YKTP Yukon Kuskokwim Delta TRANSPORTATION PLAN

Executive Summary

March 2018

EXECUTIVE SUMMARY

Purpose

The purpose of the Yukon-Kuskokwim Delta Transportation Plan (Plan) is to inventory transportation facilities and issues, and document transportation needs. The Plan identifies, prioritizes, and recommends the top five regionally significant projects[1] for each mode of transportation (aviation, marine, and surface) in the Yukon-Kuskokwim Delta (Y-K Delta). The Y-K Delta is in critical need of basic infrastructure necessary for daily life activities including transportation, facilities, housing, water and sewer, and utilities.

The Plan is a 20-year, multimodal, regional transportation plan including various vehicle fleets (e.g. planes, all-terrain vehicles [ATVs], snow machines, barges, skiffs, and automobiles), and modes (e.g. aviation, surface, and marine) of transportation. The Plan is one of six area transportation plans being incorporated into the Alaska Statewide Long-Range Transportation Plan (LRTP). This is an update to the original Y-K Delta Transportation Plan (2002 YKTP). The Plan is not a programing document. Communities, tribal and city governments, and funding agencies should use this plan as a tool to secure funding for projects from multiple funding sources. The vision for the Plan is:

VISION STATEMENT

The Yukon-Kuskokwim Delta Transportation Plan will guide transportation decisions in the Yukon-Kuskokwim region by promoting safety, livability, economic development, and intermodal connectivity throughout the transportation system.

1 A regionally significant project is one that provides connection between two or more communities; provides access to public facilities such as hospitals, schools, jobs etc.; or provides access to alternative modes of transportation.

Regional Overview

The Y-K Delta is one of the largest deltas in the world stretching across 59,000 square miles. Approximately 26,000 residents live in the region, and 85 percent of the population are Yupik Eskimos and Athabaskan Indians mostly living a subsistence lifestyle. The region includes 56 remote communities, and the largest hub community is Bethel, which is home to approximately 6,300 residents. Local governance and services are provided by 56 federally recognized tribes, cities, a regional Native corporation (Calista), and several large regional non-profit organizations including the Association of Village Council Presidents (AVCP) and the Yukon Kuskokwim Health Corporation (YKHC). The Y-K Delta has critical needs for basic infrastructure to support daily life, including transportation, housing, water and sewer, and utilities.

Children in Newtok, Alaska

Transportation in the Region

The Y-K Delta is a vast remote area, with relatively long travel distances between villages. The ground conditions comprise mostly wetlands and permafrost soils. The winter climate is harsh. There is a lack of good infrastructure building materials, such as gravel. Because the 56 communities in the Y-K Delta are not connected to the state of Alaska's National Highway System (NHS) or the Alaska Highway System (AHS), Y-K Delta residents use a system of airports, rivers, ports, barge landings, and trails for transportation to, from, and within the region.

Transportation choices vary by season. Given the lack of inter-village roads and wet, lowland conditions in much of the region, overland travel is not common. In the summer months, river transportation is by skiff or small boat, with barges bringing in fuel and freight. In winter months, river travel is by snow machine, dog sled, or passenger vehicle (via ice roads and winter trails). In colder months, fuel and freight must

be flown in, as barges are unable to navigate the frozen rivers. During the freeze-up period in the fall and break-up period in the spring, river travel is dangerous and overland travel is extremely difficult, leaving air travel as the most viable option. However, even as the most viable mode of transportation, air travel is often expensive and highly weather dependent.

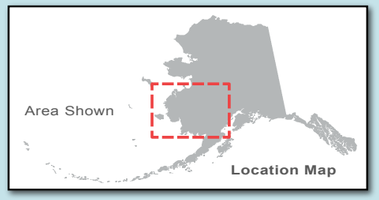
Two critical planned developments in the region that greatly influenced several of the recommend projects were the YKHC hospital expansion and Donlin mine. The transportation network in Bethel is dependent on Chief Eddie Hoffman Highway, which is approaching greater than 10,000 vehicles per day. Major improvements and a connector road between Chief Eddie Hoffman Highway and Ptarmigan Street are needed. Because Bethel is a hub community and is growing rapidly, transportation solutions were identified throughout this planning process and are included in this section. Bethel surface and marine projects evaluated and recommended for prioritization in the Plan, will support these large regional projects that are currently being planned/developed. Additionally, there is currently no transportation grid in Bethel to help relieve congestion along the main highway and vehicles per day are approaching greater than 10,000.

Transportation Recommendations

The recommendations below are listed in alphabetical order and do not reflect a level of priority. Regionally significant projects are grouped by aviation, surface and marine projects. The planning team, along with significant public input, developed four goals and evaluation criteria identified in Section 3.1and Figure 3 (Safety, System Preservation, Connectivity, and Economic Value), during the early part of the planning process to help guide the identification and recommendation of projects for this plan. Projects were then evaluated to determine which ones were regionally significant . A total of 107 (40 aviation, 40 land, and 27 marine) projects were determined regionally significant by the planning team. A project evaluation team comprising of members from the planning team and representatives from DOT&PF then evaluated and scored the projects using the goals, and evaluation criteria developed for the Plan. The scoring process, project list, and scores were then shared with a Transportation Advisory Committee (TAC) for final input. Meeting notes from the TAC review of the list of projects can be found in Appendix A. The goals, evaluation criteria, and project list used to develop recommendations can be found in Appendix H. Recommended projects that were prioritized using this process are identified on the following pages.

The Plan does not guarantee the recommended projects will be funded. DOT&PF, communities, and agencies can use the Plan to seek funding from various funding sources.

IV



Recommended Projects

MARKER	PROJECT TITLE	EST. COST
A	Bethel Port Expansion	$17 Million
B	Bethel Chief Eddie Hoffman Highway 4R Project	$60 Million
C	Bethel City Dock East Repair	$6 Million
D	Bethel Airport Level/Reinforce Runway 1L 19R RSA	$6.1 Million
E	Crooked Creek Airport Improvements	$21.9 Million
F	Emmonak Dock Expansion/Port Development	$13 Million
G	Kalskag Yukon-Kuskokwim Freight and Energy Corridor	$150 Million
H	Kongiganak Deep Sea Port and Access Road	$23 Million
I	Kwigillingok Airport Reconstruction	$36 Million
J	McGrath Airport Repaving & Erosion Control	$20.5 Million
K	Saint Mary's Dock Improvements	$4 - $5 Million
L	Saint Mary's Airport Improvements	$15 - $25 Million

AREA-WIDE PROJECTS	EST. COST
All Coastal Communities – Winter Trail Marking and Emergency Shelters	$4.5 Million
Erosion Assessment for Transportation Facilities for Priority Action Communities	$500,000
All Y-K Delta Communities – Dust Control (per community)	$50,000 - $100,000

A Bethel Port Expansion

Scope

This project adds a 721-foot sheet pile dock adjacent to the existing petroleum dock, extending from the existing seawall to the existing boat launch area. Extension to create a larger dock face is feasible but would cause displacement of the boat launch area, which is used by regional residents when they visit Bethel for medical or other reasons. Approximately 20 percent of petroleum products that arrive at Bethel is transported using the petroleum dock, and about 2.5 million gallons of petroleum is distributed to surrounding villages along the Kuskokwim River.

Status

The project identified in the City of Bethel (City) Capital Improvement Plan. The City is working to secure funding from the State.

Planning Estimate

$17 million (Source: PND Engineers and City of Bethel - 2010 Port of Bethel Expansion Feasibility Study)

Bethel Port

B Bethel Chief Eddie Hoffman Highway 4R Project

Scope

This project will provide a 4R[2] on the Chief Eddie Hoffman Highway, which is the main highway between the City of Bethel and the airport. A 4R project involves major reconstruction activities such as widening to provide additional through travel lanes, horizontal or vertical re-alignment, and bridge replacement work. This project will consider three roundabouts with all-way stops, including two at the hospital and one at Watson's Corner. The improvements include three-lane widening past the Post Office to Hanger Lake Road, an improved pedestrian pathway, signage, safety lighting, and crosswalks/signals for pedestrians and non-motorized transportation users.

Status

DOT&PF completed a Traffic Impact Assessment (TIA) to analyze the traffic impacts generated by the YKHC hospital expansion and clinic project. The TIA provided information regarding average daily traffic in the area which is currently approaching levels greater than 10,000 vehicles per day. DOT&PF is currently working on a 1R[3] project on the Chief Eddie Hoffman Highway to address some of the safety and surfacing concerns on the highway.

Planning Estimate

$60 million (Source: DOT&PF)

2 A transportation reconstruction project that consists of a new roadway or upgrade to an existing roadway to meet geometric design criteria for a new facility. In addition to work described under resurfacing, restoration and rehabilitation, reconstruction work generally includes substantial changes in the geometric character of the highway, such as widening to provide additional through lanes and horizontal or vertical realignment, and major improvements to the pavement structure to provide long term service. Reconstruction work includes bridge replacement work.

3 A transportation reconstruction project that consists of basic rehabilitation of an existing transportation facility. A 1R project only improves an existing transportation facility. It does not consist of new construction.

C

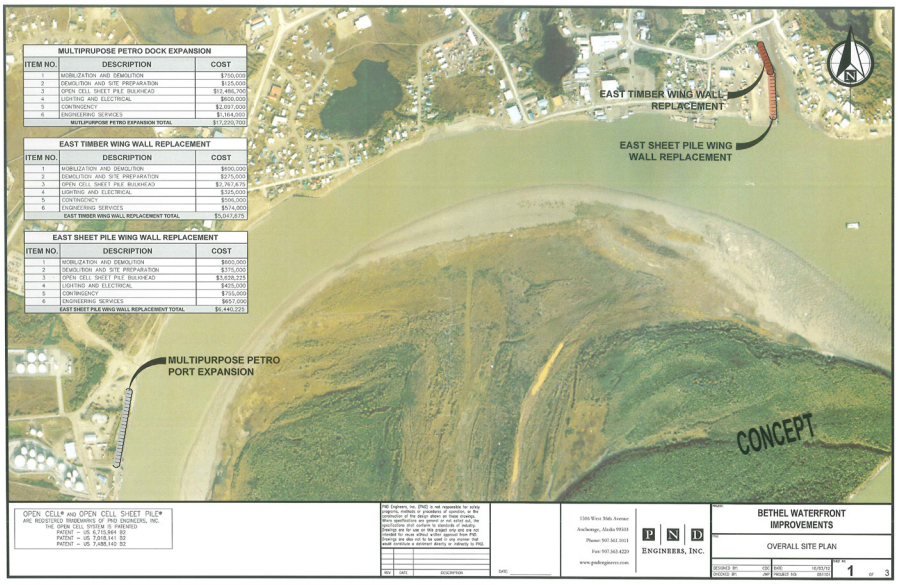
Bethel City Dock East Repair

Scope

Replace the failing east timber wing wall of the city dock, to the south of the bridge over Brown's Slough. The timber wall would be replaced with a sheet pile design, to tie into the existing sheet pile wall.

Status

The project is identified in the City of Bethel Capital Improvement Plan. The City is working to secure funding from the state. If funding is not secured for this project, the existing infrastructure will continue to deteriorate, causing issues for fuel and freight delivery to communities along the Kuskokwim River.



Bethel Dock Design Concept

Planning Estimate

$6 million (Source: PND Engineers and City of Bethel - 2010 Port of Bethel Expansion Feasibility Study)

D

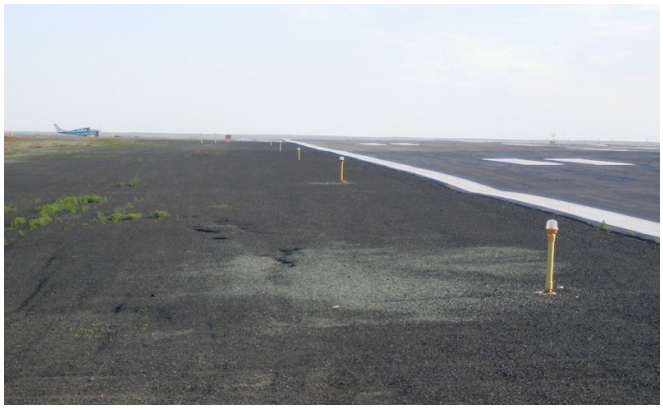
Bethel Airport Level/Reinforce Runway 1L-19R Runway Safety Area

Scope

Fill and compact the runway safety area near the Bethel runway bump. Install Precision Approach Path Indicators (PAPI). Bethel is a Regional Class Airport.

Status

The DOT&PF Aviation Evaluation Board has evaluated this project, but it is not recommended for funding in the next few years.



Bethel Runway

Planning Estimate

$6.1 million (Source: DOT&PF Airport Improvement Program Spending Plan)

E Crooked Creek Airport Improvements

Scope

The project implements the 0-5-year recommendations of the Crooked Creek Airport Master Plan. It will bring the existing sub-standard airport up to standards. The existing 1997' x 60' runway will be expanded to 3,300' x 75' and a 250' x 300' aircraft apron will be constructed. The RSA will be expanded to 3,900' x 150' and terrain penetrations will be removed. A new taxiway will be constructed. Medium Intensity Runway Lighting will be installed along with Precision Approach Path Indicators, Runway End Identifier Lights and an Automated Weather Observation System. A new, two-bay heated SRE building will be constructed. Property acquisition will occur to accommodate the improvements.

Status

The DOT&PF Aviation Evaluation Board has evaluated this project, but it is not recommended for funding in the next few years.

Planning Estimate

$21.9 million
(Source: DOT&PF Airport Improvement Program Spending Plan)

Crooked Creek Airport

F Emmonak Dock Expansion/Port Development

Scope

The Port of Emmonak is used for trans-shipment of heavy and bulk items to other Y-K Delta coastal and Yukon river communities. The AVCP and Calista Corporation are supporting the City of Emmonak and Yukon Delta Fisheries Development Association (YDFDA) in their efforts to see the Lower Yukon Region Port and Dock constructed in Emmonak. This project will expand the dock and develop a deep-water port. The banks of the Yukon River currently serve as the dock, and need constant reinforcement.

Status

The project is identified in the City of Emmonak's transportation plan. The design is complete, and the City of Emmonak is seeking construction funding to complete the project.

Planning Estimate

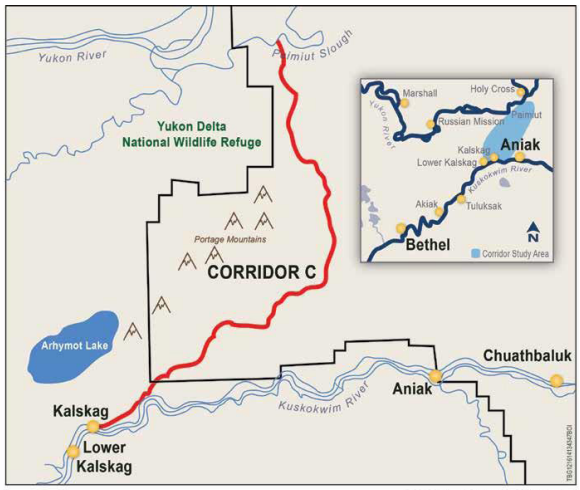
$13 million (Source: City of Emmonak)

VIII

G Kalskag Yukon-Kuskokwim Freight and Energy Corridor

Scope

The Yukon-Kuskokwim Freight and Energy Corridor project seeks to develop a 44-mile gravel haul road between the Yukon and Kuskokwim Rivers systems to enhance connectivity among communities in the region. The proposed corridor will allow for travel, trade (fuel and freight), and access to public facilities and other modes of transportation within the Y-K Delta.



YK Freight Corridor Project Study Area

Status

The project is identified in the Bureau of Land Management Resource Management Plan and is a high priority for Y-K Delta residents, the community of Kalskag, and AVCP. The State of Alaska has appropriated $450,000 to the AVCP to advance the project toward development, including an engineering, economic, and environmental evaluation of the road corridor and regions it will serve. In 2012, the State of Alaska appropriated an additional $3 million for corridor planning and development. The project is still currently in the planning phase.

Planning Estimate

$150 million (Source: CH2M Corridor Plan)

H Kongiganak Deep Sea Port and Access Road

Scope

This project will provide a new port to allow for safe and efficient fuel and freight delivery to Kongiganak and surrounding villages. It will develop a new barge site on the river, as the existing barge site is becoming too shallow due to silting. The project could potentially provide a safe harbor for hunters and travelers.

Kongiganak

Status

The project is identified in the AVCP's FY13 Community Economic Development Plan. AVCP and the Kongiganak Tribe have secured $500,000 to commence design of this project.

Planning Estimate

$23 million (Source: AVCP)

I Kwigillingok Airport Reconstruction

Scope

This project will reconstruct and expand the existing 1,835-foot runway to 3,300-foot by 60-foot runway plus taxiway, construct a new apron, install an airport lighting system and navigation aids, and construct two single-bay snow removal equipment buildings. The project will also install erosion protection for the runway embankment along the tidal slough and may include some stream realignment.

Status

Project is currently programed in the Airport Improvement Program (AIP) and is a top priority for DOT&PF because Kwigillingok's short runway is in very poor condition and because the airport is a mini-hub in the region, with flights to other airports with much longer runways.

Planning Estimate

$36 million (Source: DOT&PF Airport Improvement Program Spending Plan)

Kwigillingok Airport

J McGrath Airport Repaving & Erosion Control

Scope

This project will rehabilitate and repave the runway, taxiways, and apron pavement; correct/mitigate the erosion problems at the south end of Runway 16/34; and expand or replace the existing snow removal equipment building.

DOT&PF staff and McGrath leaders viewing erosion problems at McGrath airport

Status

Project was identified during a site visit to McGrath. Resurfacing and erosion control is currently being designed, and construction is anticipated in 2019.

