



**PORTAGE CREEK VILLAGE COUNCIL  
PORTAGE CREEK, ALASKA**

**INDIAN RESERVATION ROADS PROGRAM**

**FINAL  
LONG-RANGE TRANSPORTATION PLAN**

**PHASE II**

**JUNE 2002**

**Submitted by:**



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**ACRONYM LIST**

°F	degrees Fahrenheit
ADEC	Alaska Department of Environmental Conservation
ADOT&PF	Alaska Department of Transportation and Public Facilities
ADT	Average Daily Traffic
ANTHC	Alaska Native Tribal Health Consortium
AS	Alaska Statute
ATV	all-terrain vehicle
BEESC	Bristol Environmental & Engineering Services Corporation
BIA	Bureau of Indian Affairs
DCED	Alaska Department of Community and Economic Development
FY	Fiscal Year
HUD	U.S. Department of Housing and Urban Development
IRR	Indian Reservation Roads
JATP	Juneau Area Transportation Plan
LRTP	Long Range Transportation Plan
PL	Public Law
ROW	right-of-way

## **1.0 GENERAL DESCRIPTION**

### **1.1 PURPOSE**

The purpose of this report is to identify and outline the Tribal transportation goals and to fulfill the long-range transportation strategies for the Village of Portage Creek, Alaska. The goals for planning are to address future land use, economic development, traffic demand, public safety, and health and social needs for the next 20 years. Within the context of comprehensive planning, the Long Range Transportation Plan (LRTP) should develop and maintain a transportation system that respects the social and economic development of the Tribal Government by considering such needs as housing, education, health care, natural resources, culturally sensitive areas, sovereignty, land use, recreation, tourism, pedestrian access, history, and employment.

### **1.2 INTRODUCTION**

Portage Creek Village Council contracted with Bristol Environmental & Engineering Services Corporation (BEESC) to develop the LRTP for Fiscal Year (FY) 2000-2001. Under the direction of the Bureau of Indian Affairs (BIA), the project was broken down into three phases. Phase I primarily focused on data gathering and agency information for the Village Council. Phase II implemented the compilation of information and drafting of a final report for the Village Council's comprehensive 20-year Long Range Transportation Plan. During Phase III, the Village Council detailed the existing and future community roadway system inventory and BEESC submitted the data into the BIA-Indian Reservation Roads (IRR) program for the FY 2001 Inventory Update. Phases II and III included a public meeting in which the Village Council and members of the community outlined current and future transportation needs. These meetings enabled planners and engineers from BEESC to assist the Village Council in assessing the existing conditions of the roads and planning for future development.

### **1.3 LOCATION**

Portage Creek is located on the bank of the Nushagak River near the mouth of Portage Creek and the Keefer Cutoff. The village is approximately 29 miles southeast of Dillingham, 35 miles east of Clarks Point, and 300 miles southwest of Anchorage. The geographic coordinates for Portage Creek are approximately 58 degrees 54 minutes North Latitude, 157 degrees 43 minutes West Longitude (Section 01, Township 15 South, Range 51 West, Seward Meridian). Portage Creek is located in the Bristol Bay Recording District. The land area included in the community is approximately 13.1 square miles (DCED, 2002).

### **1.4 BACKGROUND**

Portage Creek has a recorded 2000 census population of 36, and is an unincorporated community within an unincorporated borough (DCED, 2002). Historically, Yup'ik Eskimos used the site at Portage Creek as a campground and waypoint on the portage from the head of Nushagak Bay to the mouth of the Kvichak River. The upland portage provided a safer travel route without having to risk the open waters of Bristol Bay, and without making the long trip around Etolin Point. Residents from Koliganek and the Nushagak River migrated to Portage Creek and in 1961 the first modern settlement at the site and permanent dwellings were constructed. In 1963, a BIA school was established. By 1965, 11 families lived in the settlement. The 1980 U.S. Census

listed 48 residents. The school eventually closed, and the population dwindled as families moved to Dillingham and New Stuyahok where school facilities were available. The Portage Creek School has since reopened, with grades K through eight, and Southwest Region Schools administers the operations.

Portage Creek Village Council (a traditional village government) is the federally recognized tribe that conducts Tribal government affairs within the community. Bristol Bay Native Corporation (a for-profit Alaska Native Regional Corporation), Bristol Bay Native Association (a regional non-profit corporation), and Portage Creek Association, c/o Choggiung, Limited (a village for-profit corporation) are the primary Native organizations within the Portage Creek area.

