

## **Appendix I: Cultural Resource Probability Modeling**

## Alaska Rail Road Archaeological Survey and Inventory

### Pre-historic and Ethno--historical Patterns of Land Use and Settlement

Prehistoric sites have been found in upland areas along major water ways dating from <sup>14</sup>C 8,000 yrs. B. P. (Before Present) to approximately 3,000 yrs. B.P. People inhabiting those upland areas may have been the progenitors of succeeding generations of Dena'ina. Traditionally, land use by the Dena'ina Athabascans was along streams and lakes that supported anadromous fish runs. Winters were spent in villages during a time of minimum food procurement. Villages along Knik Arm were inhabited on a semi-sedentary basis; they were located at the mouth of important river confluences with Knik Arm and on numerous inland lakes. During the spring and fall most of the population moved away to fish camps where whole families would have been involved in procuring and processing fish. In the late fall, families went hunting in the mountains; men pursued large game, while women and children set snares for small fur bearers such as rabbits and squirrels.

In the Port MacKenzie Rail Road study area the Nancy Lake and Goose Bay lowlands both prehistorically and historically likely provided good locations for hunting water fowl and fur bearing animals. Uplands surrounding Lakes and swampy areas, such as the Susitna lowlands and Goose Bay, provided excellent areas to camp. Prehistorically, promontories served as lookout areas and vantage points for spotting big game. Historically, they provided good locations for camps when hunting, gathering berries and/or pursuing water fowl. Shem Pete (Kari and Fall 2003) called Goose Bay "Tustl'agh" (Rear Portage). It was a popular goose hunting area for the Knik Dena'ina.

Art Theodore, a Dena'ina elder, remembered the description his uncle gave him of how they had traditionally hunted geese in the Goose Bay area. His uncle, as a little boy, would accompany his father when they went goose hunting. They set up and staked pit snares in locations where geese were likely to land. To increase their odds, they put feed out to entice the birds. Once the birds were caught he and his father clubbed them. When he was 4-5 years old often the geese were bigger than he, making him fearful of them as he tried to club them. Later they started using traps, but were cautious in their use because metal traps often amputated a bird's leg, enabling the geese to fly away. When traps were used, his uncle was taught to wrap cloth or rope around the "jaws" so the traps would not cut through and amputate a leg (Kari and Fall 2003: 273).

In the early twentieth century a cannery was built at Goose Bay. Shem Pete, the late Dena'ina elder well versed in the geography of the region, mentioned:

"In 1915 I left Susitna in a boat and came over to Goose Bay cannery. They had just built a cannery there. There were Chinamen there Lot of people there. I saw that cannery there in 1914 and 1915" (Kari and Fall 2003: 273).

Tustl'aghtnu (Rear Portage Creek) refers to trails and portages connecting Goose Bay with a number of other important sites such as: Seven Mile Lake, Big Lake, Papoose and Twin Lake, in addition to the Little Susitna River and a trail north to Red Shirt Lake (Kari and Fall 2003: 273). Art Theodore reported that his father had a trapper's cabin at Seven Mile Lake on a trail leading from Knik.

Shem Pete mentioned that villages were generally located at the confluence of a river with a lake. A good example of such a site was his description of the village at the confluence of Red Shirt Lake with Fish Creek. His son Billy added that people would place basket traps in the shallows near an outlet. Fish traps could be four to eight feet long and as wide as four feet. The area surrounding the mouth of Red Shirt Lake harbored a large community. Both Shem Pete and his son, Billy, elaborated at great length on the availability of fish and other subsistence foods in that

community (Kari and Fall 2003: 101). Annual fish runs provided the most stable and easy subsistence resource. Other important village sites included a village at the upper end of Red Shirt Lake, Cow Lake, Flat Horn Lake, and Indian Bay on the southeast shore of Nancy Lake. Cow Lake was reportedly the first stop-over village when traveling from Red Shirt Lake (Fall 1981: 382); it had been abandoned prior to the village at Red Shirt Lake. Shem Pete's mother was familiar with the village when she was young (Fall 1981: 382). Trails radiated out from all the above villages, linking them to Goose Bay, in addition to villages along the Susitna River.