Planning Estimate

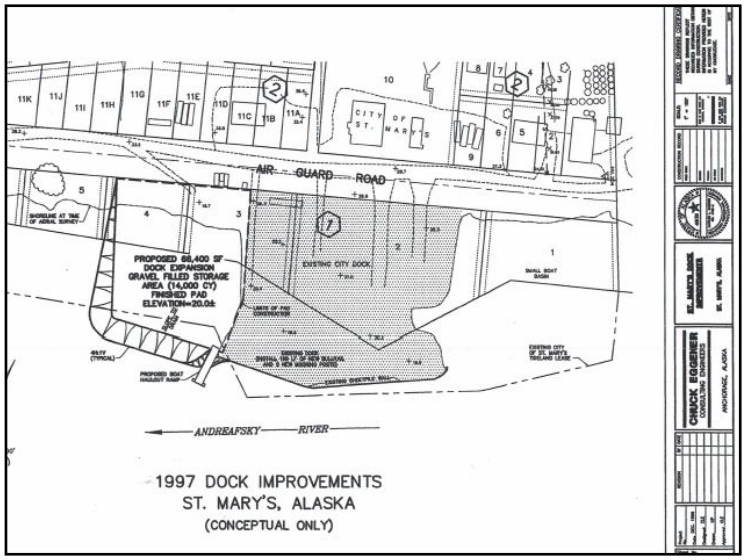
$20.5 million (Source: DOT&PF)

McGrath Airport

K Saint Mary's Dock Improvements

Scope

This project will provide dock improvements to allow better access to barges that deliver cargo and fuel to Yukon river villages. It will increase the size of the dock by approximately 66,000 square feet, creating additional cargo and equipment storage space, construct additional mooring posts for more convenient vessel moorage, provide a haul-out ramp for vessels requiring on-shore hull and power train repairs, allow multiple cargo vessels to tie-up to the port and transfer/consolidate loads, allow simultaneous gravel loading or fish processing during periods of high cargo vessel activity, and increase the revenue generation and self-sufficiency of the port.



St. Mary's Dock Concept Design

Status

This project is new, and funding has not been assigned.

Planning Estimate

$4-5 million (Source: City of St. Mary's)

L Saint Mary's Airport Improvements

Scope

This project will rehabilitate all operating surfaces and replace airport lighting. Additionally, it will address runway safety area deficiencies, replace the 5,000-gallon fuel tank, clear vegetation, and apply dust palliative.

St. Mary's Airport

Status

Programming of this project has been deferred pending the outcome of a study requested by FAA to confirm the amount of runway length needed, and how to address runway safety area deficiencies. The improvement project is programmed in 2020 for construction.

Planning Estimate

The project estimate is pending completion of a planning study that will confirm the project scope. The project is likely to be between $15 and $25 million. (Source: DOT&PF Airport Improvement Program Spending Plan)

All Coastal Communities

Winter Trail Marking and Emergency Shelters

Scope

Winter trail markers are needed to improve safety for inter-community travel along the commonly used winter routes. The trail markers will not only serve as a visual aid for path finding, but they will also provide GPS coordinates for travelers to determine their exact location. Emergency safety shelters placed along the routes would provide refuge during winter storms for the travelers using these trails.

Winter Trail Marking

Status

DOT&PF and AVCP have commenced a program of funding permanent markers in the Y-K Delta. AVCP is working on a winter trail marking project with 15 consortium tribes, and design was completed in May 2018/2019. The plan includes marking approximately 3,000 miles of routes between consortium villages, including safety shelters along the routes. Environmental impacts are being evaluated.

Planning Estimate

$4.5 million (Source: AVCP)

Priority Action Communities

Erosion Assessment for Transportation Facilities

Scope

Existing transportation facilities in communities suffering from erosion are at risk. These facilities need to be a priority for transportation funding agencies. Napakiak and Newtok are the two communities experiencing the worst impacts from erosion. Other priorities identified by the U.S. Army Corps of Engineers (USACE) are Akiak, Alakanuk, Chefornak, Chevak, Emmonak, Kwigillingok, Lime Village, McGrath, and Nunapitchuk. Further investigation into the status of these needs is recommended.

Newtok, Alaska Barge Landing

Status

Projects should be discussed with the Denali Commission and USACE. Both agencies may have the ability to provide support to these communities.

Planning Estimate

$500,000 (planning work only) (Source: DOWL)

XII

All Y-K Delta Communities

Dust Control

Scope

The University of Alaska Fairbanks Research Center has highlighted that asthma and lung issues in the YK-Delta are directly related to dust and other airborne particles. Some of the villages are using water trucks to control dust. A dust control application for communities in the Y-K Delta will help improve residents' health.

Status

The Alaska Department of Environmental Conservation continues to work with the DOT&PF, the Environmental Protection Agency, the Alaska Native Tribal Health Consortium, the University of Alaska Fairbanks, the Bureau of Indian Affairs, and others to develop practical solutions for controlling dust in rural Alaska and simplify the coordination needed to implement solutions.

Dust at Community Airport

Planning Estimate

$50,000 to $100,000 per village
(Source: UAF/DOT&PF)

CONTACT INFORMATION

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DOWL
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YKTP

Yukon Kuskokwim Delta TRANSPORTATION PLAN

March 2018

THE STATE of ALASKA
GOVERNOR BILL WALKER

Department of Transportation and Public Facilities

OFFICE OF THE COMMISSIONER
Marc Luiken, Commissioner

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Main: 907.465.3900
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April 6, 2018

The 2018 Yukon/Kuskokwim Delta Transportation Plan update will help guide the State of Alaska over the next 20 years in providing and sustaining surface, air and marine transportation in the region. The plan includes data-driven analyses of transportation by mode, identifies needs, and suggests several prioritized projects based on plan goals. An ongoing challenge for the region is the identification of adequate funding to develop, operate and sustain transportation facilities and services. The plan is consistent with policies from the Alaska Statewide Long Range Transportation Plan, and complies with Alaska Statutes and U.S. Federal Regulations.

The Yukon/Kuskokwim Delta Transportation Plan update is the product of a collaborative effort between the Alaska Department of Transportation and Public Facilities (DOT&PF), municipal and tribal governments and public agencies. The planning effort engaged public input through a rigorous process that included local meetings in the region and on-line outreach to numerous stakeholders. DOT&PF is grateful to the following local governments and organizations for their valuable involvement and assistance in developing this plan:

- Federal Aviation Administration (FAA)
- Denali Commission
- United States Department of Agriculture (USDA)
- Bureau of Indian Affairs (BIA)
- Federal Highway Administration (FHWA)
- Yukon Kuskokwim Health Corporation (YKHC)
- Regional Airlines
- Alaska Energy Authority (AEA)
- Alaska Tribal Technical Assistance Program (AKTTAP)
- Association of Village Council Presidents (AVCP)
- Barge Operators
- Calista
- Doyon
- Tanana Chiefs Conference (TCC)
- The Kuskokwim Corporation (TKC) & Kuskokwim Native Association (KNA)
- United States Postal Service (USPS)
- Nu Vista Light and Power

The Yukon/Kuskokwim Delta Transportation Plan draws its authority from Alaska Statute 44.42.050 and is a component of the Alaska Statewide Transportation Plan as defined in 23 CFR 450.216. I am pleased to authorize this update to the Yukon/Kuskokwim Delta Transportation Plan.

Adopted: _____ Date: 6 Apr 2018
Marc Luiken, Commissioner April 06, 2018

"Keep Alaska Moving through service and infrastructure."

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDICES (REFERS TO SEPARATE VOLUME)

ACRONYMS

2002 YKTP	Yukon-Kuskokwim Delta Transportation Plan
AASP	Alaska Aviation System Plan
ADA	Americans with Disabilities Act
ADEC	Alaska Department of Environmental Conservation
AHS	Alaska Highway System
AIP	Airport Improvement Program
APEB	Aviation Project Evaluation Board
ATV	All-terrain vehicle
AVCP	Association of Village Council Presidents
AWOS	Automated Weather Observation Systems
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
CDBG	Community Development Block Grant
DCCED	Alaska Department of Commerce, Community, and Economic Development
DNR	Department of Natural Resources
Donlin	Donlin Gold, LLC
DOT&PF	State of Alaska Department of Transportation and Public Facilities
EAS	Essential Air Service
EDA	Economic Development Administration
EIS	Environmental Impact Statement
FAA	Federal Aviation Administration
FAST	Fixing America's Surface Transportation
FHWA	Federal Highway Administration
FLAP	Federal Lands Access Program
FLH	Office of Federal Lands Highway
FTA	Federal Transit Administration
GPS	Global Positioning System
HSIP	Highway Safety Improvement Program
HUD	U.S. Department of Housing and Urban Development
ICS	Instrument Landing System
LP	Localizer Performance
LPV	Localizer Performance with Vertical Guidance
LRTP	Alaska Statewide Long-Range Transportation Plan
LRTP Update	Alaska 2036 LRTP Update
MAP-21	Moving Ahead for Progress in the 21st Century
MOU	Memorandum of Understanding
MPDs	Metropolitan Planning Organizations
mph	Miles per hour
NEPA	National Environmental Policy Act
NHFN	National Highway Freight Network
NHPP	National Highway Performance Program
NHS	National Highway System

NPIAS	National Plan of Integrated Airport Systems
OFZ	Obstacle Free Zone
PAPIs	Precision Approach Path Indicators
PIP	Public Involvement Plan
Plan	Yukon-Kuskokwim Delta Transportation Plan
RNAV	Area Navigation
ROW	Right-of-way
RPZ	Runway Protection Zone
RSA	Runway Safety Area
RVZ	Runway Visibility Zone
SPBs	Seaplane Bases
SRC	Sub-Regional Clinic
STBG	Surface Transportation Block Grant
STIP	Statewide Transportation Improvement Plan
TAC	Transportation Advisory Committee
TAP	Transportation Alternatives Program
TCC	Tanana Chiefs Conference
TIA	Traffic Impact Assessment
TIGER	Transportation Investment Generating Economic Recovery
TSS	Treshold Siting Service
TTPSF	Tribal Transportation Program Safety Funds
TTP	Tribal Transportation Program
UAF	University fo Alaska Fairbanks
USACE	U. S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USDOT	U.S. Department of Transportation
USPS	U.S. Postal Service
WAAS	Wide Area Augmentation System
WFLHD	Western Federal Lands Highway Division
Y-K Delta	Yukon-Kuskokwim Delta
Y-K	Yukon-Kuskokwim
YDFDA	Yukon Delta Fisheries Development Association
YKHC	Yukon-Kuskokwim Health Corporation

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1.0 INTRODUCTION

The purpose of the Yukon-Kuskokwim Delta Transportation Plan (Plan) is to inventory transportation facilities and issues, and document transportation needs. The Plan identifies, prioritizes, and recommends the top five regionally significant projects[1] for each mode of transportation (aviation, marine, and surface) in the Yukon-Kuskokwim Delta (Y-K Delta). The Y-K Delta is in critical need of basic infrastructure necessary for daily life activities including transportation, facilities, housing, water and sewer, and utilities.

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Aniak Airport

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2

2.0 TRANSPORTATION LEGISLATION AND GUIDANCE

To receive federal and state funding, this Plan must align with the federal policy guidelines outlined in the Fixing America's Surface Transportation (FAST) Act of 2015 and the State of Alaska's transportation planning regulations (17 AAC 05) and statutes (AS 19.10.010) Dedication of Land for Public Highways. Aviation projects should also align with the aviation performance measures from the Alaska Aviation System Plan (AASP).

The FAST Act, like its predecessor the Moving Ahead for Progress in the 21st Century Act of 2012 (also known as MAP-21), focuses on incorporating performance goals, measures, and targets into the planning and programming process to move states toward developing outcome-based programs. National performance measures have recently been finalized, and the State of Alaska Department of Transportation and Public Facilities (DOT&PF) is preparing for full implementation of FAST Act policies by considering FAST Act goals and performance measures in each of its area transportation plan updates. Additionally, Federal Aviation Administration (FAA) goals have been considered in the aviation section of this Plan (Figure 1).

Surface transportation projects in the Y-K Delta are primarily funded by Bureau of Indian Affairs (BIA), Federal Highway Administration (FHWA), and Tribal Transportation Program (TTP) funds. These funds are typically used for small local projects and maintenance. Funding for aviation projects is primarily from FAA through the Airport Improvement Program (AIP). The Plan can be used by communities, tribal entities, tribal organizations and consortiums, the State of Alaska, and other agencies to seek funding for projects from various transportation funding agencies. This Plan also provides a list of project needs and recommended project priorities. Many of the projects recommended in the Plan will need to be funded by multiple transportation funding sources. For example, a surface transportation project may be able to be fully developed jointly by DOT&PF, TTP, and FHWA.

Although DOT&PF, FHWA, and FAA funded the Plan, they are not able to commit to funding the projects recommended. They will, however, consider the findings of the Plan when funding is available and they are seeking to deliver projects that have been identified/recommended in the Plan.

The Plan can be used by communities, tribal entities, tribal organizations and consortiums, the State of Alaska, and other agencies to seek funding for projects from various transportation funding agencies.

Figure 1. Federal and State Policy Goals Considered for LRTP Development.

Federal & State Policy Goals Considered in LRTP Development

FAST Act Performance Area Goals

Safety
Achieving a significant reduction in traffic fatalities and serious injuries on all public roads

Infrastructure Condition
Maintaining highway infrastructure asset system in a state of good repair

Congestion Reduction
Achieving significant reduction in congestion on the National Highway System (NHS)

System Reliability
Improving the efficiency of the surface transportation system

Freight Movement and Economic Vitality
Improving the national freight network, strengthening the ability of rural communities to access national and international trade markets, and supporting regional economic development

Environmental Sustainability
Enhancing performance of the transportation system while protecting and enhancing the natural environment

LRTP Policy and Action Areas

The State's Long Range Transportation Plan (LRTP) was undergoing revision when this Plan was originally developed, providing some challenges in coordinating common goals. The two plans are again being drafted simultaneously. However, the existing LRTP, which created eight policy and action areas, provides solid guidance for this Plan. The policy and action areas identified in the current LRTP are:

1. New Facilities
2. Modernization
3. System Preservation
4. System Management and Operations
5. Economic Development
6. Safety and Security
7. Livability, Community, and the Environment
8. Transportation System Performance

FAA Goals

Runway Safety Areas
Improvements at Part 139 (hub) airports completed by September 30, 2015

Rural Access
Direct Airport Improvement Program funding for pavement reconstruction projects as identified in the Airport Capital Improvement Program process

Pavement Condition
Identify pavement condition improvement projects that will ensure no less than 93% of runways at airports in the National Plan of Integrated Airport Systems are maintained in excellent, good, or fair condition

3.0 PLANNING PROCESS

The FHWA and DOT&PF public involvement and transportation planning processes were used in the development of the Plan. Section 3.2 provides more information on the public outreach undertaken. The public involvement plan (PIP), presentations, meeting notes, survey responses, and other public involvement material can be found in Appendix A. A project website was used to disseminate documents and explain the purpose, process, and status of the Plan and public involvement efforts.

3.1 Planning Process

The transportation planning process that was followed (Figure 2), includes:

1. **PIP:** The PIP was developed in accordance with FHWA and state of Alaska public involvement guidelines.

2. **Plan Review:** A thorough review of Tribal LRTPs, local and regional plans was conducted to provide a baseline of existing information and transportation needs. Plans reviewed include the 2002 YKTP, local comprehensive plans, and other regional planning documents such as the United States Army Corps of Engineers (USACE) Barge Landing Assessment and the Alaska Ports and Harbors Studies. Tribal LRTPs and other plans are available upon request.

3. **Vision, Goals, and Evaluation Criteria:** The vision statement, goals, and evaluation criteria developed in the early stages of the planning process were used to evaluate, consider, and justify the recommended projects. The planning team used goals articulated in the FAST Act, FAA guidance, and the State of Alaska LRTP (Figure 1) as a starting point, and then sought feedback on the goals from Y-K Delta residents and stakeholders to verify they are appropriate for the Plan and the Y-K Delta region. The four prevailing goals are Safety, System Preservation, Connectivity, and Economic Value (Figure 3).

4. **Document Existing Conditions:** The transportation inventory from the 2002 YKTP was updated, which included travelling to Bethel, St. Mary's, Emmonak, and McGrath to review the 2002 YKTP existing conditions maps, and conducting an inventory of existing transportation facilities. Interviews were held with a broad range of stakeholders involved in the transportation system in the Y-K Delta, including the Association of Village Council Presidents (AVCP), BIA, DOT&PF aviation and surface transportation staff, and aviation and transportation providers.

5. **Identify Issues and Needs:** Issues and needs were identified by completing aviation, surface, and marine analyses; surveys; community meetings; interviews; conference attendance; and presentations. A project list based on the evaluation of issues, needs, and reviews of other studies can be found in Appendix H.

6. **Determine Regionally Significant Projects:** The project list was reviewed by DOT&PF to determine which projects were regionally significant. The regionally significant projects are identified on the list found in Appendix H. Regionally significant projects were scored. Projects that were reviewed but determined to not be regionally significant remain on the list, but did not receive a score. The full list of projects, both identified needs and regionally significant projects, are considered a critical element to the Plan. All projects identified in Appendix H should be considered for future funding and development.

The four prevailing goals are Connectivity, System Preservation, Economic Value, and Safety.

7. **Evaluate Projects:** Regionally significant projects were evaluated using the goals and evaluation criteria created for the Plan (Figure 3). The planning team completed the evaluation and reviewed the projects and scores with the Transportation Advisory Committee (TAC).

8. **Recommend Projects:** Following evaluation, the projects were scored and prioritized. The highest scored projects enabled the selection of the top five project recommendations for each mode of transportation (Figure 23).

9. **Public Review:** The first draft of the Plan was available for public review for 45 days. Copies were also sent to key stakeholders who develop infrastructure in the Y-K Delta for comment (Figure 4).

