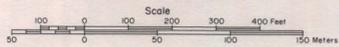


COMMUNITY MAP ANAKTUVUK PASS

68° 08' N - 151° 45' W



Prepared by the Arctic Environmental Information and Data Center, University of Alaska, under contract to the United States Geological Survey, in cooperation with the Bureau of Land Management for National Petroleum Reserve-Alaska Task Force studies, July, 1978.

1. Itinerant housing for borough personnel
2. Mobile equipment storage
3. Teachers housing
4. School
5. Store
6. Health clinic
7. Church
8. Old school
9. Community hall
10. Post office
11. Village cooperative store
12. NARL field research station
13. Fuel storage

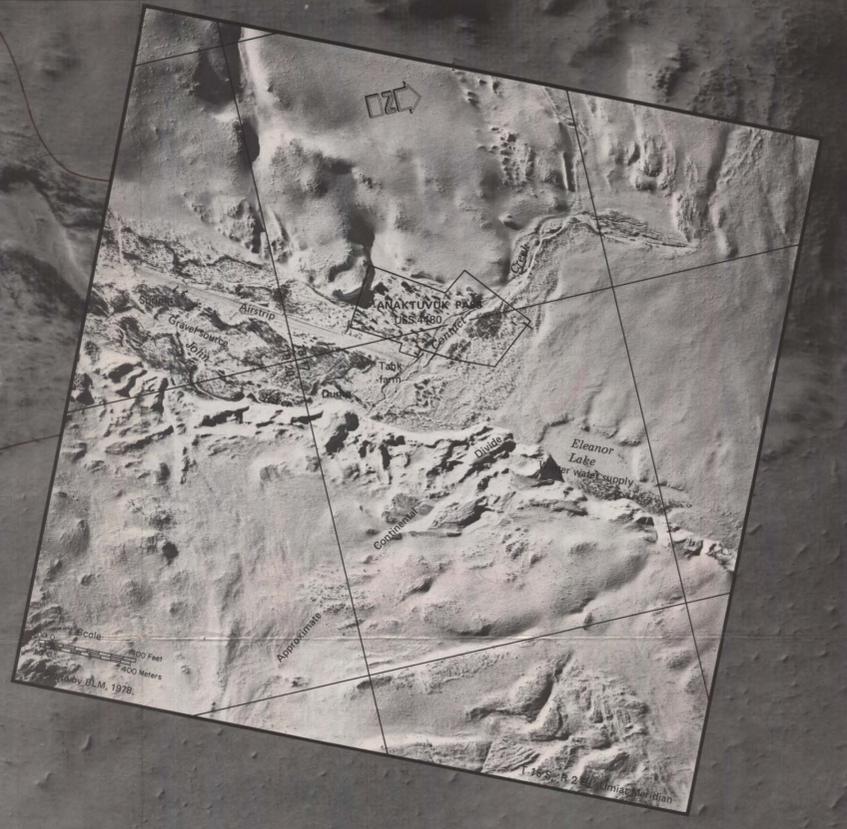
Land Use *

- Residential
- Public
- Public (under construction)
- Commercial

Electrical Distribution **

- Service line
- Pole
- ⊕ Generator
- ⊙ Community well
- ⊕ Community phone
- ⊙ Satellite earth station
- Survey line (USS 4480)
- Soils (boundaries are approximate; on-site testing is necessary prior to construction of facilities)

* These data were collected from interviews with people who had recently visited the village and have not been field checked.
** These data were adapted from a March 15, 1977 "as-built" of the Anaktuvuk Pass Distribution System by Robert W Retherford Associates and have not been field checked.



Land Use and Community Facilities

Housing—Until the mid-1960s all housing in Anaktuvuk Pass consisted of sod huts, most of which have now been replaced with conventional structures. Some of the buildings were accomplished by individuals while other homes were built in 1967 through Bureau of Indian Affairs programs. In total, Anaktuvuk Pass has 44 houses owned by individuals, two teachers housing units and four separate quarters for itinerant borough personnel owned by the Borough, and one housing unit for itinerant NARL personnel. All structures are mounted on gravel pads to prevent differential thawing and settling into the permafrost. The Borough is planning to limit construction of new housing to the northwest side of the John River to encourage centralization of community utilities and services.