## **Methodology**

The area of investigation for the Alaska Rail Road spur alternates encompasses the region south of Willow to Port MacKenzie. To the north it is bound by the railroad, on the east side by Knik Arm, while its western boundary basically follows the Susitna River. The specific objective was to examine topographic maps and shade areas likely to reveal historic sites based on ethnographic reports and previous archaeological data. Areas within the Area of Potential Effect (APE), adjacent to and in the vicinity of the proposed spurs, were also addressed.

Prior to outlining areas on the map it was necessary to study historical and ethnographic data on settlement patterns and land uses by people who lived in the region, both historically and prehistorically. Based on those patterns, areas of greatest sensitivity for archaeological sites were identified and broken down into two separate categories: prehistoric and proto-historic. The latter category also included the ethno-historic period; both overlap the prehistoric with the historic period. Once the literature research was conducted, topographic maps were examined to determine areas most and least likely to encompass historic sites. Potential areas for archaeological sites were identified on topographic maps submitted for the Port MacKenzie R. R. spur alternates. An on-the-ground cultural resource walk-over survey was recommended for areas identified on the maps. Archaeological surveys conducted will need to identify and examine evidence of cultural activity left on the landscape, both historically and prehistorically.

Archaeological sites comprise material remains of past events or landscape features and alterations created by cultural activities. The latter includes depressions where cache pits were used for food storage; depressions where houses once stood; and earthen foundation walls. Subsurface archaeological sites can only be found through shovel testing. Shovel testing may yield artifacts and /or cultural disturbance in sub-surface strata; such as birch bark lined caches, hearths and post molds.

There is a fine line between historic and prehistoric sites when identifying sites characteristic of Native American dwellings and subsistence activities. Many Athabascan traditional activities and subsistence practices continued into the early 20th Century. If the date of use is attributable to more recent times, a site may be referred to as proto-historic or ethno-historic; both describe the period that overlaps the prehistoric unwritten and historic written eras. Proto-historic is used for the period during initial Russian settlement on the Kenai, while the ethno-historic period may include the Russian-American trading period with the Upper Cook Inlet Dena'ina. The Dena'ina controlled the interior fur trade by acting as middlemen for the Russians. Most trade was carried out on Dena'ina terms (Fall 1981). Information for that period may be gleaned from Russian records, Russian Orthodox Church documents and from cultural observations written by Euro-Americans and from Dena'ina oral histories.

In the final report, based on a cultural resource survey, it is anticipated that archaeological site identification may include pre-historic sites, dating from the pre-Russian undocumented era; proto and ethno-historic sites, reflecting the Russian-American and Early-American fur trade; and the subsequent gold rush era that continued into the early 20th Century. The ethno-historic era is dependant on ethnographic data, historical records, oral histories, cultural documentation and

material culture. During the late Russian American period, dating between 1835-1840, the smallpox epidemic swept through Athabascan territory. It decimated Dena'ina numbers by 50 percent. Dena'ina Athabascan people thus received a crippling blow to their culture. Subsequent flu epidemics further depopulated many areas. Because of the decimation of many villages in the Upper Cook Inlet Susitna region, much of the collective traditional cultural knowledge was lost; however their villages in the form of house and cache pit depressions have been left as cultural footprints on the landscape. Those are the remains that are important to interpret before they too are lost to development.

The map submitted to the Alaska Rail Road included areas likely to yield important data on archaeological sites. In order to carry out an archaeological survey, areas of importance and sensitivity to archaeological sites (as highlighted on the map) would include:

- a) the confluence of a river with a lake;
- b) the confluence of two rivers;
- c) bluffs above major waterways;
- d) promontories that may have provided good look-outs for prehistoric camps;
- e) promontories near or adjacent to swamps where water fowl might have congregated; and
- f) bluffs surrounding inland lakes and streams

Staff for the Cultural Resources Division of the Matanuska-Susitna Borough submitted topographic maps identifying areas sensitive to sites within a region heavily used and populated by the Dena'ina people. Most of the information on Dena'ina land use patterns was based mainly on one man's oral history: Shem Pete related numerous areas used by his family both in the recent and historic past (Kari and Fall 2003). It is obvious from his recollections and from oral history handed down to him, that the region has the potential to hold a greater number of villages and subsistence areas than the recollections of one person. The above information and suggested survey areas did not include post 20th Century historical data on the built environment.