10. **Finalize the Plan:** The final Plan was prepared with consideration and documentation of public comments, adopted by DOT&PF, and is not fiscally constrained. Communities, tribal entities, tribal organizations and consortiums, DOT&PF, and other stakeholders may choose to partner to develop and fund the recommended projects listed in the Plan.

Figure 2. The Yukon-Kuskokwim Transportation Planning Process.

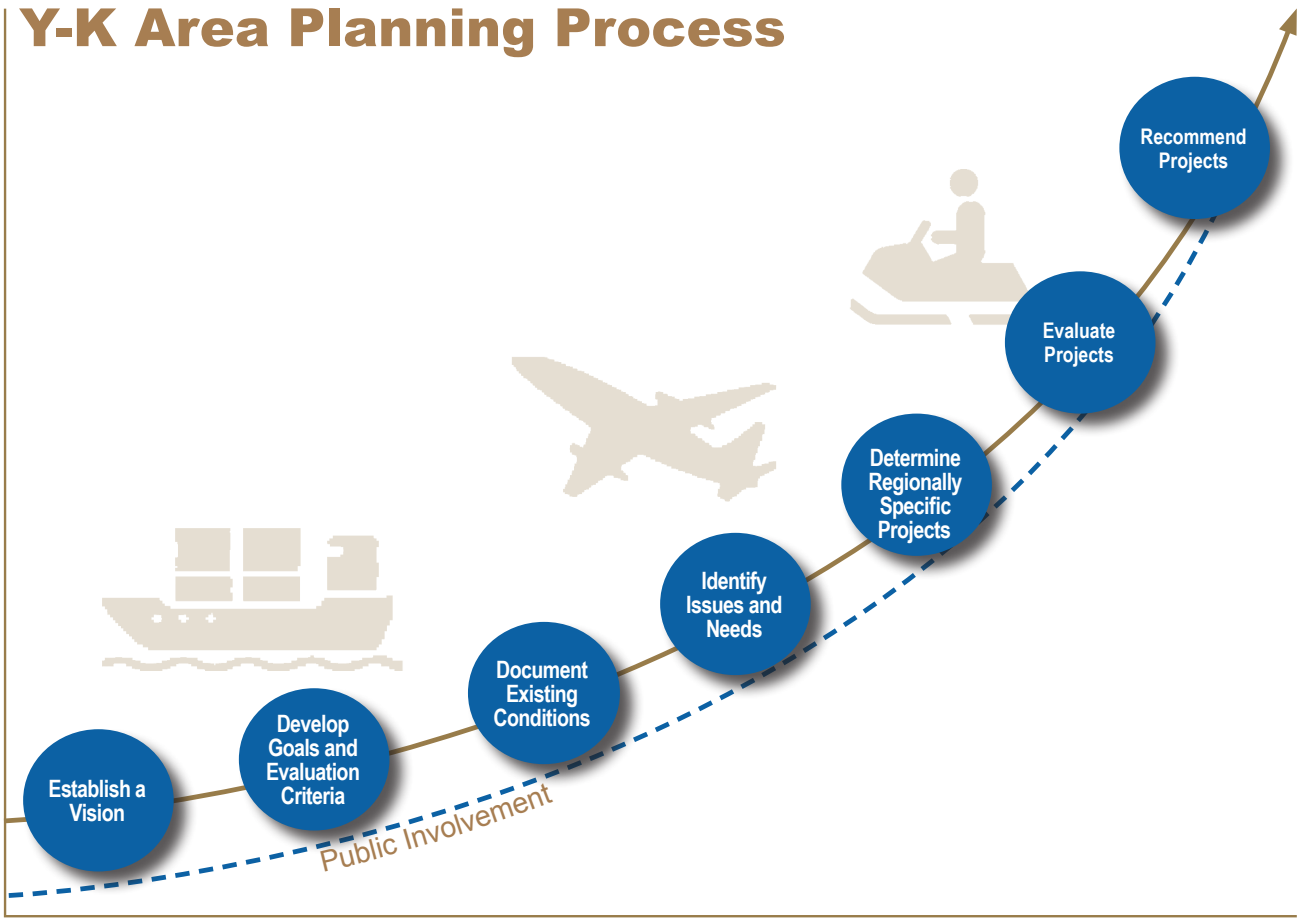


Figure 3. Goals and Evaluation Criteria.

1 Safety

Improve operational safety and security and helps reduce risks for the Yukon Kuskowim Delta Alaska transportation system use.

Evaluation Criteria

4 Critical need with immediate health or safety consequences if not pursued. Project provides services for access to Yukon Kuskokwim Health Corporation Services. Meets a critical safety need or FAA standard at a Regional Class airport.

3 Addresses a health and safety hazard. Meets a critical safety need or FAA standard at a Community or Local Class airport.

2 Improves health and safety through improved conditions. Project marks trails on rivers or channels. Addresses a non-critical safety hazard noted by airport owner or airport users.

1 Minimal impact on health and safety.

2 System Preservation

Preserve and maintain the existing Yukon Kuskowim Delta Transportation System.

Evaluation Criteria

4 Critical need for rehabilitation, will need reconstruction if delayed. Project maintains existing system that provides access to multiple communities and modes of transportation.

3 Improves or rehabilitates existing facilities. Project is sustainable for the entity responsible for maintenance and operations of the facility.

2 Reconstruction. Project provides preventive maintenance on the existing transportation system.

1 Adds additional infrastructure to be maintained.

3 Connectivity

Improve intermodal connections and provide access to airports, barge landings, ports or docks; provide access to fisheries, public services and facilities such as health clinics, hospitals, and schools; and focus on projects that provide more than two communities with connectivity to other communities within or outside the region.

Evaluation Criteria

4 Critical need with immediate health or safety consequences if not pursued. Project improves access to multiple communities or other modes of transportation. Project connects users with major intermodal transportation hubs.

3 Rationalizes existing intermodal facilities, or addresses a shortcoming in an existing transportation corridor. Project enhances rural transportation and provides access to other modes, public facilities, and jobs in the region.

2 Adds new infrastructure to feed other systems. Project improves bike and pedestrian facilities that access other modes of transportation.

1 Minimal impact on connectivity. Project is in a hub community.

4 Economic Value

Improve economic conditions locally and regionally; provide intermodal connections that enhances economic activity, bringing new businesses or money to the region.

Evaluation Criteria

4 Critical need for access to economic opportunities. Project was identified in a planning study, such as the Alaska Aviation System Plan, United States Army Corp of Engineers (USACE), and Statewide Transportation Improvement Program.

3 Supports improved access for regional commerce, including workforce access and reduced cost of living. Project supports communities that operate small businesses, exporting items such as fish, groceries, supplies, fuel, Alaska Native art work, and other goods Project supports tourism by providing access to recreational activity, shopping, events, and community

2 Provides access for new economic activity.

1 Minimal impact on economic advancement.

Note: The evaluation criteria numbers are the scores used to evaluate and rank the projects.

3.2 Public Involvement

A robust public involvement process was a key part of the Plan. The primary goal of engaging the public was to identify common Y-K Delta transportation priorities and stakeholders who may be a part of implementing projects identified in the Plan.

Figure 4 includes the stakeholders involved in the planning process for the Plan.

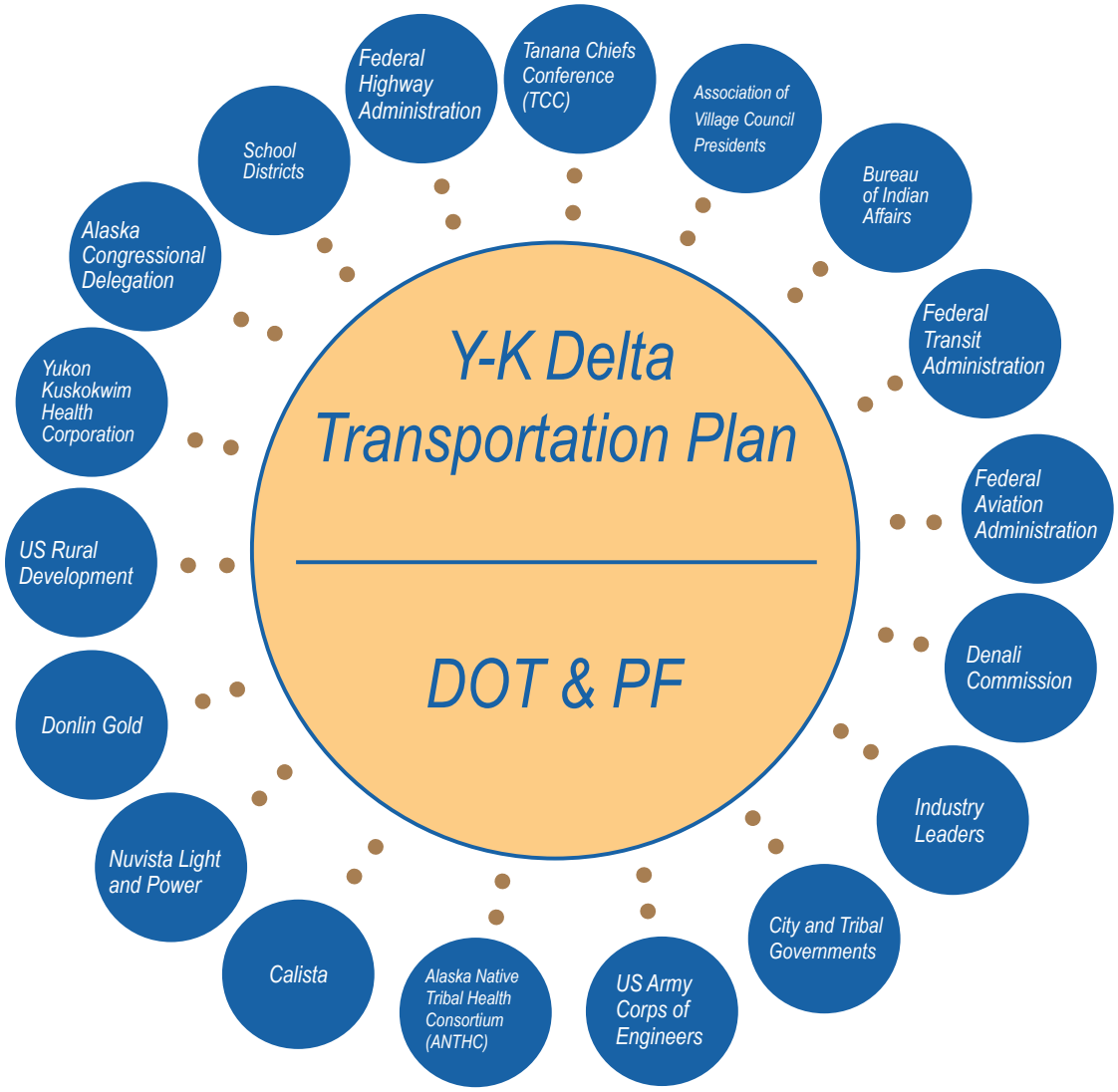
3.2.1 Yukon-Kuskokwim Transportation Plan TAC Meetings

The TAC met three times and provided the planning team with guidance on public outreach, data gathering and research, and project prioritization.

3.2.2 Public Meetings

Public meetings and site visits were conducted at four hub communities[2]. A public survey was handed out at each meeting and was available on the project website. A list of the meetings and a summary of needs identified via the public meetings and surveys is set out on the following pages.

Figure 4. Yukon-Kuskokwim Transportation Plan Stakeholders.



2 For this Plan, a community is considered a hub if it serves as a location for Bypass Mail, has a sub-regional health clinic or school, and services surrounding villages.

St. Mary's Public Meeting: April 10, 2015

- *Airport Improvements:* Various airport improvements are needed to continue to support fuel and freight delivery for St. Mary's and surrounding villages.
- *Dock Improvements:* Improvements are needed to continue shipping from the port to allow for distribution of fuel and freight to surrounding villages.

Bethel Public Meeting: April 15, 2015

- *Winter Trail Markers:* Better winter trail markers are needed to help reduce crashes and the risk of residents getting lost on the existing trail systems.
- *Oscarville and Napakiak to Bethel:* Residents expressed a need to connect Oscarville and Napakiak to Bethel by road. AVCP is working on a 10-mile road between Oscarville and Bethel.
- *Complete Streets for Bethel:* The use of the local streets in Bethel by ATVs, snow machines, vehicles, bicyclists, and pedestrians is a public health and safety concern. A Complete Streets policy was developed and passed by the City of Bethel in September 2015. This policy was developed to support safe and convenient travel for all users of the Bethel transportation system. The public would like this policy to be considered for future transportation investments.
- *Transit for Bethel:* An expanded transit system is sought to provide more public transportation options than taxicabs. Improved marketing of the transit system to reach a broader audience in Bethel was also suggested.
- *Improve Marine Facilities in Bethel:* Marine facilities improvements are needed in Bethel and should be a priority for state and other transportation stakeholders. These facilities are the primary way that communities along the Kuskokwim River receive their freight and fuel.
- *Bridge Connections:* Short bridge connections that provide for ATVs and snow machines and can cross over wetlands connecting to the trail system should be considered between villages that are less than five miles apart.
- *Boardwalks:* Use paint to preserve boardwalks in communities that rely on them for transportation.
- *Passenger Shelters:* Passenger shelters are needed in village airports. Residents wait in the wind and cold to catch their plane.
- *Barge Landings:* Barge landing systems along the Kuskokwim River need to be maintained.
- *Yukon-Kuskokwim (Y-K) Freight Corridor Project:* The Y-K Freight Corridor project could help improve the lives of Y-K Delta communities by providing better connections between Yukon and Kuskokwim villages. Freight and fuel providers may also be able to reduce the cost of transporting freight and fuel by using this corridor. Additional public outreach was requested at this meeting.
- *Ports:* A port at the mouth of the Yukon River near Emmonak would facilitate arctic shipping. Strategically located ports would reduce the cost of local shipping.

McGrath Public Meeting: May 15, 2015

- *Airport Improvements:* Improvements include resurfacing, obstruction/brush removal, a sweeper, and erosion control.
- *Road to Ruby:* This 145- to 165-mile route will connect McGrath to Ruby, providing access to a mining district with known mineral deposits. This project was identified in the 2002 YKTP as a high priority.
- *Road to Takotna:* This 15- to 20-mile route will also develop a section of the proposed road to Ruby by connecting McGrath to the north side of the Kuskokwim River to Takotna, and then on to Ruby.

- *Boat Launch/Aircraft Dock:* Provides floatplane and boat launch users with a safe place to dock and offload.
- *Noir Hill Landing Road:* A 1.8-mile road would provide access to rock and timber for construction projects. This is also a subsistence access road. Residents of McGrath use this road for berry picking and hunting.
- *Road from Parks Highway to McGrath:* A road connecting McGrath to the Parks Highway.

Emmonak Public Meeting: May 19, 2016

- *Hub Communities:* The hub communities should be prioritized and focused on for regional development.
- *Emmonak Airport:* The airport needs a paved 200- by 6,000-foot runway to allow for larger aircraft. Cost of air freight will go down by using larger airplanes. Expanding the airport will benefit the surrounding 13 communities that come to Emmonak to fish, work, and visit family, the doctor, and public facilities such as the post office and health clinic.
- *Post Office:* The existing building is small and sometimes mail gets lost due to the large volume of mail delivered.
- *Port:* Construction funding is needed for the port. The existing barge loading facility does not have the capacity to handle the freight shipment. Emmonak spent $516,000 to design and engineer the port. They now need approximately $14 million for construction.
- *Fuel:* Emmonak would like liquid natural gas from the North Slope to help reduce the price of fuel.
- *Military:* Look into military aspects of hub communities so that in an emergency the military can take care of security in the region. Improve airports as well as aircraft so when emergencies happen, communities can be ready for military flights.
- *Fisheries and Subsistence:* The Lower Yukon River has a small regional fisheries economy that supports households in surrounding villages. The fisheries and subsistence lifestyle needs to be preserved. Residents would like to sell their salmon to markets throughout the world. This economy is very important to the Lower Yukon River villages (Emmonak, Alakanuk, Mountain Village, St. Mary's, Pilot Station, and Marshall). This area is dependent on a subsistence lifestyle to generate income and live off the land. The transportation system should accommodate this area to enable residents to continue their lifestyle and thrive in the fishery economy.
- *Tribal Sovereignty:* The Plan needs to recognize tribal sovereignty so tribes are heard. The government is responsible for tribal consultation (meaning the process of government-to-government dialogue between the federal government and Indian tribes).
- *Transportation Costs:* The cost of transportation is too high and a lack of competition results in high travel costs.
- *Economy:* During the fish processing season, large cargo aircraft are needed to ship more products out. Grant Aviation and Ravn Alaska are the two primary carriers operating in Emmonak. The typical size of the aircraft that operate in Emmonak now includes a Cessna C206/207/209/210, Cessna 208 Caravan, Beech 200 Super King Air, Piper Navajo/T-1020, and a McDonnell Douglas DC-6A. Ryan Air and Everts Air Cargo occasionally use the airport for cargo deliveries.
- *Bypass Mail:* Bypass Mail is critical for helping to keep the cost of freight down. Without Bypass Mail, shipping would be even more unaffordable.

3.2.3 Air Carrier Surveys

Air carrier survey responses are summarized below.

- *Aircraft Fleet to Remain Stable:* There are no plans for significant changes in the aircraft fleet serving the Y-K Delta.
- *Improvements Needed:* There was a general agreement on improvements needed, including lighting, weather systems, and runway improvements in several communities. These were documented and included in the project needs list.
- *Community Airports:* Primary needs include runway resurfacing, drainage, grading, weather stations, and approaches.
- *Regional Airports:* St. Mary's Airport's main runway should be paved. The bump in the main runway in Bethel needs to be levelled. The Bethel crosswind runway needs to be extended.
- *New United States Postal Service (USPS) Hubs:* New USPS hubs are not needed. There is not enough population growth to support a new hub. A new USPS hub could increase passenger fares for Y-K Delta residents and would require costly new infrastructure such as a longer runway, apron, and storage space.

