atqasuk Research Center house in the village, which has both office and lodging space. The ACRF/NSA/AAO Project has arranged use of one bedroom with one twin bunk bed in the ARC House, with use of other bedrooms possible on a non-interference basis with other NSF-sponsored visitors. That is, ARM staff and ARM-funded visitors have guaranteed access to one bedroom in the Atqasuk Research Center house; this bedroom is located next to the boiler room. If other bedrooms are empty, we can use them, but we are only guaranteed the one bedroom. NSF-funded researchers have priority for the other bedrooms. Arrangements for use of the Atqasuk Research Center house are made through Walter Brower, ACRF/NSA/AAO Site Facilities Manager in Barrow. Researchers planning to stay in the Atqasuk Research Center house are responsible for obtaining the keys from Walter Brower before traveling to Atqasuk, and are responsible for returning the keys to Walter when they return to Barrow. The Atqasuk Research Center house also has internet access and a wireless link installed courtesy of BASC. The phone number for the Atqasuk Research Center house is 907-633-6137. The Atqasuk Research Center house has a kitchen, dining area, living area, bathroom with a shower, and several bedrooms, and a working washer and dryer. **There is NO public Laundromat in the village.** The Atqasuk Research Center house does not have cable TV at present.
 - Atqasuk Research Center house requirements for use: Following are some basic housekeeping requirements that you are asked comply with during your stay at the Atqasuk Atqasuk Research Center house:
 - You must maintain the house in good condition at all times, as other researchers may arrive at any time.
 - You must also clean the house prior to departure. Standard housecleaning includes:
 - Sweep all floors
 - Wipe all counters and tabletops
 - Clean any areas of the floor that have become dirty
 - Clean shower, sink, and toilet

- Any towels and sheets used at the Atqasuk Research Center house should be washed, dried, and put away before you leave.
- Any cooked/perishable food must be thrown away (don't leave any food in plastic containers, baggies, etc.)
- Trash bags (kitchen and bathroom) must be changed and trash (carefully tied off to avoid trash blowing in wind) must be deposited in one of the large trash dumpsters located around Atqasuk. Trash includes boxes – please do not leave them stacked in or around the house.
- Trash should be removed from the truck and 4-wheelers. Make sure the 4-wheelers are put away in the garage, and if the truck needs gas, tell Doug.
- Amenities to bring: There are some linens in the Atqasuk Research Center house but it is best to bring your own sheets, pillowcases, towels to make sure you have what you need. You should also bring toiletries, as none are provided. There are blankets and pillows to use at the Site.
- Places to eat: The Atqasuk Hotel may be able to provide some meals, but be prepared to cook your own. It is important to note that the hotel restaurant is not always in operation. Don't count on the restaurant providing meals.
- Shipping: **expect an additional 2-day delay** to get equipment from Barrow to Atqasuk on top of the delay to get things shipped to Barrow from Fairbanks or beyond.
- Your first impression: probably: similar to that of Barrow. Also: Look at all the phone lines and power lines above all the houses! This place is sooo small! How can people live here? The only difference between this village and any other village is that there is no road here, there are no trees around, and it is in the Arctic. Just come prepared and with a positive attitude. If you approach your visit to Atqasuk as a camping trip, you'll have some idea of what to bring, and you'll also likely be pleasantly surprised by what you find when you get there.
- Details: **Plan as if you will not be able to buy anything in Atqasuk** (with very few exceptions). **Think of all the details before you arrive.**
- Special Notes for IOP Participants:
 - Atqasuk is “dry.” You can't bring alcohol to or consume alcohol in Atqasuk. If you break this law, you are on your own - don't expect ARM staff to help you if are caught.
 - July and August are mosquito season in Atqasuk. You should bring an effective mosquito repellent, a mosquito-netting hat, and a long-sleeved jacket and gloves and/or mosquito-proof jacket. You may also wish to bring duct tape to seal sleeves and trouser cuffs to mosquitoes. In Atqasuk, at the peak of the mosquito season, working outside can be a challenge. For reasons not well understood, native people seem to have less of a problem with mosquitoes than “outlanders.” Contact Jimmy Ivanoff or Walter Brower at the ACRF/NSA/AAO site in Barrow if you need advice about mosquitoes.

- Bring a phone card. You will need to provide your own phone card for personal long distance calls from Atqasuk. You can buy cheap phone cards at Costco, Walgreens, Walmart, or the big-box store of your choice.

Links and Pictures

- Community information: <http://www.north-slope.org/nsb/HomeruleBrochure/BrwInfo.htm>, and AtqInfo.htm
 - <http://www.nsbsd.org/>
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Barrow accomodation - ARM duplex



(left) Kitchenette area in the duplex, (lower left) two examples of bedrooms, (lower right) living room area adjacent to the kitchenette.

Not shown: shower/bathroom, washer/dryer, office space used by ARM operations.



Atqasuk accomodation - ARC house overview

Top - kitchen & dining area; living area; dining area visible behind couch, bathroom with heater. Bottom - examples of bedrooms in the house.