## **1.5 INFRASTRUCTURE**

Housing in the community consists of 22 homes, and the Village Council states that six are currently occupied year-round. The buildings are primarily single-family, of wood frame construction. As with many rural Alaska communities, especially in the Bristol Bay Region, housing is in very limited supply during the summer fishing months. Non-residential buildings in the community include a school, which is administered by the Southwest Region Schools. A health clinic building exists in Portage Creek, but is no longer operational.

The community does not have a piped water or sewer system that is in operation. The local school has its own well and septic system, and it is fully plumbed. A central well was in existence at one time, but the system is rusted and deteriorated beyond use. A few residents have individual wells and most residents haul water from downriver. All residents use honeybuckets or outhouse facilities. A landfill is located northeast of the village.

Electricity is provided by individual generators. The village residents state the desire to renovate the existing electric building. Nushagak Telephone Co-op, Inc., and AT&T Alascom provide telephone service to the community (DCED, 2002).

## **1.6 SOILS AND TOPOGRAPHY**

The Village of Portage Creek lies in a moraine- and outwash-mantled plain, on the Bristol Bay Lowland, which has elevation changes from zero to 500 feet. The Nushagak and Kvichak bays border Portage Creek on the south, the Tikchik Mountains and Ahklun Mountains to the west, and the Aleutian Range to the east and south. The geology of Portage Creek consists of gravelly river or stream-laid deposits, with volcanic ash deposits dispersed throughout the area. The gravel layer is covered with a peaty surface layer consisting of decomposing and organic matter. The soil is generally well drained with high groundwater content (Selkregg, 1976). The area surrounding the community is generally flat with a few rolling hills. The vegetation in the lowlands bordering Kvichak Bay is mostly mesic to wet shrub tundra that consists of alder, willow, shrub birch, and sedge tussocks. There are essentially no trees, but isolated stands of spruce hardwood are present in well-drained sites.

Portage Creek is located in the discontinuous permafrost zone (Selkregg, 1976). Shallow permafrost is uncommon in the area. Generally, permafrost occurs in low-lying areas where the soils are silty substrates and covered with a layer of thick tundra vegetation. Deep permafrost is mostly from relic permafrost that formed during the Pleistocene era.

## **1.7 CLIMATE**

Portage Creek lies within the transitional climatic zone of Alaska, which is characterized by more pronounced daily and annual temperature variations than the maritime zone regions, and less variation than the continental regions. The transitional zone is marked with lower amounts of precipitation, cloudiness, and humidity than the maritime zone. Prevailing winter winds blow from the north, and summer winds blow predominantly from the south. Fog is common in the summer months (Selkregg, 1976).

Weather data from nearby Dillingham Airport, taken over a 50-year period, is assumed representative of the Portage Creek region. Average summer temperatures range from 46 degrees Fahrenheit (°F) to 61°F; average winter temperatures range from 9 to 22°F. Temperature extremes are recorded as a high of 92°F and a low of -53°F. Annual precipitation is approximately 26 inches, including 88 inches of snowfall (WRCC, 2002).

## **2.0 REGULATIONS AND MASTER PLANNING OF TRANSPORTATION IMPROVEMENTS**

### **2.1 REGULATION OF TRANSPORTATION IMPROVEMENTS**

The Village of Portage Creek is an unincorporated community within an unorganized borough, and is subject to state and federal regulations for the purposes of platting.

The Federal Lands Highway Program, Title 23, United States Code, Sections 202(d), 204(a), and 204(j), details the administration of the transportation program, which includes the IRR Program and Public Law (PL) 93-638, the Indian Self-Determination and Education Assistance Act, as amended, that together provide federal guidance for transportation planning. Alaska Statute (AS) 19.10.140 outlines the state's regulation plan.

Road improvements are generally authorized under PL 105-178 and AS 19.05.030. Land use requirements for specific road projects may vary depending on the project location. As applicable, road improvements are subject to the Title 25, Code of Federal Regulations, Parts 169 and 170; AS 40.15; Village requirements; and private landowner approvals.

### **2.2 COMPREHENSIVE PLANNING**

As part of the comprehensive planning process for the FY 2000-2001 BIA-IRR Inventory Update Phase III, a public meeting was held on April 6, 2001, with the Portage Creek Village Council. During the meeting, representatives of BEESC met with the Village Council and community members to discuss the community roadway system and future development. A community roadway map is presented as Appendix A and a land status map is included as Appendix B. The Portage Creek Village Council updated its IRR inventory in August 2001 and roads were added to the inventory for future project consideration. The 2001 IRR update request totals 2.3 miles, and the Village of Portage Creek currently has no miles in the IRR system. Based on the 2001 update request and the current inventory, a total of 2.3 miles of roadway would be in the system for the Village of Portage Creek.