3.2.4 Newsletters

Three newsletters were mailed out to the mailing list throughout the planning process:

- The first newsletter informed the public about the plan, schedule, process, and public involvement methods.
- The second newsletter informed the public of upcoming meetings and gathered input on the public survey.
- The third newsletter informed the public of the draft Plan completion, provided details on the online open house, and guided the public to the online open house website where they could review the draft plan and provide feedback and comments.

3.2.5 Conferences

Several conferences were attended to present information on the Plan, and gather input from conference attendees. A summary of the conferences attended and input received is provided below.

- **Tanana Chiefs Conference (TCC) Upper Kuskokwim Sub-Regional Advisory Board Meeting, March 2015**
  - *Y-K Freight Corridor Project:* Grayling, Aniak, Shageluk, and Holy Cross representatives requested additional public involvement for the AVCP Y-K Freight Corridor project. This is not a DOT&PF project.
  - A survey was provided to the attendees, no responses were received.

- **AVCP Conference, September 2015**
  - *Fuel:* Improvements to the transportation system need to be focused on helping reduce the price of fuel, freight, and transportation between communities.
  - *Connectivity:* Roads or bridges that connect the communities in the Y-K Delta are needed, specifically a road between Oscarville, Napakiak, and Bethel. Members of the public support the Y-K Freight Corridor project.
  - *Dust Control:* Residents would like Bethel to have paved streets. Several members complained about dust impacting their daily lives.
  - *Winter Trail Markings:* Winter trail markings need to be prioritized for funding. These markings help keep residents safe when traveling between communities.
  - *Marine:* Improvements to the Bethel port and harbor should be prioritized.
  - *Passenger Shelters:* Passenger shelters are needed at airports in communities that are not connected by road.

- *Donlin Gold, LLC (Donlin):* Concerns were raised about the upcoming operations of the Donlin mine. When operations start, there will be up to three barges a day going between Bethel and the Donlin camp.
- *Transit:* Expand transit and help provide the public with better public transportation options.
- *Sub-Regional Connections:* Connections between communities with sub-regional infrastructure was suggested.
- *Regulatory Exemptions:* Regulatory exemptions for air carriers seeking to use safer aircraft were suggested.

- **BIA Tribal Providers Conference, December 2015**
  - *AVCP Y-K Freight Corridor Project:* Additional public involvement for the Y-K Freight Corridor project was requested.
  - *Fuel Prices:* Y-K Delta residents are still paying as much as $6 to $7 a gallon for fuel.
  - *Donlin:* Concerns regarding the Donlin mine's proposed infrastructure.

3.2.6 Public Open House

An online public open house was held on February 16, 2017 to present the draft plan. The open house was held in Anchorage using teleconference and Facebook Live facilities. Final comments on the draft Plan were received and have been incorporated into the Plan.

AVCP Conference, September 2015

4.0 EXISTING CONDITIONS, ISSUES, AND NEEDS

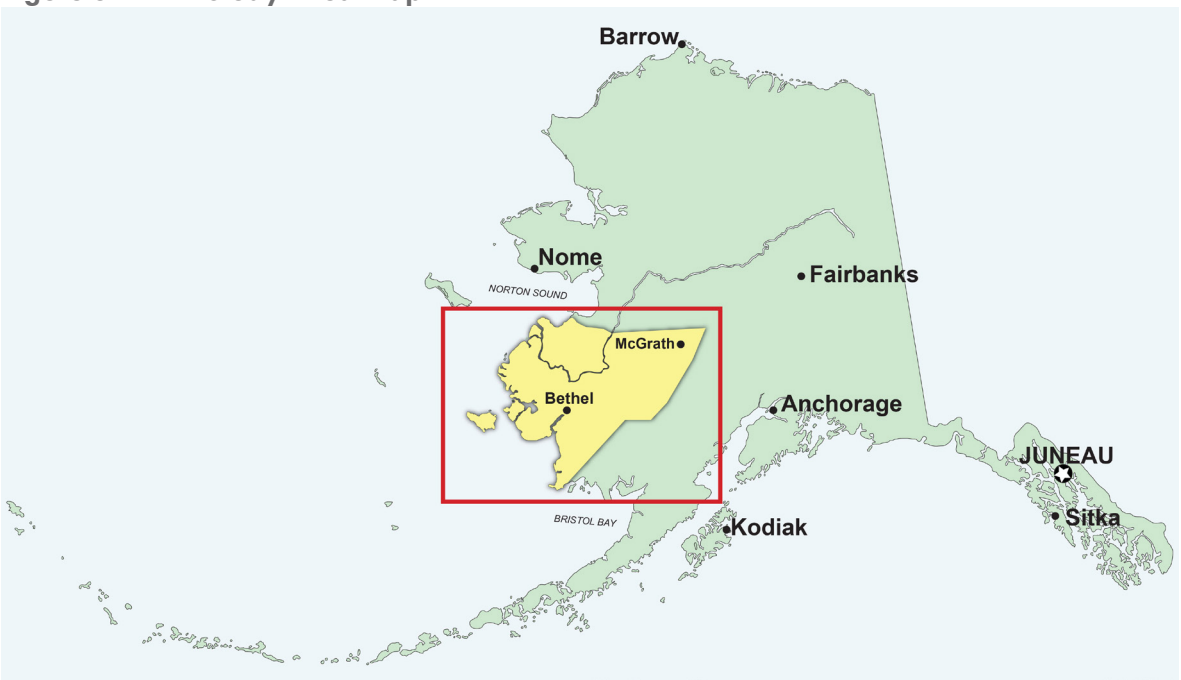
The Y-K Delta is one of the largest deltas in the world, stretching across 59,000 square miles (Figure 5). Approximately 26,000 residents live in the region, and 85 percent of the population are Yupik Eskimos and Athabaskan Indians, mostly living a subsistence lifestyle. The region includes 56 remote communities, and the largest hub community is Bethel, which is home to approximately 6,300 residents. Local governance and services are provided by 56 federally recognized tribes, cities, a regional Native corporation (Calista), and several large regional non-profit organizations, including AVCP and the Yukon-Kuskokwim Health Corporation (YKHC).

Because the 56 communities are not connected to the State of Alaska's National Highway System (NHS) or the Alaska Highway System (AHS), Y-K Delta residents use a system of airports, rivers, ports, barge landings, and trails for transportation to, from, and within the region.

The Y-K Delta is located in a remote geographical location, with relatively long travel distances between villages. The ground conditions comprise mostly wetlands and permafrost soils. The winter climate is harsh. There is a lack of good infrastructure building materials, such as gravel.

Transportation within the region is highly seasonal. Given the lack of inter-village roads and wet, lowland conditions in much of the region, overland travel is not easy. In the summer months, river transportation is by skiff or small boat, with barges bringing in fuel and freight. In winter months, river travel is by snow machine, dog sled, or passenger vehicle (via ice roads and winter trails). In colder months, fuel and freight must be flown in, as barges are unable to navigate the frozen rivers. During the freeze-up period in the fall and break-up period in the spring, river travel is dangerous and overland travel is extremely difficult, leaving air travel as the most viable option; however, even as the most viable mode of transportation, air travel is often expensive and highly weather dependent.

Figure 5. YKTP Study Area Map



4.1 Economy

The Y-K Delta is located in the Kusilvak and Bethel census areas, which are among the least economically well-off areas in the United States. Many communities do not have clean water, sewer systems, health care, jobs, affordable housing, and reliable transportation. Sewer sanitation is often provided through the use of "honey bucket" toilets. Because fuel and freight is transported to the communities by barge or airplane, the cost of resources is several orders of magnitude higher than costs in more urban areas such as Anchorage. As a consequence, residents consistently struggle to pay for their heating bills and food. For example, the cost for a round trip plane ticket between two distant villages within the region is around $400, and the cost to fly round trip between a village and Anchorage is around $500.

The cost of a flight between a Y-K Delta village and Anchorage is about the same as a plane ticket between Anchorage and Hawaii.

The major economic activities in the region include commercial fishing and fish processing, health care, local government, and industries that support the supply of goods and services to the region. Although there is currently limited activity in the mining industry, potential mining operations, particularly at the Donlin mine, could add to the economy of the region in the future. Subsistence harvest activities are prevalent throughout the region, and while not always evident through normal economic indicators, contribute greatly to the economy of the region and the well-being of its residents. Support industries are driven by changes in population and income, and if the population in the region declined, support sectors would suffer losses.

High fuel costs affect costs of transportation, electricity, and heating in the Y-K Delta. The cost of fuel, goods, and services, such as transportation, may fall over time but the volatility of fuel prices, and the many factors impacting them, make real predictions about fuel price changes in this region difficult. The immediate impact of lower oil prices on state government will be less state aid to Alaska communities. Outmigration of residents in the region is expected to continue and increase over time. However, the high birth rate in the region will fuel a slow increase in population.

4.1.1 Employment and Income

Table 1 presents annual per capita income for the two census areas in the region. The strong employment in Bethel compared to other communities in the region is reflected in these figures. Both of these census areas had average annual per capita income growth higher than the Consumer Price Index growth calculated for Anchorage (annual average of 2.3 percent growth between 2008 and 2013), so real growth of income in the region occurred during this time period. For the state as a whole, per capita income grew slower than the cost of living over this same time period.

4.1.2 Population

The population in the Y-K Delta is approximately 26,000 residents. Table 2 presents the current forecast of population growth in the study area, with populations for Bethel and the secondary hubs of Aniak, Emmonak, McGrath, and St. Mary's. The forecast was prepared by the state demographer (Alaska Department of Labor and Workforce Development) in 2012. It forecasts continued high birth rates and continued outmigration in the region through 2042. It shows annual population growth rates increasing slightly in the region over time, while statewide annual population growth rates are expected to decrease slightly over the same time period. This difference would result in the Y-K Delta region having a higher percentage of the statewide population in future years. Table 2 also compares the population forecasts developed for the 2002 YKTP. The Department of Labor and Workforce Development's population forecasts for the Y-K Delta in 2020 are far below population levels forecasted in the 2002 YKTP.

Bethel is one of the fastest growing communities in Alaska. The rate of population growth in Bethel is similar to other small cities in Alaska such as Palmer, Kenai, and Wasilla.

Table 1. Annual Per Capita Income for the Bethel and Kusilvak Census Areas, 2008 to 2013.

Year	Bethel Census Area	Kusilvak Census Area	Alaska
2008	$31,022	$21,932	$45,024
2009	$32,546	$22,690	$44,184
2010	$34,113	$24,177	$45,565
2011	$36,424	$25,891	$48,181
2012	$36,941	$26,117	$49,906
2013	$36,195	$25,066	$50,150
Average Annual Change	3.2%	2.8%	2.2%
Average Annual Change Adjusted for Inflation	0.9%	0.5%	-0.1%

Table 2. Forecast of Population for the Bethel, Kusilvak, and Yukon Koyukuk (8 communities) Census Areas, 2012 through 2042.

	Bethel City	Secondary Air Hubs	Other Villages	Total Region
2000 Census	5,532	2,365	16,320	24,217
2013 Population Estimate (DOLWD)	6,278	2,317	18,222	26,817
2017 Population Forecast (DOLWD)	6,562	2,414	19,259	28,235
2022 Population Forecast (DOLWD)	6,860	2,523	20,160	29,543
2027 Population Forecast (DOLWD)	7,163	2,632	21,073	30,869
2032 Population Forecast (DOLWD)	7,495	2,775	22,139	32,409
2037 Population Forecast (DOLWD)	7,905	2,930	23,396	34,231
2042 Population Forecast (DOLWD)	8,432	3,148	25,078	36,658
2020 Population Forecast (DOLWD)	6,739	2,478	19,794	29,011
High 2020 Forecast (2002 YKTP)	8,218	4,499	27,649	40,366
Low 2020 Forecast (2002 YKTP)	7,460	4,005	24,505	35,970

Sources: State Demographer's Office, Alaska Department of Labor and Workforce Development (DOLWD), 2014, and Yukon Kuskokwim Delta Transportation Plan, DOT&PF, 2002.

4.2 Yukon-Kuskokwim Health Corporation (YKHC)

One of the main economic drivers in Bethel is YKHC, a tribal health organization headquartered in Bethel. YKHC administers a comprehensive health care delivery system for all Y-K Delta communities. The system includes community clinics, sub-regional clinics (SRC), a regional hospital in Bethel, dental services, mental health services, substance abuse counseling and treatment, health promotion and disease prevention programs, and environmental health services.

In 2016, YKHC secured the funds needed to expand its facilities to improve health care throughout the Y-K Delta. At $165 million, the loan commitment to YKHC is the largest ever granted by the United States Department of Agriculture (USDA) Community Facilities Program. The program funds facilities that serve an essential community purpose. YKHC's hospital was built in the 1980s, and YKHC is planning to renovate the building and construct a new primary care facility.

The facility expansion will cost ~$300 million and is currently being constructed. The expansion includes a new clinic and renovation of the YKHC hospital. Bethel residents and businesses have expressed the need for additional housing, improved traffic patterns, and road improvements to support the hospital expansion. Coordination among transportation stakeholders to support the additional housing, traffic, and transportation needs is critical.

In 2017, YKHC completed a Traffic Impact Assessment (TIA) for the hospital expansion and clinic project. The TIA provided information regarding average daily traffic in the area, which is approaching levels above 10,000 vehicles per day. DOT&PF and YKHC are currently working toward an interim solution along the hospital frontage to help with safety and congestion concerns.

It is important to note in the Plan that, under 17 AAC 10.020, YKHC is responsible for assisting DOT&PF and Bethel in selecting a transportation alternative to help address transportation impacts from this expansion because the project impacts a public right-of-way (ROW) owned by the State of Alaska. YKHC is also responsible for helping DOT&PF and the City of Bethel secure funds and schedule work. A three-way partnership and associated Memoranda of Understanding (MOU) are needed to support this project.

With the anticipated growth in Bethel, the YKHC hospital expansion project, the City of Bethel, and other transportation stakeholders agree that alternative routes could help distribute traffic volumes, provide safer access and connectivity within the community, and minimize residential conflict. Currently, the only way to access the residential area located near Ptarmigan Street is by traveling on the Chief Eddie Hoffman Highway and Ridgecrest Drive, which is currently experiencing traffic volumes greater than 10,000 vehicles per day.

YKHC plans to add approximately 600 new employees to their organization with the expansion of the hospital facility and services.

4.3 Donlin Gold LLC

Another potential project that will impact the transportation network in the Y-K Delta, especially in Bethel, is the Donlin mine project. Donlin is working to develop an open pit, hard rock gold mine about 10 miles north of the community of Crooked Creek (Figure 6). In addition to the mine site, the project has two other major components: transportation infrastructure and a pipeline. An Environmental Impact Statement (EIS) for the project was published for comment in November 2015. The review and comment period concluded in April 2016. A final EIS and Record of Decision are expected in 2018.

The mine would have a total footprint of about 16,300 acres. There is currently no road or rail access to the site, or an existing power supply. The mine would consist of an excavated open pit, ultimately about 2.2 miles long, 1-mile wide, and 1,850-foot deep; a waste treatment facility (tailings impoundment); a waste rock storage facility; a mill; and a natural gas-fired power plant with a total connected load of 227 megawatts. Transportation infrastructure would consist of upgraded dock facilities in Bethel, a 30-mile road from the mine site to a new barge landing on the Kuskokwim River near Crooked Creek, and a 5,000-foot airstrip.

Donlin's planned marine cargo terminal at Bethel would have three berths: one to accommodate ocean barges and two for river barges. The storage yard would include adequate space to accommodate five ocean barge loads (storage for 2,750 containers). A fuel terminal capable of storing 10 million gallons would be constructed nearby. The terminal would have an average annual throughput of 40 million gallons. Fuel for the mine would be transported from Dutch Harbor by ocean barges that would deliver to Bethel. A 2.8-million-gallon tank would be built at Jungjuk, a new port facility on the Kuskokwim River, located approximately 185 river miles upstream from Bethel and eight river miles downstream from Crooked Creek. The transport of fuel between Bethel and Jungjuk would be accomplished by "tows," each consisting of a pusher tug and four barges. Each tow would make approximately 32 round trips per shipping season, for a total of 64 round trips between Bethel and Jungjuk. On a typical day, three barge trains would pass a given point on the river; one barge train would move in one direction (up- or downstream); and the other two would move in the opposite direction (down- or upstream).

A 30-mile access road is planned to connect the Jungjuk port to the mine site. Fuel and other cargo would be transported by truck on the access road. Fuel transport would require approximately 27 tandem tanker truck trips per day, while transport of general cargo would

Figure 6. Donlin Mine Location.

require approximately eight trips per day. Donlin describes the access road as a single-user private road. It would not pass through or near any existing settlements or communities. A 3-mile spur road at mile 5.4 from the mine site would provide access to the air strip. The road design provides for a 28' to 30' wide surface, with a design speed ranging from 15 miles per hour (mph) for mountainous terrain to 35 to 45 mph for moderate terrain. The clearing width ranges from 425' to 850'. Trails used by snow machines and dogsleds are in the vicinity of Donlin's exploration activities, which are generally not passable by wheeled vehicles.

Donlin operates a 4,913-foot gravel surfaced runway (FAA location identifier 01AA) built in the late 1990s at the mine site. The runway is closed to the public except in emergencies, has no lighting or approach aids, and is not maintained in the winter.

A proposed 315-mile, small-diameter (14-inch) natural gas pipeline would be constructed from the west side of Cook Inlet, across the Alaska Range, to the proposed power plant at the mine site.

If the EIS is approved, Donlin will move forward with developing the infrastructure mentioned above in preparation for mine operations. Stakeholders impacted by these operations should continue to coordinate with Donlin on project development.