School—Anaktuvuk Pass is in the North Slope Borough School District. The school presently consists of three separate structures. Grades K through six are held in a part of a triplex. Grades seven through 12 are temporarily being held in a portion of a large domed building that was originally intended as a school, but construction was halted because it failed to meet Alaska building code standards. Hot lunches are served in a former school which was condemned as a fire hazard. During the 1977-78 school year, 24 students attended grades K through six, and 28 students attended grades seven through 12.

A new school is under construction. It consists of one preschool, two elementary, and two high school classrooms. There is a home science room, a science room, a shop with small engine repair facilities, a media center that includes a library, a kitchen, a gymnasium which will also be used as a cafeteria, and a two-lane swimming pool.

Other Structures—Anaktuvuk Pass has four stores, one of which is the village cooperative operated by the Nunamit Corporation. The others are small shops in private homes. There is also a post office, a community hall, a church, and the NARL field research station.

Health Care—The Borough's Health and Social Services Agency (HSSA) operates a health clinic in the village, staffed by a PHS-trained health aide. The clinic consists of two rooms in a triplex. Health aides provide preventative and primary health care to both Native and non-Native patients. They also screen patients and make referrals to the medical staff at the Indian Health Service (IHS) clinic at Fairbanks Memorial Hospital or to the IHS Tanana Services Unit Hospital for further treatment. PHS provides dental care at the IHS clinic in Tanana and itinerant medical and dental care personnel to the clinic in the village. A state public health nurse visits Anaktuvuk Pass to hold well-baby clinics and to screen and treat communicable diseases. HSSA is attempting to upgrade mental health, dental, optometric, and alcoholic detoxification and rehabilitation care through more itinerant clinics in the village and expanded facilities for these services at Barrow.

Public Safety—The North Slope Borough provides police protection, while the City is responsible for fire protection. The Borough stations one full-time police officer in the village, headquartered at the community building. Fire is a great hazard in Anaktuvuk Pass because of the prevalence of old wooden structures built closely together and the frequency of high winds. There is no known fire-fighting equipment in the village. The new school will use water stored in the pool to supply its overhead sprinkler system.

Communication—A satellite earth station provides most of the communication capability for the village. The village phone (668-8001) connects via satellite with RCA Alascom's long-distance center in Anchorage. This Message Toll Service (MTS) phone is manned by an attendant who collects payment from the caller and pays a monthly bill for all calls directly to RCA. The PHS phone links the clinic with the IHS hospital at Tanana.

Anaktuvuk Pass receives commercial and educational television broadcasts through the State's Bush Satellite Television Demonstration Project. A small television studio at the school produces its own videotapes and live programs for local use as well as transmits videotapes made in Barrow. The village receives radio broadcasts from the public radio station in Barrow and various stations in Fairbanks. The school has an HF radio for communicating with school district headquarters in Barrow.

Power—The electrical power system in Anaktuvuk Pass is owned and operated by the North Slope Borough and consists of one 55-kw and two 90-kw generators, an insulated generator building, a distribution system, and streetlights. The school has a standby generator. Fuel oil for cooking and heating is stored by and purchased from the Nunamit Corporation, which also sells fuel to the Borough for its generators. In 1978 electricity cost \$0.84 per kilowatt hour, and fuel oil cost \$1.25 per gallon.

Water—In the past, residents hauled water from Contact Creek and Eleanor Lake and from springs near the south end of the airstrip if the creek went dry. In winter they hauled ice from Eleanor Lake. In 1971 the U. S. Geological Survey conducted an hydrologic reconnaissance of surface and groundwaters in the Anaktuvuk Pass area to help develop a central water supply for the village. Based on their recommendations, the U. S. Public Health Service (PHS) drilled a test well in Contact Creek in 1974. Although too many boulders were present to construct a permanent well, results showed that groundwater flow was sufficient for village needs. In 1974 the U. S. Public Health Service drilled a 72-foot (22-m) well in the center of the village downhill from the school. The Borough supplied a generator for the pump house. Flow averages 30 gallons (114 l) per

minute with no drawdown. Chemical and bacteriological data are available. Villagers use the well as long as the piping system stays thawed; otherwise, they haul ice from Eleanor Lake.