A survey questionnaire was drafted by BEESC and sent to the Portage Creek Village Council. The survey is presented as Appendix C. The survey is part of Phase II of the LRTP and was used as a means to assist the Village Council in determining the existing and future transportation needs, trip generators, modes of transportation, health and safety concerns, and roadway conditions, and to prioritize improvement projects.

Portage Creek is within the boundaries of the Bristol Bay Coastal Resource Service Area Coastal Management Program. Other agencies involved in the community's development program include the BIA, Alaska Department of Transportation & Public Facilities (ADOT&PF), Alaska Department of Community and Economic Development (DCED), U.S. Department of Housing and Urban Development (HUD), the Alaska Department of Environmental Conservation (ADEC), and the Alaska Native Tribal Health Consortium (ANTHC). The following sections list current and future projects for the Portage Creek area. The projects listed for Portage Creek are determined based on available ADOT&PF, DCED, BIA, HUD, ANTHC, and village association data base systems.

### **2.2.1 ADOT&PF Projects**

There are no current ADOT&PF projects in Portage Creek. Portage Creek is not listed on the 2001-2003 Statewide Transportation Improvement Program for future project consideration.

### **2.2.2 ANTHC/ADEC Projects**

A Feasibility Study was completed for a water and sewer system for the village. The project is funded through Village Safe Water and the ADEC.

### **2.2.3 BIA Projects**

Portage Creek presently has no projects listed on the BIA Transportation Improvement Plan for the FY 2000-2002 3-Year Project Plan. Portage Creek has not had a project developed by the BIA in the past.

### **2.2.4 DCED Projects**

Currently, no DCED projects are listed for the Village of Portage Creek. The last project completed included preparation of Alaska Native Claims Settlement Act 14(c) Map of Boundaries and trail improvements.

### **2.2.5 HUD**

Housing block grants were obtained in 1999 and 2000. The grants are for Native American Housing Assistance and Self-determination Act administration of operating and construction funds. Construction of four single-family homes will be completed in 2002.

### **3.0 EXISTING TRANSPORTATION SYSTEM**

#### **3.1 COMMUNITY ROADWAY SYSTEM**

The Village of Portage Creek is built on a knoll on the southern shoreline of the Nushagak River at the junction of the mouth of Portage Creek and Keefer Cutoff. Travel is generally in an east-west direction. Private motorized vehicles include pickup trucks, snowmobiles, all-terrain vehicles (ATVs) and boats. Local streets and roads within Portage Creek consist generally of narrow, two-way gravel roads. Several of the roads that are used extensively do not have a surface material and are simply earth roads. There are approximately 2.3 miles of existing roads and trails within the community. The community roadway map is an aerial view of the existing roads and trails (per 1996 aerial). This baseline map was subject to review by the community as part of Phase III of the 2001 IRR Inventory Update package. Figures of the updated routes are shown as Appendix D. The Village Council stated that ice roads are used extensively during the winter months for transportation connections to other communities and to subsistence hunting and gathering areas.

##### **3.1.1 Right-of-Way and Roadway Ownership**

Portage Creek is not an incorporated city, and right-of-way (ROW) ownership belongs to the Village Council, Village Corporation, or private landowners. As declared in the Portage Creek Village Council 2001 Juneau Area Transportation Plan (JATP) IRR Resolution No. 2001-05, ROW ownership of the local streets and trails that were added to the BIA Inventory is intended for transference to the BIA for future BIA projects. In general, most ROW widths are approximately 40 feet.

##### **3.1.2 Geometric Elements**

Most of the local streets and trails in Portage Creek were primitively constructed and were built without design engineering standards. Two-way passage of vehicles is dangerous on many local streets, which are too narrow. Roadway widths vary from 10 to 16 feet. The majority of roadway widths are 12 feet.

##### **3.1.3 Transportation Health and Safety**

Respondents to the questionnaire state that the airport does not meet Federal Aviation Administration regulations and that the existing airport needs to be resurfaced on the main runway and the crosswind runway and have lights installed. During spring breakup, the airport and crosswind runway are closed periodically because the runway becomes too soft and unstable. The Portage Creek Village Council and community members are concerned about the dust pollution that makes the residents miserable during the dry season. If there is no wind, the dust lingers in the air, causing a severe health hazard for some people. Travel during spring breakup conditions is reported to be unsafe due to the severely eroded and slick roads, especially the road to the beach where boats are launched and fuel is delivered. In addition, numerous ruts and potholes on the roadway surface cause great concern to the residents.