4.4 Aviation

Aviation provides frequent, fast, and efficient access to all communities in the Y-K Delta. Residents fly for many basic purposes that contiguous U.S. residents would expect to drive automobiles, such as:

- Visiting friends and family, or traveling to school, vacations, or for medical reasons
- Federal, state, and local personnel traveling on official business
- Persons traveling on business or to access work sites, mines, canneries, or fishing vessels
- Military personnel traveling for National Guard duty or to visit military bases and facilities

The Y-K Delta is primarily an importer of goods, groceries, and household items. Primary exports are fish and game products, business and residential equipment needing servicing in Anchorage, and industry goods.

The Y-K Delta aviation system is comprised of 52 airports supported by hub airports in five communities. Services such as aircraft maintenance and fuel are found primarily at the hub airports, which function as centers of aviation commerce. Aviation activity at these hubs focuses on the transport of passengers and cargo, with USPS Bypass Mail transport to villages being a major driver of aviation demand. Communities in the Y-K Delta whose airport is currently designated by the USPS as a Bypass Mail hub include:

- Aniak
- Bethel
- Emmonak
- McGrath
- St. Mary's

USPS has also proposed Chevak as a Bypass Mail hub, but it is not functioning as one because no qualified carriers have applied to serve Chevak as a hub.

Other airports are "spoke" airports, as they provide aviation access via the hubs to communities in the region. Spoke airports within the Y-K Delta have very few based aircraft and aircraft services (Figure 7).

While most of the aviation demand in the region is driven by air carriers, general aviation traffic and chartered aircraft activity also create important aviation demand.

An inventory of existing conditions for all Y-K Delta airports is found in (Figure 8).

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Figure 7. 2018 Existing Aviation Conditions Map.

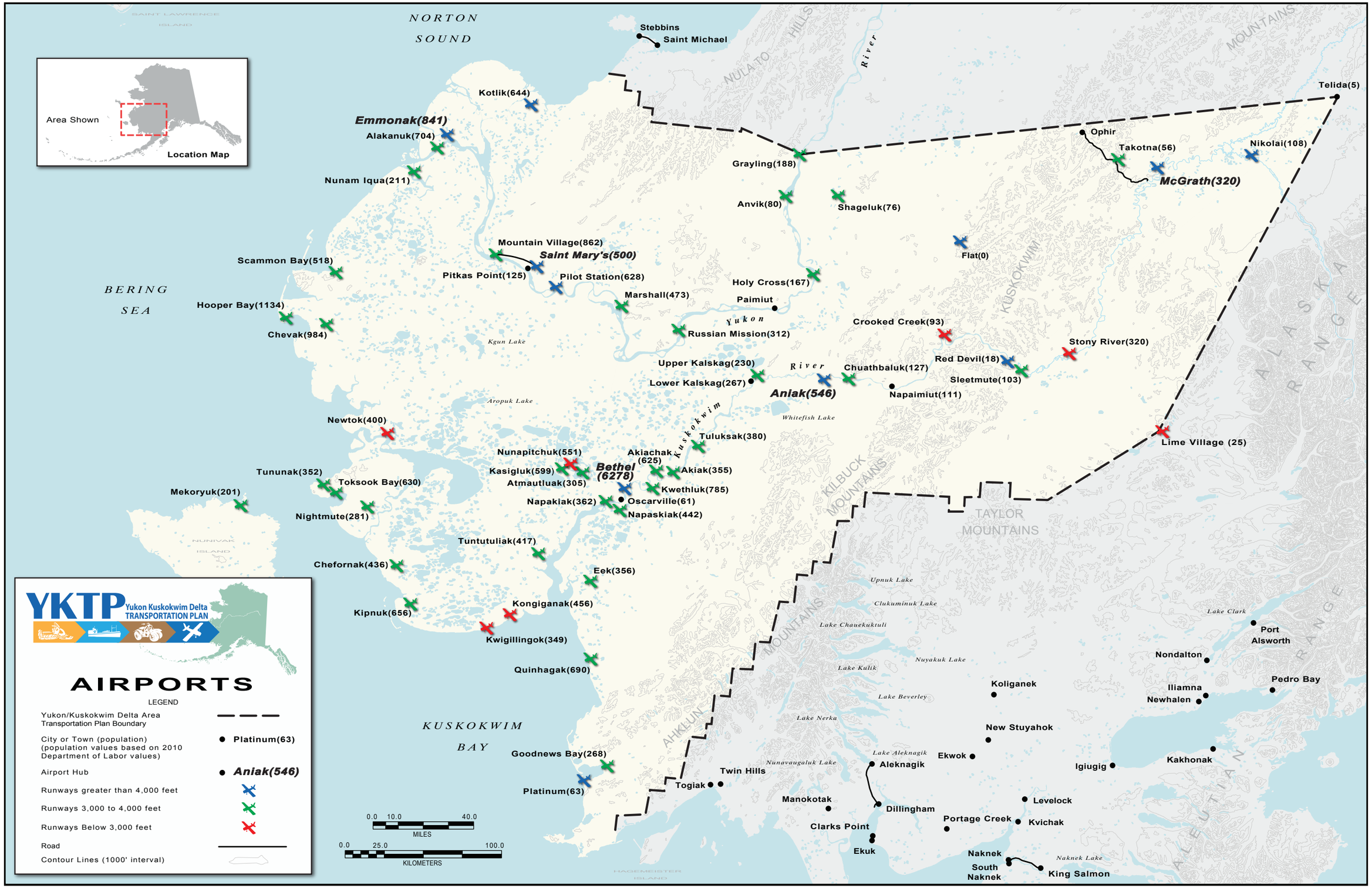

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Figure 8. Y-K Delta Airport Inventory.

Community	Region	Classification	2015 Pop.	RWY Length/ Width (feet)	RWY Surface	ALP Near Term/Ultimate RWY Length/Width (feet)	ALP Date	ALP ARC Existing	ARC Near Term/ Ultimate	2014 Wx Station	2014 Wx Camera	2014 Approach Types Available	Runway Lighting	2014 Passenger Shelter	2014 Sub-regional Health Facility	2014 School	2014 Post Office
Bethel (Hub)																	
Bethel(Major Hub)	Central	Regional	6,241	6400 X 150	Paved	Same As Existing	2010	C-III	C-III	ASOS	Yes	ILS/GPS/ VOR/DME	HIRL	Common use terminal w/ amenities individual carrier terminals	Yes	Yes	Yes
Villages Near Bethel -Hub (Bethel)																	
Akiachak	Central	Community Off-Road	671	3300 X 60	Gravel	3300x60/5000x75	2013	B-I	B-II		No	GPS/NDB	MIRL	None	No	Yes	Yes
Akiak	Central	Community Off-Road	389	3196 X 75	Gravel	None	2002	B-I	B-I		No	GPS	MIRL	None	No	Yes	Yes
Atmautluak	Central	Community Off-Road	319	3000 X 75	Gravel	Same As Existing	2006	B-I	B-I		No	None	MIRL	None	No	Yes	No
Kasigluk	Central	Community Off-Road	600	3000 X 60	Gravel	Same As Existing	2011	A-I	A-I		Yes	GPS	MIRL	None	No	Yes	No
Kwethluk	Central	Community Off-Road	800	3199 X 75	Gravel	Same As Existing	2005	B-II	B-II		Yes	GPS	MIRL	None	No	Yes	No
Napakiak	Central	Community Off-Road	387	3248 X 60	Gravel	Same As Existing	2002	B-I	B-I		Yes	None	MIRL	None	No	Yes	Yes
Napaskiak	Central	Community Off-Road	451	3000 X 60	Gravel	Same As Existing	2011	A-I	A-I		No	GPS	MIRL	None	No	Yes	No
Nunapitchuk	Central	Community Off-Road	563	2420 X 75	Gravel	Same As Existing	2014	A-I	None		Yes	GPS/NDB	MIRL	None	No	Yes	No
Oscarville	No Airport	No Airport	53		No Airport		No Airport				No	No Airport		No Airport	No	Yes	No
Tuluksak	Central	Community Off-Road	380	3300 X 60	Gravel	Same As Existing	2014	B-I	None		Yes	NONE	MIRL	None	No	Yes	No
Paimuit	No Airport	No Airport	0	No Airport			No Airport				No	No Airport		No Airport			No
Napaimute	No Airport	No Airport	2	No Airport			No Airport				No	No Airport		No Airport			No
Aniak Plus Nearby Villages on Kuskokwim-Hub (Aniak)																	
Aniak	Central	Regional	533	6000 X 150	Paved	6200x100	2016	B-III	B-III	AWOS	Yes	ILS/GPS/ NDB	HIRL	Individual Carrier Terminal	Yes	Yes	Yes
Chuathbaluk	Central	Community Off-Road	134	3401 X 60	Gravel	Same As Existing	2007	B-I Utility	None		No	GPS	MIRL	None	No	Yes	No
Crooked Creek	Central	Community Off-Road	105	2029 X 60	Gravel -Dirt	3300x75/3800x75	2010	A-I	B-II		No	NONE	No	None	No	Yes	Yes
Kalskag	Central	Community Off-Road	512 (upper and lower)	3198 X 75	Gravel	4000x75	2002	B-I	B-II	AWOS	Yes	GPS	MIRL	None	No		No
Red Devil	Central	Community Off-Road	19	4820 X 75	Gravel	4500x75	2004	B-II	B-II		Yes	NONE	No	None	No	Yes	No
Sleetmute	Central	Community Off-Road	99	3100 X 60	Gravel	3300x60	2003	B-I	B-I	AWOS	Yes	GPS	MIRL	None	No	Yes	No
Stony River	Central	Community Off-Road	34	2601 X 40	Gravel-Dirt	3200x60	2005	A-I	B-I		No	GPS/NDB	No	None	No	Yes	No
McGrath Plus Nearby Villages-Hub (McGrath)																	
McGrath	Central	Regional	315	5936 X 100	Paved	Same As Existing	2012	B-III	B-III	ASOS	Yes	GPS,VOR/DME	MIRL	Individual Carrier Terminal	Yes	Yes	Yes
Takotna	Central	Community Off-Road	62	3300 X 60	Gravel	4000x75	2013	B-I Utility	B-II		Yes	NONE	MIRL	None	No	Yes	No
Nikolai	Central	Community Off-Road	83	4021 X 75	Gravel	None	2007	B-III	None	AWSS	Yes	GPS	MIRL	None	No	Yes	No
Flat	Central	Local NPIAS Low	0	4045 X 90	Turf-Gravel	Same As Existing	2011	A-I	A-I			NONE	No	None	No		No
Lime Village	Central	Local NPIAS Low	29	1500 X 55	Gravel-Dirt	None	2010	A-I	None		Yes	NONE	No	None	No	Yes	No
Lower-Mid Yukon Served By Aniak-Hub (Aniak)																	
Anvik	Northern	Community Off-Road	79	4000 X 75	Gravel	Same As Existing	2013	B-II	B-II	AWOS	Yes	GPS	MIRL	None	No	Yes	Yes

Figure 8. Y-K Delta Airport Inventory (Cont'd).

Community	Region	Classification	2015 Pop.	2017 RWY Length/ Width (feet)	RWY Surface	ALP Near Term/Ultimate RWY Length/Width (feet)	ALP Date	ALP ARC Existing	ARC Near Term/Ultimate	2014 Wx Station	2014 Wx Camera	2014 Approach Types Available	Runway Lighting	2014 Passenger Shelter	2014 Sub-regional Health Facility	2014 School	2014 Post Office
Grayling	Northern	Community Off-Road	191	4000 X 75	Gravel	Same As Existing	2015	A-I	B-II		Yes	NONE	MIRL	None	No	Yes	No
Holy Cross	Northern	Community Off-Road	177	4000 X 100	Gravel	Same As Existing	2001	B-II	B-II	AWSS	Yes	GPS	MIRL	None	No	Yes	No
Russian Mission	Northern	Community Off-Road	325	3620 X 100	Gravel	Same As Existing	2004	B-II	B-II	AWSS		GPS	MIRL	None	No	Yes	No
Shageluk	Northern	Community Off-Road	79	3400 X 75	Gravel	Same As Existing	2004	B-II	B-II	AWSS	Yes	GPS	MIRL	None	No	Yes	No
Lower Yukon Served by St. Mary's-Hub (St. Mary's or Bethel)																	
St. Mary's incl Pitka's Point	Northern	Regional	550(117)	6008 X 150	Gravel	Same As Existing	2002	C-III	C-III	AWOS	Yes	GPS/LOC/DME	HIRL	Individual Carrier Terminal	Yes	Yes	No
Marshall	Northern	Community Off-Road	444	3200 X 100	Gravel	5000x100	2003	B-II	B-II	AWSS	Yes	GPS/NDB	MIRL	None	No	Yes	No
Mountain Village	Northern	Community Off-Road	857	3501 X 75	Gravel	4000x75	2004	A-I	B-II	AWOS	Yes	GPS	MIRL	None		Yes	Yes
Pilot Station	Northern	Community Off-Road	634	4000 X 75	Gravel	4400x75	2003	B-II	B-II			NONE	MIRL	None	No	Yes	No
Upper Coastal-Hub (Emmonak)																	
Emmonak	Northern	Regional	841	4601 X 100	Gravel	6200x150	2003	B-II	C-III	AWOS	Yes	GPS/NDB	MIRL	None	No	Yes	No
Alakanuk	Northern	Community Off-Road	730	4000 X 75	Gravel	Same As Existing	2014	B-II	B-II			GPS	MIRL	None	No	Yes	No
Nunam Iqua (Sheldon Point)	Northern	Community Off-Road	181	3015 X 60	Gravel	3400x75	2002	B-I	B-II			GPS	MIRL	None		Yes	No
Kotlik	Northern	Community Off-Road	653	4400 X 100	Gravel	Same As Existing	2013	B-II	B-II		Yes	GPS/VOR	MIRL	None	No		No
Middle Coastal-Hub (Bethel)																	
Hooper Bay	Central	Community Off-Road	1178	3300 X 75	Gravel Surface	4500x75	2013	B-II	B-II	AWOS	Yes	ILS/GPS	MIRL	None	Yes	Yes	No
Chevak	Central	Community Off-Road	989	3200 X 75	Gravel	Same As Existing	2015	B-I	B-I	AWOS	Yes	GPS	MIRL	None	No	Yes	No
Scammon Bay	Central	Community Off-Road	528	3000 X 75	Gravel	4000x100	2004	A-II	B-II	AWSS	Yes	GPS	MIRL	None	No	Yes	No
Lower-Middle Coastal-Hub (Bethel)																	
Chefornak	Central	Community Off-Road	420	3230 X 60	Gravel	3230x75	2016	B-I	B-II		Yes	GPS	MIRL	None	No		Yes
Kipnuk	Central	Community Off-Road	643	3200 X 60	Gravel	4000x75	2016	B-I	B-II	AWSS	Yes	GPS	MIRL	None	No		No
Mekoryuk	Central	Community Off-Road	210	3001 X 75	Gravel	4070x100	1983	B-II		AWOS	Yes	ILS/GPS/VOR	MIRL	None	No	Yes	Yes
Newtok	Central	Community Off-Road	380	2202 X 35	Gravel	3300x75/4000x75	2014	A-I	NEW AIRPORT SITE		Yes	GPS	No	None	No	Yes	No
Nightmute	Central	Community Off-Road	274	3200 X 75	Gravel	Same As Existing	2014	B-II	B-II		No	NONE	MIRL	None	No	Yes	No
Toksook Bay	Central	Community Off-Road	623	3218 X 60	Gravel	None	2005	B-I	None	AWSS	Yes	GPS	MIRL	None		Yes	No
Tununak	Central	Community Off-Road	384	3300 X 75	Gravel	4000x75	2017	B-II	B-II		No	None	MIRL	None	No	Yes	No

Figure 8. Y-K Delta Airport Inventory (Cont'd).

Kuskokwim Bay & South Coastal-Hub (Bethel)																	
Community	**Region**	**Classification**	**2015 Pop.**	**2014 RWY Length/ Width (feet)**	**RWY Surface**	**ALP Near Term/Ultimate RWY Length/Width (feet)**	**ALP Date**	**ALP ARC Existing**	**ARC Near Term/Ultimate**	**2014 Wx Station**	**2014 Wx Camera**	**2014 Approach Types Available**	**Runway Lighting**	**2014 Passenger Shelter**	**2014 Sub-regional Health Facility**	**2014 School**	**2014 Post Office**
Eek	Central	Community Off-Road	349	3242 X 60	Gravel	Same As Existing	2007	B-I	B-I		Yes	GPS	MIRL	None	No	Yes	Yes
Kongiganak	Central	Community Off-Road	501	2400 X 75	Gravel-Dirt	3300x100	2007	A-I	B-II		No	NONE	MIRL	None	No	Yes	No
Kwigillingok	Central	Community Off-Road	364	1835 X 40	Gravel-Dirt	3300x60	2002	A-I	B-I		Yes	GPS	No	None	No	Yes	No
Quinhagak	Central	Community Off-Road	724	4000 X 75	Gravel	3116x59	2006	A-I	B-I		No	GPS	MIRL	Small Heated Shelter	No	Yes	No
Tuntutuliak	Central	Community Off-Road	437	3025 X 90	Gravel	3093x75	1998	A-I	B-I		Yes	NONE	MIRL	Unheated Shelter	No	Yes	No
Platinum	Central	Community Off-Road	60	5000 X 75	Gravel	Same As Existing	2014	B-II	B-II	AWOS	No	ILS/GPS/VOR	MIRL	None	No	Yes	No
Goodnews Bay	Central	Community Off-Road	259	3300 X 75	Gravel	3300x75/3800x75	2006	B-II Utility	B-II Utility		Yes	None	MIRL	None	No	Yes	Yes
Source	**AASP**	**AASP**	**DCCED 2015 Dep of Labor Estimate**	**AASP**	**Ak Supplement**	**ALP**	**DOT Website**	**ALP**	**ALP**	**AASP**	**http://avcams.faa.gov/**	**AASP**		**AASP**	**AASP**	**AASP**	**AASP and Y-K Contact List**

*** Runways for villages served primarily by 9 passenger Navajo**

ARC	**Airport Reference Code**
A-I or B-I	**Most single engine land fall into this category**
B-II or B-III	**Airports serving larger general aviation and commuter-type planes**
C-III	**Small to medium-sized airports serving air carriers**
AWOS	**Automated Weather Observation Station**
AWSS	**Automated Weather Sensor System**
ASOS	**Automated Surface Observation Station**
ILS	**Instrument Landing System**
VOR	**Very High Frequency Omnidirectional Range**
DME	**Distance Measuring Equipment**
LOC	**Localizer(part of ILS)**
AIP	**Airport Improvement Program**
M&O	**Maintenance and Operations**

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4.4.1 Top 20 Airports: Flights, Enplaned Passengers, and Deplaned Cargo

While there are 52 airports within the study area, Tables 3, 4, and 5 rank the 20 airports with the highest traffic in number of flights, enplaned passengers, and deplaned cargo (mail and freight) in the region. Bethel is the busiest airport in the Y-K Delta as it tops the list in the number of flights, enplaned passengers, and deplaned cargo. It is the third busiest airport in Alaska.