Since individual homes do not have water piped to or within them, consumption is a low 2 gallons (7.6 l) per person per day. The storage tank next to the pump house holds only 250 gallons (950 l)—too little to supply the 150 residents for even one day when the pump fails. The two-story borough bunkhouse and the school have internal piping, but water is hauled from the community system. After the Borough establishes a maintenance program to prevent the present system from freezing, PHS plans to expand well capacity and develop a water distribution system.

Waste Disposal—"Honey bucket" wastes and trash are collected and hauled by truck to a dump located about a half mile east of town across the airstrip. Solid wastes are burned in 55-gallon (208-l) drums. Maintenance of the road to the dump is an important part of good sanitation in the village. PHS and the North Slope Borough plan to construct a sewage lagoon and sewage collection system by late 1978.

Mapping Unit	Soil Description	Suitable as Source of:			Engineering Applications			Soil Features Affecting:		
		Topsoil	Sand & Gravel	Roadfill	Potential Frost Action	Foundations	Highway Location	Embankments		
300 A	EL fine sandy loam—nearly level, susceptible to occasional flooding. Soil temperatures below freezing, but hard frozen soil and ice lenses only at depths of several feet.	Fair to depths of 15 to 30"	Good; 15 to 30% of overburden	Good	Low	Occasional flooding	Occasional flooding	Leamy materials susceptible to piping; porous substratum material		
297 DF	So, gravelly sandy loam, 12 to 45% slopes—Soil temperatures below freezing, but hard permafrost only below depths of 2'.	Poor; gravelly materials	Fair; 5 to 14% fines	Good	Low	Hilly to steep slopes	Hilly to steep slopes	Moderate to rapid permeability when compacted		
296 B	Kollituk gravelly loam, 3 to 7% slopes—Poorly drained with soils on mounds with patterned, hummocky microrelief. Permafrost at depths of 6 to 14" in troughs and 24 to 40" on mounds.	Poor; gravelly and poorly drained	Unsuitable; high fines	Poor; susceptible to frost action	High	Poorly drained; high permafrost table	High permafrost table	Susceptible to piping		
296 D	Kollituk gravelly loam, 12 to 20% slopes—Poorly drained soils on mounds with patterned, hummocky microrelief. Permafrost at depths of 6 to 14" in troughs and 24 to 40" on mounds.	Poor; gravelly and poorly drained	Unsuitable; high fines	Poor; susceptible to frost action	High	Poorly drained; high permafrost table	High permafrost table	Susceptible to piping		
299 A	An, very gravelly, loamy fine sand—Nearly level, very gravelly calcareous soils on alluvial plains; excessively drained but susceptible in places to occasional flooding. Soil temperatures below freezing, but hard permafrost only below depths of several feet in very gravelly materials.	Unsuitable; very gravelly	Good; occasional flooding	Good	Low	Occasional flooding	Occasional flooding	Porous materials		
293 B	Umlat silt loam, 3 to 7% slopes—Poorly drained soils on colluvial slopes that are perennially frozen at shallow depths.	Poor; poorly drained	Unsuitable silty	Poor; susceptible to frost action	High	Poorly drained; high permafrost table	High permafrost table	Poor stability; susceptible to piping		

U. S. Soils Conservation Service, 1969. Soils of the Anaktuvuk Pass Area, Alaska.

Community Base Map—Maps are needed to show land use, ownership, location of utilities, and to plan for future village improvements. These maps can be prepared by either surveying the land on the ground or through enlargement of aerial photos or by a combination of both. Air photos can be taken at various heights. The height determines the extent of the area covered by the photograph.

The community base map was prepared from a BLM photograph taken in 1978 at a height of 8,400 feet and enlarged to a scale of 1:2,400 (1 in. = 200 ft.). This map was used to locate the present utilities, residential development, and various community services and can be used in the future to evaluate the area for village expansion and to locate new construction.

Note: This community base map has been prepared from low-altitude aerial photographs which contain unavoidable distortions in scale. Property and utility information has been generalized from many sources and may contain minor inconsistencies. This map should not be construed as a survey.