## **3.2 EXISTING STRUCTURAL CHARACTERISTICS**

### **3.2.1 Surfacing and Subbase Material**

The roadway surfacing material consists of locally excavated gravel. During the site visit in April 2001, engineers from BEESC observed that the local gravels are primarily rounded 2-inch-minus beach rock with sand that is locally excavated. Most of the surface gravel is pushed to the sides of the roads and this contributes to breakdown and erosion. The Village Council stated that several roads are in need of reconstruction. Most roads are rutted and experience seasonal deterioration during spring breakup and winter freeze. Survey respondents stated that the overall condition of the roads has gotten worse over the last five years.

### **3.2.2 Drainage**

Culverts and drainage ditches are the main methods used to divert surface water runoff in the roadways in Portage Creek. During the visit to the community in April 2001, engineers from BEESC observed water running down the middle of the road. Ditches have been filled in and are no longer functional. Standing water and erosion of the roads indicate the need for an engineered drainage system. Village Council members stated that the culverts are rusted and in poor condition.

### **3.2.3 Bridges**

There are no bridges located in Portage Creek.

## **3.3 USER CHARACTERISTICS**

Information obtained from the questionnaire reveals that typical trip modes vary depending on the time of year and purpose (Table 1). Winter travel usually includes snowmobile, ATV and truck/car vehicles, with snowmobile use being the predominant method of transportation within the community. During the summer months when peak fishing season is underway, boats and vehicles to transport fish are the main transportation method. Private motorized vehicles include pickup trucks, snowmobiles, ATVs, and boats. There are no public transportation systems within the village at this time. Vehicle numbers were estimated based upon best knowledge of the Village Council.

**Table 1 Characteristics of Seasonal Transportation Modes**

<b>SEASONAL TRAVEL MODES</b> (Number of vehicles)		
	<b>Summer</b>	<b>Winter</b>
Passenger vehicles	1	0
Snowmobile	0	8
ATV	2*	5
Boat	10*	0
Aircraft	0	0
Taxi	0	0
Bicycle	3	0
Other	0	0

\*Summer fishing season increases numbers of vehicles.

**3.3.1 Trip Generators**

Within the community’s developed area, the main trip generators include the airport, school, Village Council building, the boat landing area, and the landfill. Three distinct trip types are identified as (1) work/school, (2) health/social/recreational, and (3) subsistence activities. Each trip type and seasonal activity will create a unique mode of transportation and destination choice. Summer travel mode is generally by truck/automobile, boat, and ATV. Winter travel would include the use of snowmobiles.

Average Daily Traffic (ADT) is estimated based on the 2000 census population. For future 20-year planning and traffic projections, ADT + 20 was used. The ADT + 20 is estimated by multiplying the current ADT by 1.5.

**3.4 AIR TRANSPORTATION**

Portage Creek is currently accessible by air and water. The predominant mode of transportation to and from Portage Creek is by air. The community has a state-owned, 1,900-foot, unlit, sand and gravel airstrip located east of the community. A crosswind airstrip was added to the existing public runway in the mid-1970s. Improvements to the airport runway and crosswind runway were completed in the mid-1980s. Mail and cargo are delivered by air, but no regularly scheduled flights service Portage Creek. Passenger and charter air service is provided by Bristol Bay Air, Peninsula Air, and Mulchatna Air. Respondents to the questionnaire state that the availability for emergency evacuation services is inadequate due to the unlit runway, and that the runway is only maintained during the winter. During spring breakup, the airport has to be closed due to the unstable soil conditions that make it unsafe for landing.

### **3.5 INTERMODAL TRANSPORTATION SYSTEMS**

Intermodal facilities in Portage Creek are limited. There are no rail, public transit systems, or commercial docking facilities available at this time in Portage Creek. The village has one public airport, which connects the community to larger metropolitan areas.

### **3.6 MAINTENANCE**

#### **3.6.1 Responsible Agencies**

At this time, the maintenance of the local roads in Portage Creek is determined by the ownership of the ROW. The ROW in this community belongs to the Portage Creek Village Council, the Village Corporation, or the ADOT&PF. The airport runway and apron are currently the only surfaces that receive regular maintenance.

#### **3.6.2 Maintenance Budgets and Funding Sources**

Portage Creek is not an incorporated community and is not within an organized borough, but is eligible for state revenue sharing to help support its facilities and services. However, the Portage Creek Village Council states that it has not received revenue sharing for at least the past five to seven years. The Portage Creek Village Council states that no funds are put into road maintenance. Consequently, the roads are not improved, and many roads are no more than earth trails.

#### **3.6.3 Community Maintenance Equipment Inventory**

Portage Creek Village Council reports that maintenance equipment owned by the Village Council consists of one grader. The state maintains the airport runway and apron and equipment owned by the state consists of one grader.