Four of the five hubs also rank highly in the same categories. McGrath, one of the five Bypass Mail hubs, however, only ranks highly for deplaned cargo. Some communities rank highly on one or more of these lists, and low on others. This is probably because of location, population of surrounding communities, types of aircraft used, and local industries. For example, although Chevak ranks highly (number 5 or 6) in enplaned passengers and deplaned cargo, it ranks number 15 in number of flights, which may be the result of larger capacity aircraft operating that require fewer trips to serve the market. Some rankings are less straightforward in modeling the local demand. Tuntutuliak, for example, ranks fairly high for number of flights, but low for enplaned passengers, and is not in the top 20 airports for deplaned cargo.

Table 3. Top 20: Flights, 2015.

Rank	Airport	2015 Flights	2015 Population	Flights per Capita
1	Bethel	39,118	6,246	6.3
2	Aniak	5,948	532	11.2
3	St. Mary's	5,225	567	9.2
4	Emmonak	4,858	827	5.9
5	Quinhagak	3,746	746	5.0
6	Toksook	3,609	622	5.8
7	Kipnuk	3,049	679	4.5
8	Tuntutuliak	2,996	437	6.9
9	Eek	2,926	348	8.4
10	Kotlik	2,840	644	4.4
11	Kongiganak	2,833	504	5.6
12	Chefornak	2,825	432	6.5
13	Hooper Bay	2,819	1,210	2.3
14	Alakanuk	2,755	707	3.9
15	Chevak	2,638	1,022	2.6
16	Mountain Village	2,633	901	2.9
17	Kasigluk	2,627	620	4.2
18	Kwigillingok	2,567	378	6.8
19	Kwethluk	2,549	794	3.2
20	Pilot Station	2,496	626	4.0
	Total Top 20	101,057	18,842	5.4
	All Other Airports	39,507	8,035	4.9
	Total Region	**140,564**	**26,877**	**5.2**

Sources: Air traffic data obtained from the U.S. Department of Transportation, Transtats databases. Populations were estimated by DOLWD.

Note: The population of Bethel includes that of Oscarville, and the population of St. Mary's includes that of Pitkas Point because those smaller communities are included within the service areas of the larger communities' airports.

Table 4. Top 20: Enplaned Passengers, 2015.

Rank	Airport	2015 Passenger	2015 Population	Passenger/ Capita
1	Bethel	159,349	6,246	25.5
2	Aniak	15,621	532	29.4
3	St. Mary's	14,528	567	25.6
4	Quinhagak	9,886	746	13.3
5	Chevak	9,767	1,022	9.6
6	Emmonak	9,694	827	11.7
7	Hooper Bay	9,285	1,210	7.7
8	Toksook	8,974	622	14.4
9	Kipnuk	8,605	679	12.7
10	Scammon Bay	7,826	561	14.0
11	Chefornak	7,666	432	17.7
12	Kotlik	7,431	644	11.5
13	Mountain Village	7,406	901	8.2
14	Eek	6,661	348	19.1
15	Pilot Station	6,649	626	10.6
16	Kongiganak	6,520	504	12.9
17	Alakanuk	6,249	707	8.8
18	Tuntutuliak	6,102	437	14.0
19	Newtok	5,707	396	14.4
20	Nightmute	5,691	285	20.0
	Total Top 20	319,617	18,292	17.5
	All Other Airports	81,139	8,585	9.5
	Total Region	**400,756**	**26,877**	**14.9**

Table 5. Top 20: Deplaned Cargo, 2015.

Rank	Airport	Deplaned Cargo (lbs)	2015 Population	Cargo/ Capita (lbs)
1	Bethel	42,649,322	6,246	6,828.3
2	Aniak	6,834,894	532	2,847.5
3	St. Mary's	5,662,554	567	9,986.9
4	Emmonak	5,252,432	827	6,351.2
5	Hooper Bay	2,488,920	1,210	2,057.0
6	Chevak	2,319,417	1,022	2,269.5
7	McGrath	1,813,383	327	5,545.5
8	Quinhagak	1,750,717	746	2,346.8
9	Toksook	1,542,171	622	2,479.4
10	Mountain Village	1,507,074	901	1,672.7
11	Kipnuk	1,381,715	679	2,034.9
12	Scammon Bay	1,380,304	561	2,460.4
13	Alakanuk	1,217,873	707	1,722.6
14	Kotlik	1,216,548	644	1,889.0
15	Pilot Station	1,164,428	626	1,860.1
16	Chefornak	1,089,023	432	2,520.9
17	Kalskag	1,087,507	284	3,829.3
18	Kongiganak	1,081,663	504	2,146.2
19	Tununak	979,783	395	2,480.5
20	Marshall	896,013	463	1,935.2
	Total Top 20	83,315,741	18,295	4,554.0
	All Other Airports	12,747,995	8,582	1,485.4
	Total Region	**96,063,736**	**26,877**	**3,574.2**

Sources: Air traffic data obtained from the U.S. Department of Transportation, Transtats databases. Populations were estimated by DOLWD.

Note: The population of Bethel includes that of Oscarville, and the population of St. Mary's includes that of Pitkas Point because those smaller communities are included within the service areas of the larger communities' airports.

4.4.2 Carriers/Fleet

Passenger airlines and cargo-only carriers operate in the Y-K Delta region with a wide variety of aircraft. Appendix B identifies the carriers, their aircraft, the aircraft's reference code, and primary airports served.

Source: Grant Aviation

4.4.3 Essential Air Service

The Essential Air Service (EAS) subsidy program went into effect after the passing of the Airline Deregulation Act in 1978. The EAS program is administered by the U.S. Department of Transportation (USDOT) with the purpose of guaranteeing a minimum level of scheduled air service to rural communities that would otherwise have lost service through changes in air carrier profitability after deregulation. While this program is controversial and often debated in Congress, it has generally been supported for Alaska and Hawaii because air transportation is essential to many rural communities in these two states due to their isolation and lack of alternative systems of transportation. Y-K Delta communities currently do not receive EAS subsidies, however, all but four of those communities (Chauthbuluk, Kasigluk, Nightmute, and Nikolai) were deemed eligible for EAS subsidies in 1998 and could potentially receive those subsidies if scheduled commercial air service drops below a certain level. Figure 9 shows Alaska communities receiving subsidized air service under the EAS program.

4.4.4 Bypass Mail Program

The USPS Bypass Mail program is the primary driver of aviation demand and the route structure of the Y-K Delta. Bypass Mail is shipped directly from merchants in Anchorage or Fairbanks to rural customers via air carriers, thereby bypassing the post office. The program reduces the cost of living in rural Alaska, reduces the need for and cost of additional USPS employees and facilities to handle mail shipments, and shortens shipping time because of reduced handling. However, it requires a significant subsidy by the USPS to cover the cost difference between U.S. parcel post rates and the air carriers' air freight rates.

Because shipment of mailed goods is "subsidized" by USPS, air carriers get additional revenue and are more able to provide service for passengers, as well as goods between rural communities and regional aviation hubs. Without the Bypass Mail program, some small communities with little demand for passenger service would receive far less of that service. Purchasers of goods shipped at the cheaper rates also benefit from this program.

Items shipped through the Bypass Mail program include bulk shipments of palletized goods, mostly food and dry goods destined for rural communities. Items not allowed to be shipped via Bypass Mail include hazardous substances and building materials.

To enter the Bypass Mail market, carriers must apply to USPS for equitable tender of Bypass Mail on a route. USPS then determines whether the carrier satisfies certain eligibility requirements. Carriers operating smaller planes whose payload capacity is less than 7,500 pounds are termed "bush carriers." Carriers operating larger planes are called "mainline carriers" and they receive slightly lower rates since they operate primarily from Anchorage to the hub. Under USPS's "equitable tender" practice, carriers of each type get an equal share of the relevant category of Bypass Mail (mainline or bush) on each route. Eligible carriers transporting Bypass Mail must publish their flight schedules and adhere to them, regardless of the volume of mail to be transported.

The USDOT determines the rates that the USPS pays to Alaska air carriers, based on the carriers' reported operating expenses. Monthly, each air carrier submits its costs to USDOT. The data are used to set fair and compensatory rates to be paid by the USPS to each Bypass Mail carrier.

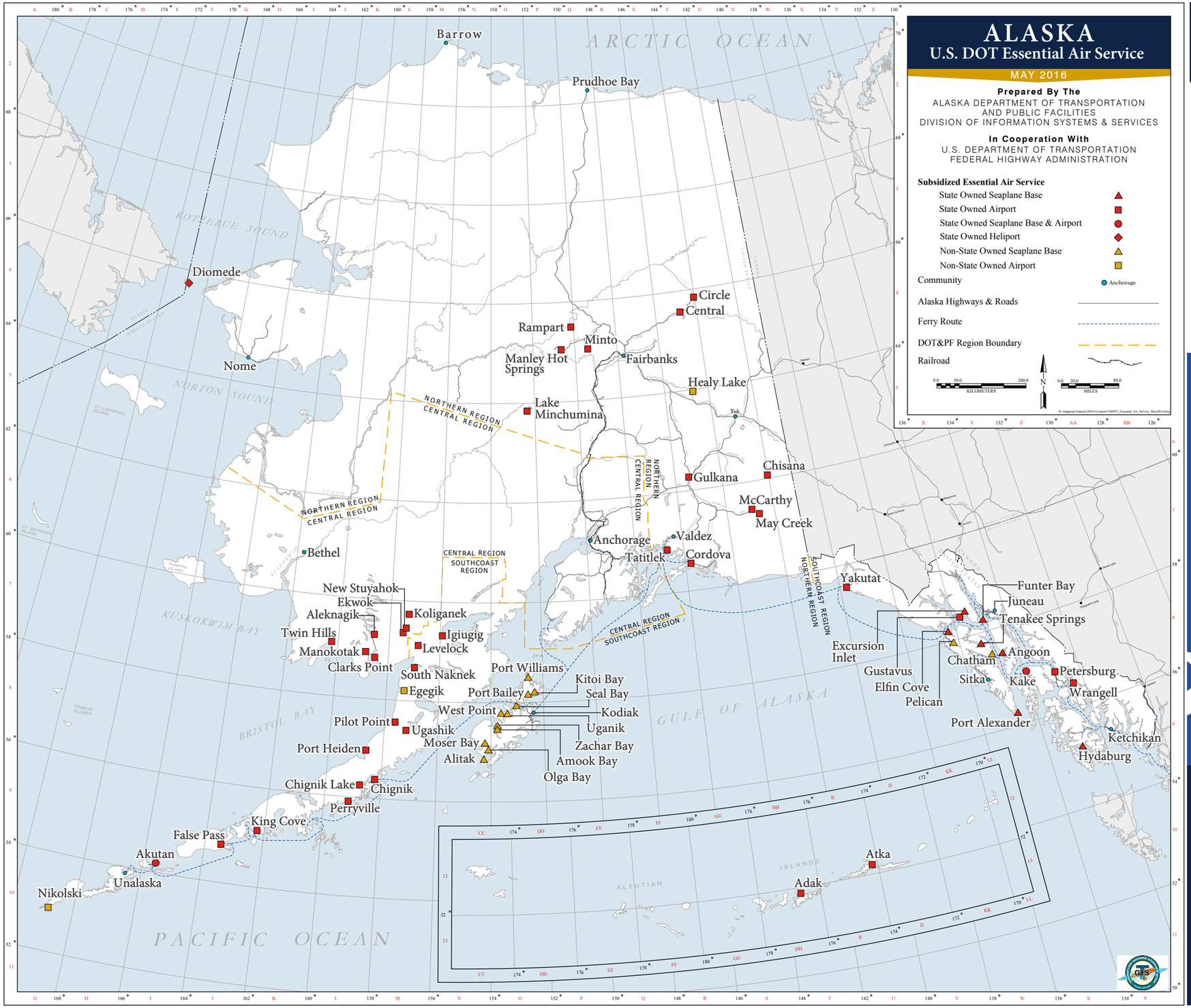
Of the 35 air carrier certificates that transported any type of mail between Alaska communities during 2010, over half (18 carrier certificates) transported mail between Alaska Bypass Mail-eligible locations. Because of carrier consolidation, USPS actually deals with a much smaller number of airlines.

USPS compensates mainline air carriers by paying the "intra-Alaska mainline service mail rate." The mainline rate reflects the average cost of operations for the pool of mainline carriers. The two components of the mainline rate are the linehaul and terminal rates. The linehaul component reflects the aircraft-specific costs of pilot, fuel, maintenance, depreciation and lease, and is based on the revenue ton-miles of mail transported. The terminal component is based on the volume of mail loaded (enplaned) onto the aircraft, since the cost of loading mail onto an aircraft does not vary with distance. The USDOT sets the terminal and linehaul rates annually, but adjusts them quarterly to reflect changes in fuel prices (USDOT 2010b).

Bypass Mail can make up as much as 60 percent of some carriers' annual revenue while passenger airfare and regular mail and freight comprise the remainder. Major carriers include Alaska Airlines, Northern Air Cargo, and Everts, which carry mail, food items, and other cargo to the hubs. From there, smaller airline companies such as Grant Aviation or Ravn Alaska take Bypass Mail and freight to more remote villages. Fare paying passengers are also transported on the same flights carrying Bypass Mail, making the flights more economical for the carrier. The only time this does not occur is on the cargo-only freighter aircraft flying from Anchorage to the hub.

Within the Y-K Delta, Bypass Mail originates from five hubs: Bethel (27 destination airports), Aniak (11 destination airports), Emmonak (three destination airports), McGrath (three destination airports), and St. Mary's (three destination airports), as shown in Table 6 and Figure 10.

Figure 9. U.S. Department of Transportation Essential Air Service Map.



The Essential Air Service Program in Alaska

The Airline Deregulation Act, passed in 1978, gave airlines almost total freedom to determine which markets to serve domestically and what fares to charge for that service. The Essential Air Service (EAS) program was put into place to guarantee that small communities that were served by certificated air carriers before deregulation maintain a minimal level of scheduled air service. The USDOT (United States Department of Transportation) administers the EAS program to ensure that smaller communities retain a link to the national air transportation system with a federal subsidy where necessary.

There are currently 62 communities in the State of Alaska that receive subsidized air service under the EAS program.

Alaskan communities receiving EAS subsidies set benchmarks for need and cost effectiveness in the program.

Alaska communities receiving EAS are the **most remote and isolated** in the nation.

There are 62 Alaska communities that receive EAS. Of those communities **only 6 are connected** to the national transportation system by a road.

Of those 6, only McCarthy **does not have road maintenance** in thewinter months.

Of the remaining 5, only 1 is on a paved road (Gulkana) and that one is **over 210 miles** from the nearest med hub airport.

The remaining 56 communities are **completely isolated** from the road system and rely on air travel as their primary means of transportation.

- Alaska communities receiving EAS subsidy far exceed the recommendations to qualify as remote communities.

The average community subsidy in Alaska is **$331,024**

The average community subsidy in the rest of the U.S. is **$2,254,687**

- Air travel in Alaska is not a convenience; it is a critical transportation mode that provides basic day-to-day necessities and access to health facilities.

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Table 6. Current Bypass Mail Hub and Destination Airports in the Y-K Delta (hubs in blue)[3]

BETHEL*	BET*
Akiachak*	KKI
Akiak*	AKI
Atmautluak*	ATT
Chefornak*	CYF
Chevak*	VAK
Eek*	EEK
Goodnews Bay*	GNU
Hooper Bay*	HPB
Kasigluk	KUK
Kipnuk*	KPN
Kongiganak*	KKH
Kwethluk*	KWT
Kwigillingok*	KWK
Marshall/Fortuna Ledge*	MLL
Mekoryuk*	MYU
Napakiak*	WNA
Napaskiak*	PKA
Newtok*	WWT
Nightmute	NME
Nunapitchuk*	NUP
Platinum*	PTU
Quinhagak*	KWN
Scammon Bay*	SCM
Toksook Bay*	OOK
Tuluksak*	TLT
Tuntutuliak*	WTL
Tununak*	TNK

ANIAK*	ANI*
Anvik*	ANV
Chauthbuluk	CHU
Crooked Creek*	CKD
Grayling*	KGX
Holy Cross*	HCR
Kalskag (includes Upper and Lower)*	KLG
Red Devil*	RDV
Russian Mission*	RSH
Shageluk*	SHX
Sleetmute*	SLQ
Stony River*	SRV
EMMONAK*	**EMK**
Alakanuk*	AUK
Kotlik*	KOT
Sheldon Point/Nunam Iqua*	SXP
McGRATH*	**MCG**
Nikolai	NIB
Takotna*	TCT
Tatalina*	TLJ
SAINT MARY'S*	**KSM**
Mountain Village *	MOU
Pilot Station (includes Pitkas Point)*	PQS
Marshall*	MLL

Source: U.S. Postal Service, Handbook PO-508, Intra-Alaska Mail Service By Air.

*These communities were deemed eligible in 1998 to receive Essential Air Service Subsidies under certain conditions. The remaining four (Chauthbuluk, Kasigluk, Nightmute, and Nikolai) may have had name changes or changes in the community size or character since 1998, and may also be eligible for EAS subsidies now. Note: Tatalina Airport is not included in this study.

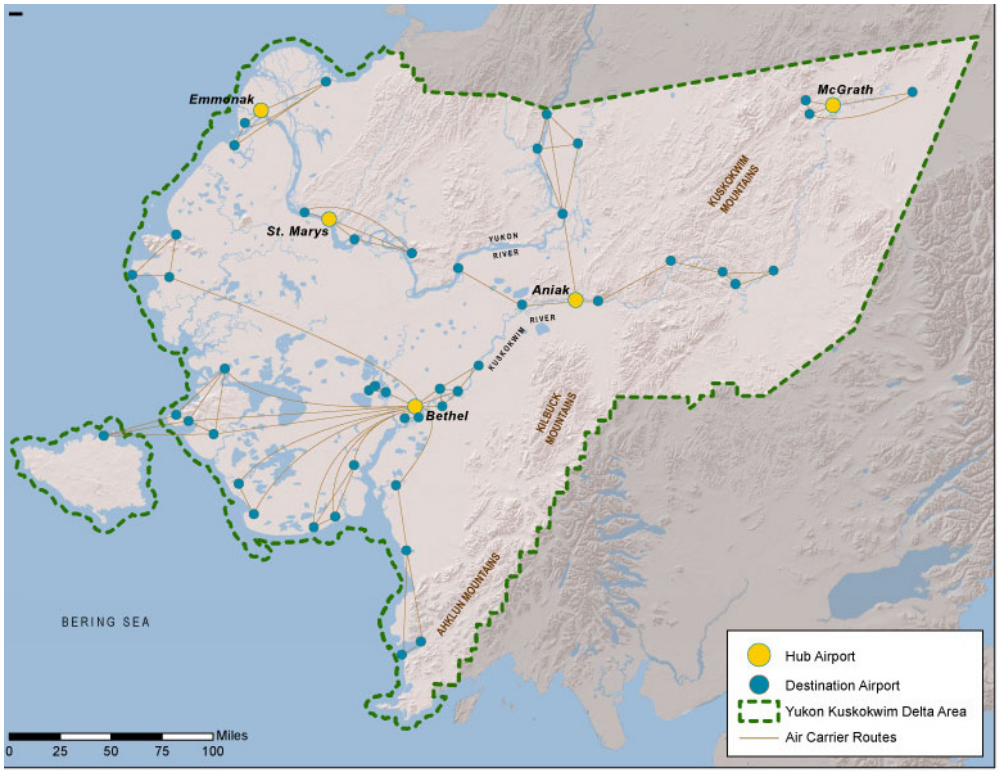
3 USPS hub codes do not necessarily match FAA or IATA airport codes.

Concerns about government efficiency and large budget deficits within USPS have made the high cost Bypass Mail program a controversial subject in Congress in recent years. In addition to possible legislative and funding changes, the USPS in Alaska has considered the addition of new Bypass Mail hubs to the system, with route changes to accommodate the new hubs. In 2012, the USPS chose Chevak as an additional Bypass Mail hub for the Y-K Delta. To date, no qualified air carriers have applied to the USPS to serve that new hub.

Should the Bypass Mail program be reduced or eliminated, most of the communities in the Y-K Delta now receiving the benefit of improved air service through the Bypass Mail program would be eligible for Essential Air Service subsidies through USDOT to preserve a minimum level of air service.

Additional information about the Bypass Mail program can be found in Appendix C.

Figure 10. Bypass Mail Program Hub and Spoke Map.



4.4.5 Medical Transportation

Most medevacs are by air to Bethel and/or sub-regional clinics (SRC). Occasionally, boat transport has occurred from villages close to the Aniak SRC by emergency medical technicians. Otherwise, patients travel by boat in the summer and by snow machine in the winter to Bethel and the SRCs. Sometimes in the winter, Bethel cabs transport medical patients to and from nearby villages via ice roads (Akiak, Akiachak, Kwethluk, Napaskiak, Napakiak, and Oscarville).

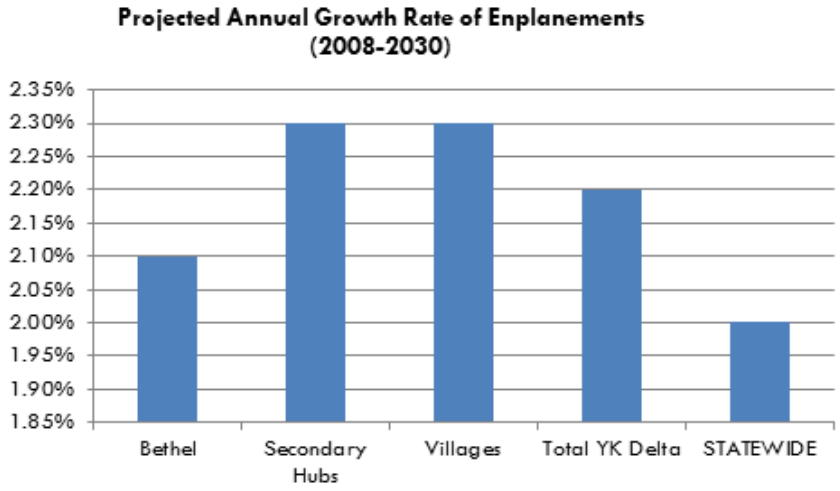
LifeMed Alaska, LLC provides 24-hour critical care air ambulance services throughout Alaska for adult, pediatric, neonatal, and high-risk obstetric patients using a fleet of Learjets, turboprops, and helicopters. LifeMed Alaska is headquartered in Anchorage with base operations in Anchorage, Fairbanks, Soldotna, Bethel, and Palmer. Medevac flights from villages to the hub airports are typically accomplished by air carriers using small aircraft. Medevacs between the hub airports and Bethel, and occasionally to Anchorage, are conducted by LifeMed using the Learjet or King Air. Medevacs transfer directly from villages to Anchorage only when an assessment can be provided at the SRC villages (Hooper Bay, Aniak, Toksook Bay, Emmonak, and St. Mary's) by a mid-level or higher provider prior to acceptance by Anchorage facilities. The majority of patients medevaced from any of the 48 villages to Bethel do not require subsequent transfer to Anchorage. LifeMed has requested the crosswind runway at the Bethel Airport be extended and paved to serve its King Air aircraft.

4.4.6 Y-K Delta Aviation Forecast

A forecast of aviation demand for the Y-K Delta was extracted from the statewide forecast of aviation activity produced for the AASP by DOT&PF in 2011. Growth indicators examined included passenger enplanements, cargo tonnage, aircraft operations, and based aircraft. The AASP forecasts present a broader, more statewide and regional focus than in-depth forecasts for specific airports do, so they may be less accurate for individual airports. The forecasts show:

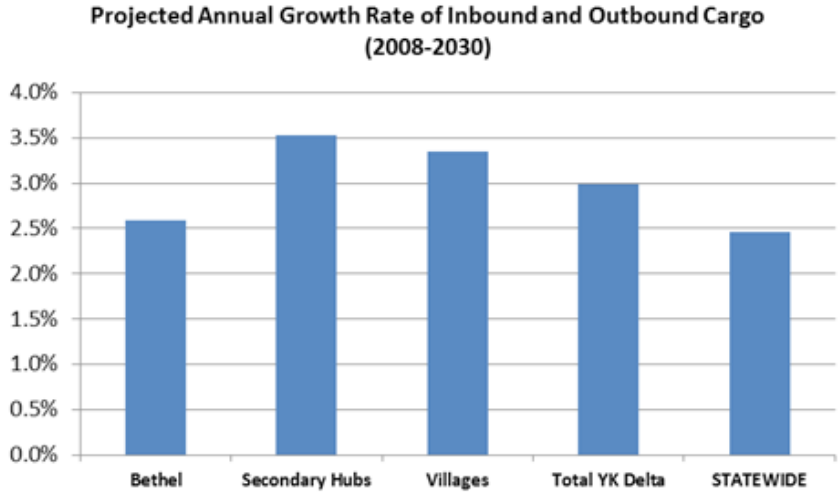
- Y-K Delta enplanement growth rates are greater than enplanement growth forecasts for the state as a whole (Figure 11).
- Y-K Delta region freight growth is higher than the statewide growth rate (when the extremely high freight numbers at Ted Stevens Anchorage International Airport are excluded from the statewide growth rate) (Figure 12).
- Y-K Delta operations growth is slightly lower than statewide operations growth (Figure 13).
- Y-K Delta based aircraft growth is similar to statewide based aircraft forecasts (Figure 14).

Figure 11. Projected Annual Growth Rate of Enplanements.



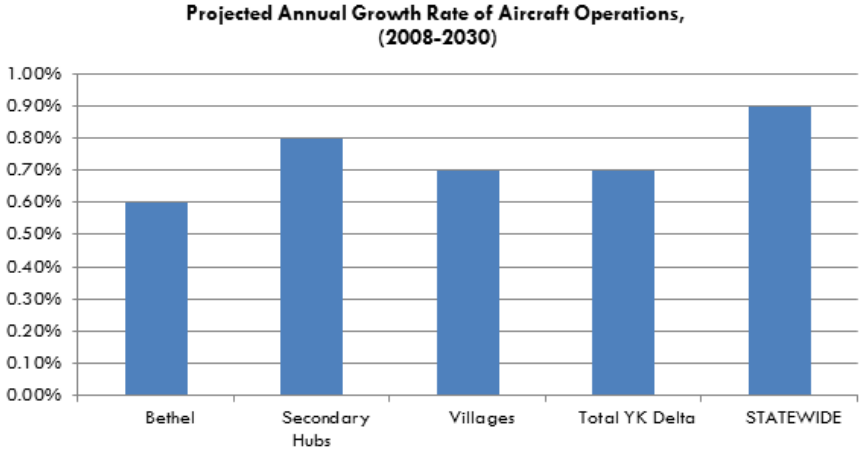
Source: AASP Forecast Report, prepared for DOT&PF by HNTB Corporation, 2011.

Figure 12. Projected Annual Growth Rate of Inbound and Outbound Cargo.



Source: Alaska Aviation System Plan Forecast Report, prepared for DOT&PF by HNTB Corporation, 2011.

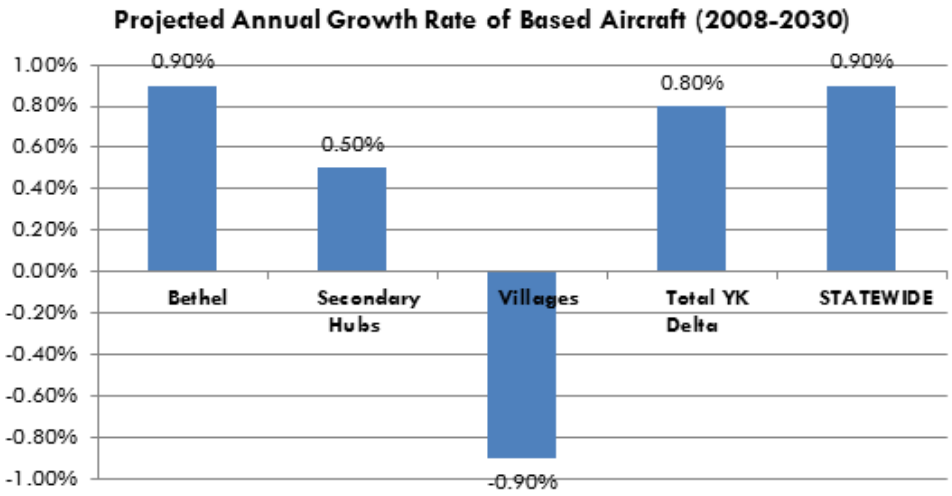
Figure 13. Projected Annual Growth Rate of Aircraft Operations.



Source: AASP Forecast Report, prepared for DOT&PF by HNTB Corporation, 2011.

More detailed enplanement, freight, operations, and based aircraft forecast information for the Y-K Delta can be found in Appendix D.

Figure 14. Projected Annual Growth Rate of Based Aircraft.



Source: AASP Forecast Report, prepared for DOT&PF by HNTB Corporation, 2011.

4.4.7 Improving Existing Airport Facilities

Airports in the region are classified as Regional, Community, and Local by the AASP (Figure 15). An inventory of the existing 52 public airports in the region and their AASP classifications can be found in Figure 15 on the following page. The airports serving the villages are grouped with the hub airports that serve them.

As shown in Table 7 the airport system includes three paved Regional class airports and two gravel Regional class airports, 45 gravel Community Off-Road airports, and two gravel Local National Plan of Integrated Airport Systems (NPIAS) Low airports, as classified by the AASP.

Table 7. Y-K Airports Overview.

AASP Classification	Airports With Paved Runways	Airports With Gravel Runways	Total
Regional	3	2	5
Community Off-Road	0	45	45
Local NPIAS Low	0	2	2
Total	3	49	52

Runway Length Progress Since the 2002 YKTP: Substantial progress has been made toward accomplishing the AASP's goal of 3,300' as a minimum standard for runway length at non-hub airports. In 2002, 21 of 45 Community Off-Road airports were less than 3,000' long. In 2014, only eight of 45 Community Off-Road airports were still less than 3,000' long. Two of those (Kwigillingok, and Crooked Creek) are already programmed for relocation or reconstruction, and the Pilot Station relocation and extension is nearly completed. Tununak's recently relocated airport has a runway length of 3,300'. Site-specific design considerations such as elevation and temperature may not allow for a full 3,300' runway length and cost considerations may make adding additional runway impractical. Generally speaking, Community Class Airport runways exceeding 3,000' should be considered as meeting the 3,300' standard.

Relocated Airports in the Y-K Delta Region 2002-2014: Several airports identified in the 2002 YKTP were proposed to be relocated to a new site with adequate land to extend the runway and meet other FAA-required safety standards. Some airports such as Eek, Tuntuliak and Takotna had terrain or other site constraints that made it difficult to extend without relocating. Other reasons for relocations include encroachment by the community preventing airport improvements, and major maintenance/erosion or flooding at the current site. Table 8 shows which Y-K Delta Airports have been relocated since 2002.

Table 8. Y-K Delta Relocated Airports – 2002- 2014.

Project Complete Date	Relocated Airport
2005	Toksook Bay
2006	Chuathbaluk
2006	Eek
2009	Chevak
2009	Tuntutuliak
2011	Goodnews
2012	Nightmute
2013	Akiachak
2013	Takotna
2013	Tuluksak
2014	Chefornak
2014	Kipnuk
2014	Platinum

Aircraft Fleet Changes/Runway Length: The 2002 YKTP anticipated that increasing passenger enplanements and freight volumes, together with the availability of certain aircraft types cycling out of the commuter market in the continental U.S., would encourage the use of larger, more demanding 19- to 30-seat aircraft, such as the Saab 340 and Beech 1900, at village airports.

Based on that forecast, the 2002 YKTP recommended increasing the standard runway length for Y-K Delta community airports to as much as 4,500'. However, this was based on an assumption that air carriers would purchase larger aircraft to accommodate an overly optimistic forecast of travel demand. The 2002 YKTP forecast, using an annual growth rate of 3.28 percent, predicted that 459,270 passengers would enplane in 2015. Actual 2015 historical data shows that enplanements are tracking almost 13 percent below this figure. The Plan update forecast, which was based on a 2011 AASP statewide aviation forecast (see Appendix D), anticipates that passenger enplanements will increase by 2.2 percent annually through 2030.

A recent survey of air carriers indicates that although the larger aircraft mentioned above are a part of the fleet serving the hub airports, the passenger fleet serving the smaller village airports is dominated by the 6-seat Cessna 207 (requires 1,800-foot runway) and the 11- to 13-seat Cessna 208 Caravan (requires a minimum of 2,500-foot runway). The fleet also includes several 30-seat DeHavilland Dash-8s (requires 3,280 to 4,675-foot runway).

Air carriers interviewed for this Plan expressed confidence the aircraft fleet currently serving the villages is "right-sized," will remain stable for the foreseeable future, and existing aircraft will eventually be replaced by newer, more efficient aircraft with similar capacity and performance characteristics. For example, multiple carriers intend to replace their older Cessna 207s with the 6-passenger GA8 Airvan.

Figure 15. Airport Classifications.

REGIONAL

Regional airports serve as transportation and economic hubs to more than one community. Generally, regional airports need to accommodate larger aircraft, have instrument approaches with low minimums, and have more landside facilities and services than other public use airports. They are usually public use airports, heliports, or seaplane bases that meet at least three of the following:

- Designated as primary airports by the FAA (at least 10,000 annual passenger boardings)
- Air carrier hubs
- USPS hubs or handle more than two million pounds of cargo (freight and mail, enplaned and deplaned) annually
- Have Part 139 certificates
- Serve communities with health facilities that serve two or more communities
- Department of Natural Resources (DNR)-designated primary or secondary fire tanker bases
- Serve communities with Coast Guard facilities

COMMUNITY

Community airports are the main air transportation facilities for individual communities. At a minimum, they need to accommodate basic health, safety, and emergency needs. In communities with International or Regional airports, the International or Regional airport is the main air transportation facility. In places where communities are close together and accessible to each other year round (within one hour driving time), a Community airport may serve more than one community.