### **3.7 PREVIOUS IRR CONSTRUCTION PROJECTS**

No previous IRR construction projects have occurred in Portage Creek. The recently updated BIA-IRR Inventory for the Village of Portage Creek will be used for future BIA projects.

## **4.0 TRANSPORTATION NEEDS**

### **4.1 1993 JATP ROAD CONSTRUCTION PROJECTS**

The Village of Portage Creek did not submit a 1993 JATP Transportation Planning Questionnaire. No further analysis was pursued nor was there a Long Range Transportation Plan developed at this time. A map dating back to 1990 is presented as Appendix E. No further analysis was pursued nor was there a long-range transportation plan developed. No 1990 JATP projects were carried forward for inclusion in the 1993 Portage Creek inventory update and since none were in the 1993 JATP road construction projects, none were carried forward as 2001 priority projects.

## **4.2 2001 JATP PRIORITY PROJECTS**

A second meeting was conducted between the Portage Creek Village Council and representatives from BEESC in April 1, 2002. Priority projects for Portage Creek were discussed as part of the LRTP Phase II. The Village Council further delineated the transportation needs for the comprehensive 20-year transportation plan. The Village Council stated the need to construct a small dock or boat ramp and improve the beach access road as a top priority. All in-town roads are in need of reconstruction and resurfacing. The future transportation needs include opening up access to communities nearby. A trail that leads to Levelock is considered an important subsistence use area, and the Village Council desires to develop the route. The existing airport needs adequate lighting and improvements to the runway surface.

The consensus of the Village Council, as related by the questionnaire and the public meeting, determined the first priority project to be construction of Main Street (Route 1003), which provides access to the Nushagak River. The second priority project is construction of the Landfill Road (Route 1002) and a new landfill. The third priority project is the improvement of an unnamed road (Route 1001) that provides access to the Nushagak River. The Village Council priority projects are listed below based on short-, medium-, and long-range needs.

### **4.3 SHORT-RANGE TRANSPORTATION NEEDS (3-5 YEARS)**

- Main Street, BIA Route 1003, 0.2 mile in length;
- Landfill Road, BIA Route 1002, 1.3 miles in length;
- Unnamed Road, BIA Route 1001, 0.2 mile in length;
- School Road, BIA Route 1004, 0.2 mile in length;
- Unnamed Road, BIA Route 1006, 0.1 mile in length; and
- Unnamed Road, BIA Route 1005, 0.2 mile in length.

### **4.4 MEDIUM-RANGE TRANSPORTATION NEEDS (7-12 YEARS)**

- Boat dock; and
- Improvements to the airport runway.

### **4.5 LONG-RANGE TRANSPORTATION NEEDS (15-20 YEARS)**

- Trail to Levelock; and
- Road connection to nearby communities.

## **4.6 OTHER COMMUNITY DEVELOPMENT PLANS**

Comprehensive transportation planning for the community considers such issues as social, tourism, economic, housing, natural resources, education, and public health. The collective agreement of all interested parties working together to guide the decision-making framework for

Portage Creek is required for future success of the village (USDOT, 1999). The Village Council and community members have expressed a desire for several development projects to ensure the successful growth of the community.

#### **4.6.1 Boat Dock**

The Portage Creek Village Council and community members desire that a small boat dock be constructed to provide adequate facilities for current demand and future use. It is also important to provide for upland boat storage and other related upland facilities to accommodate the commercial fishing industry.

#### **4.6.2 Public Health**

The Village Council and respondents to the questionnaire state that a new sewage lagoon is needed. A feasibility study was completed in 2000 for a village sewer and water design project. Respondents to the questionnaire state the need to complete the water and sewer project to accommodate the new HUD housing and other community development.

The Village Council also desires to construct a health clinic to provide for the residents' immediate health care needs. There currently is no clinic in Portage Creek and residents must fly to Dillingham for health care. Air travel during nighttime hours and poor weather conditions is not available.

### **5.0 REFERENCES**

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<http://www.wrcc.dri.edu/summary/climsmak.html>; [General Climate Information](#)

**APPENDIX A**

**Existing Roads (1996)**

**APPENDIX B**

**Land Status Map**

## **APPENDIX C**

### **Survey Questionnaire**

**APPENDIX D**

**FY 2001 IRR Inventory Update Figures (BEESC)**

**APPENDIX E**

**FY 1993 IRR Inventory Update Map (ASCG)**

The 1993 JATP listed no priority projects for Portage Creek. There was no Long-Range Transportation Plan prepared for the community and no projects were carried over from the 1990 JATP. A community roadway map dating to 1990 is presented.