Community airports are subdivided as Off-Road or On-Road depending on whether or not they have year-round road access to the intrastate road system. While it is important for any established community to have reasonable access to air transportation, it is doubly important for communities that lack an alternative to air travel. Ferry service, ice roads, etc. provide other transportation modes some of the time, but they do not provide the same level of availability as a road that is open year round.

Community airports are the public use airports, heliports, or seaplane bases that serve as the main air transportation facilities for communities that:

- Have a permanent population of at least 25
- Have a public school
- Are located more than one hour by road that is accessible year-round from an International, Regional, or other Community airport.

LOCAL

Local airports accommodate mostly general aviation activity. They supplement International, Regional, and Community airports by providing additional general aviation capacity in the more densely populated parts of the state, and they serve low population areas where a Community airport is not warranted. Runway size, and landside facilities and services depend on the type and quantity of aircraft using the airport. Capability for instrument approaches or nighttime use is less often necessary at Local airports than at Regional and Community airports. Local airports are subdivided into NPIAS High Activity, NPIAS Lower Activity, and Non-NPIAS classes.


Aniak Regional Airport


Alakanuk Community Airport


Lime Village Local Airport

A list of regional, community, and local airports is located on Page 21, Figure 8. Y-K Delta Airport Inventory.

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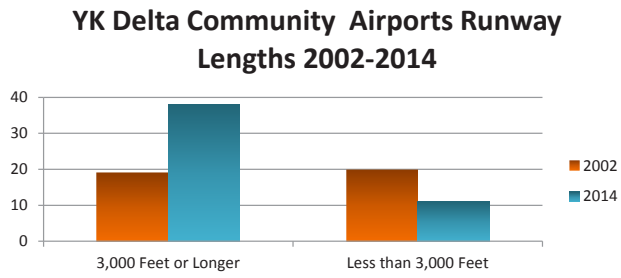
Three Community Class airports in the Y-K Delta need major improvements and longer runways — Crooked Creek, Kwigillingok, and Newtok. Crooked Creek and Kwigillingok are in substandard condition and the runways should be extended (Figure 16). When the village of Newtok is relocated to Mertarvik, a new airport should be built with a standard 3,300-foot runway.

DOT&PF has determined that extending the remaining sub-3,300-foot Community Class airport runways (Nunapitchuk, Stony River, and Kongiganak) is not feasible due to topographical challenges, low community population, and/or cost. Extending the runways at Lime Village and Telida, both Local Class airports, is also not feasible due to low population. The crosswind runway at the Bethel airport, and runways at Nunam Iqua and Marshall airports should be extended to at least 3,300'. The 3,070-foot-long runway at Mekoryuk should be extended to between 3,600' and 4,000'. Access to this community entails flight over the Bering Sea requiring, in most cases, service by twin engine aircraft as a safety measure in case of engine failure. Ravn Alaska Connect is currently serving the community with a Cessna 406, which requires a minimum of 3,600' of runway given the airport's elevation and mean daily maximum summer temperature.

Figure 16. Y-K Delta Community Airports Runway Lengths.



Runway Approaches

FAA's NextGen initiative has made it possible for instrument-rated pilots using the appropriate equipment to fly Area Navigation (RNAV) approach procedures into airports. These satellite-enabled procedures are made possible by GPS with the Wide Area Augmentation System (WAAS), which enhances the accuracy of the GPS signal.

RNAV using WAAS offers several major advantages over a conventional ground-based Instrument Landing System (ILS) approach. Unlike an ILS, an RNAV (GPS) procedure is not limited by mountainous terrain or a curved approach into the airport. With an RNAV approach, similar to an ILS approach, safety is enhanced regardless of visibility or time of day. At an airport where an ILS may be out of service, an RNAV approach serves as a key backup. Additionally, many U.S. airports — especially those used by general aviation operators — do not have an ILS or a very high-frequency unidirectional range and are served only by an RNAV (GPS) approach.

Aircraft equipped with WAAS can fly satellite-enabled RNAV (GPS) precision approach procedures with Localizer Performance with Vertical Guidance (LPV) and Localizer Performance (LP) minimums. LPV minimums are similar to ILS. Because an LPV approach provides vertical in addition to horizontal guidance, an LPV approach facilitates safe aircraft operations in a greater variety of weather and daylight conditions than an LP approach. The FAA may determine that an airport should have an LP rather than an LPV approach due to obstacles, terrain, or infrastructure limitations at the airport.

The AASP recommended Aniak, Anvik, Chevak, Holy Cross, Kalskag, Mountain Village, New Stuyahok, Nikolai, and Sleetmute as priority locations for consideration by the FAA for an LPV or LP approach. These AASP approach recommendations were based on airport activity levels, whether the approach is feasible given terrain, obstacles and infrastructure requirements, and carrier input.

Automated weather equipment and weather cameras are needed at many airports as are the aeronautical surveys to provide improved (LP/LPV) approaches. Although runway lighting is still absent at seven airports (Crooked Creek, Flat, Kwigillingok, Lime Village, Newtok, Red Devil, and Stony River), it is only feasible to install lighting at Crooked Creek, Newtok, and Kwigillingok as part

of larger airport improvement projects.

The AASP recommended installation of Automated Weather Observation Systems (AWOS) to facilitate RNAV approaches at Alakanuk, Atmautluak, Crooked Creek, Goodnews Bay, Eek, Grayling, Kasigluk, Kotlik, Nunapitchuk, Pilot Station, Platinum, and Nunam Iqua (Sheldon Point).

Other Improvements

Lease lots, tie downs, and fuel are generally available where needed in the Y-K Delta aviation system. An annual drainage and surfacing project should be programmed to address ongoing system-wide needs, with DOT&PF Maintenance and Operations staff identifying and prioritizing the airports to be addressed. Airports in the same proximity would likely be addressed at the same time.

4.4.8 Passenger Shelters

Of the region's 52 public airports, only 10 have passenger shelters to protect passengers and cargo from the weather while waiting to catch a flight or be taken from the airport into the community. Half of these shelters are located at the larger "hub" airports and are provided by the air carriers. The condition of each passenger shelter is unknown.

In 1980, the state Legislature funded the construction of passenger shelters at several remote community airports. These buildings were sometimes called the 50/80 Shelters, a reference to the chapter and year of the funding legislation. Most of these buildings were subsequently destroyed by a combination of a lack of maintenance and vandalism. The ownership of a few remaining shelters was transferred to local governments or the buildings were removed from the airports and into the community for use as housing or storage.

There are no state-funded programs designed specifically to provide public use passenger shelters. However, where major airport construction or maintenance projects are conducted by DOT&PF, upon completion of the project it may be possible for DOT&PF to transfer ownership of the on-site project management building to the local government for use on the airport as a passenger shelter, with an approved agreement.

Local governments can work with the DOT&PF Aviation Leasing section to lease airport property for an airport shelter. In 2015 the Stony River Tribe used their TTP funds to lease airport property from DOT&PF and built a passenger shelter.

Stony River Passenger Shelter

Process for Obtaining a Public Use Airport Passenger Shelter

A local government, as defined by the Alaska Statutes or as recognized as a tribal government by the BIA, is eligible to place a public use passenger shelter on an airport lease lot rent free and without paying application fees if they meet the requirements identified in Title 17 of the Alaska Administrative Code Section 45.130.

The passenger terminal or passenger shelter building must be located on an airport that provides the primary transportation access for a community with a population of at least 25 but less than 1,500, and:

- **A.** The land and building may be used for only airport terminal purposes and not for any other private or community purpose
- **B.** The land and building must be available for public use free-of-charge, except as provided in (D) of this paragraph, and on a non-discriminatory basis
- **C.** The land and building may not be used for revenue-generating purposes, except as provided in (D) of this paragraph
- **D.** If and to the extent authorized in the lease and approved by the department, the local government may charge fees no greater than required to recover building operation and maintenance costs.

An Airport Leasing Application and Airport Building Permit Application must be submitted to DOT&PF Statewide Aviation Leasing. Applications must be approved by DOT&PF before the shelter building is moved or constructed on airport property. Applicants are expected to provide and maintain the building for the term of the lease. Leasing and building permit applications can be filled out and submitted on-line by visiting the DOT&PF Statewide Aviation Leasing Online eLeasing System at www.eleasing.dot.ak.us

4.4.9 Seaplane Bases

While this study focuses on Y-K Delta airports, it is important to recognize other landing facilities in the region. Seaplane bases (SPBs) provide landing facilities for aircraft with floats and/or amphibian gear. FAA airport facilities databases indicate that there are 167 registered water runways in Alaska, with 13 of these located in the Y-K Delta. Table 9 below identifies these facilities. Six of these water runways below have been registered with another local airport. For example, Aniak Airport is identified in the FAA 5010 form as having one paved runway and one water runway.

It is important to point out that much of the Y-K Delta is rivers, lakes, and other waterways that floatplanes use, but which are not formally registered as seaplane bases. One of the advantages of a seaplane is that it can take off from an established, registered airport or seaplane base and land on a river or lake that is not an established landing facility. This type of activity allows access for subsistence, flightseeing, and other activities in remote parts of Alaska.

Table 9. FAA Registered Seaplane Bases in the Y-K Delta Region.

Airport Name	Local ID	Associated with Local Airport	Water Runway is Primary Runway	Number of Water Runways
AKIACHAK	KKI	No	Yes	2
ANIAK	ANI	Yes	No	1
ANVIK	K40	No	Yes	1
BETHEL	Z59	No	Yes	1
HANGAR LAKE	Z58	No	Yes	1
NAPASKIAK	PKA	No	Yes	1
NEWTOK	WWT	No	Yes	1
NUNAPITCHUK	16A	Yes	No	1
RUSSIAN MISSION	RSH	Yes	No	1
SCAMMON BAY	SCM	Yes	No	1
SHAGELUK	SHX	Yes	No	1
SHELDON POINT	SXP	Yes	No	2
TUNTUTULIAK	Z20	No	Yes	1

4.4.10 AASP Performance Measures

The Y-K Delta airport performance measures scorecards were prepared as part of a statewide airport assessment in the AASP. These scorecards provide a summary of the current performance and adequacy of the airport system. Performance measures are associated with several aspects of an airport's safety, design standards, and services. The AASP and the Y-K Delta scorecards cover the following two categories:

- *Airport Design Standards Index:* This index measures the extent to which 52 Y-K Delta airports are compliant with various FAA safety and design standards and regulations.
  - Runway Safety Area (RSA)
  - Obstacle Free Zone (OFZ)
  - Threshold Siting Surface (TSS)
  - Runway Protection Zone (RPZ)
  - Crosswind Runway
  - Runway Visibility Zone (RVZ)
  - Parallel Taxiway

- *Airport Service Index:* This index examines the facility and service capabilities that are applicable to 49 Y-K Delta airports in the Regional and Community airport classifications to serve their respective markets.
  - Runway
  - Runway Lighting
  - Taxiway
  - Instrument Approach Procedure Minimum
  - Meets Demand for Lease Lots
  - Meets Demand for Tie-Downs
  - Fuel Sales
  - Passenger Shelter
  - Public Toilet

Figure 17 presents the Y-K Delta scorecard for the Design Standards Index. At 81percent compliance, OFZ is the highest performing category that applies to all Y-K Delta airports.

Figure 18 is the Y-K Delta scorecard for the Airport Service Index. The highest performing categories are Runway Lighting, met by 92 percent of Regional and Community airports in the Y-K region, respectively.

Figure 17. Design Standards Index at Y-K Delta Airports.

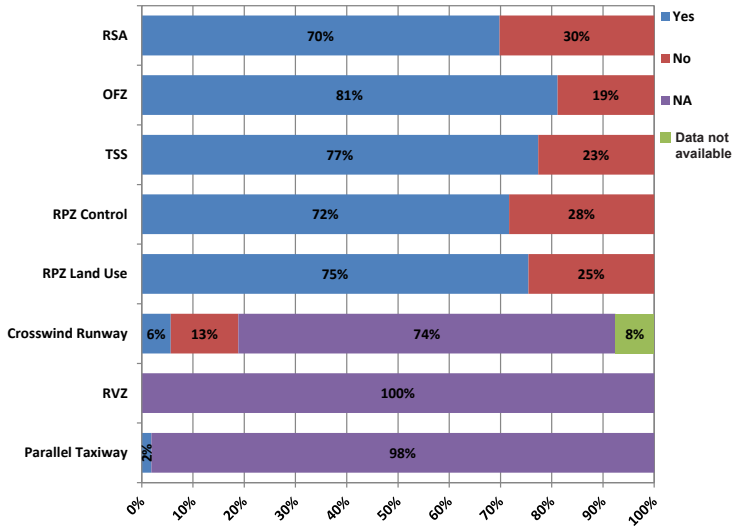
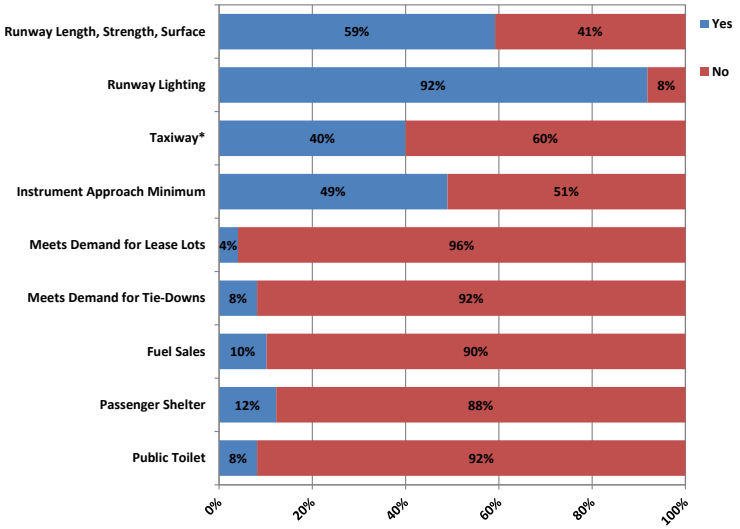


Figure 18. Service Standards Index at Y-K Delta Airports.

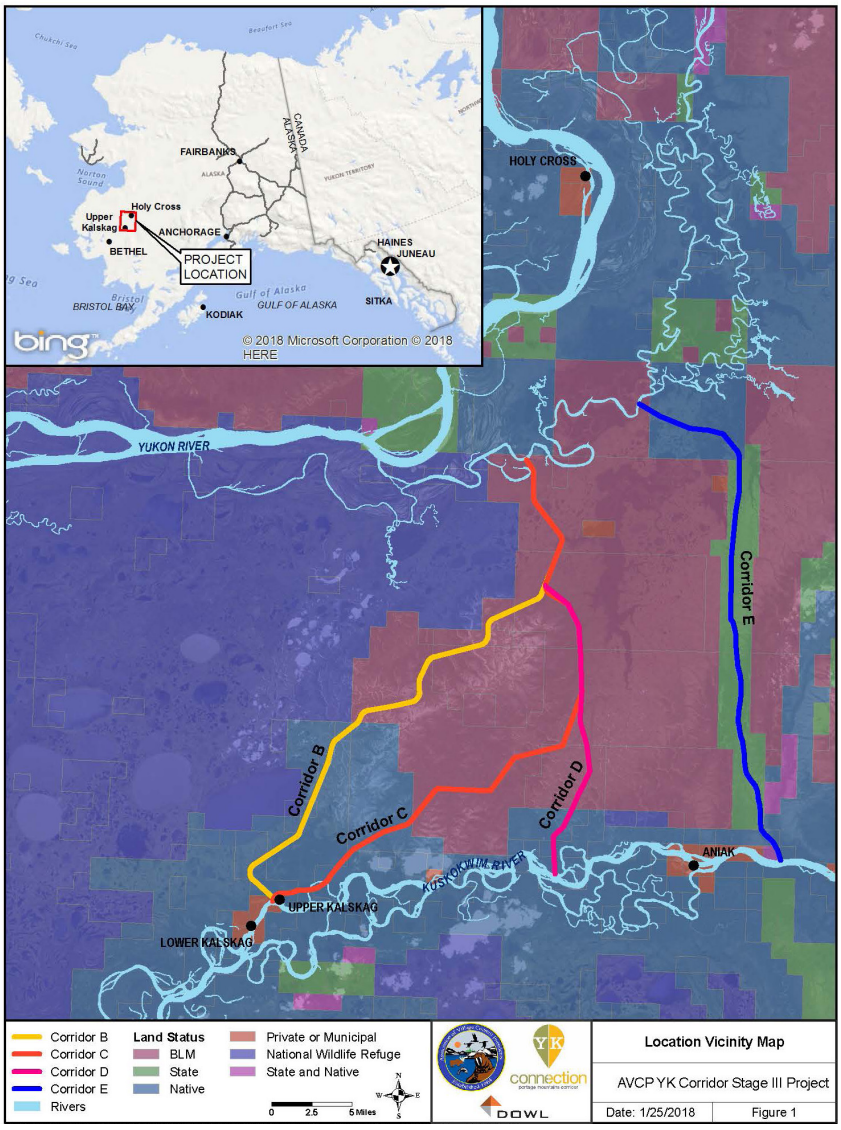


4.5 Marine Transportation

Freight movement is critically important to the wellbeing of all Alaska's communities. High percentages of the state's workforce and wages are directly linked to freight-dependent industries, such as mining and fishing. The unique size and geography of the state poses a range of challenges for the freight transportation system. In the Y-K Delta, small communities are not connected to the road network and therefore basic goods like food and fuel are brought in by air or barge. The EAS Program and Bypass Mail Program provide important financial support for transport of goods to the communities by passing some of the costs of these services on to other users/taxpayers. In spite of these programs, the costs of transporting basic consumer goods results in prices that are far above national averages. The majority of freight brought to the Y-K Delta comes via barge through the Port of Bethel and up the Yukon and Kuskokwim rivers (Figure 20). During the winter months when these rivers are frozen, freight distribution is more challenging, and freight is more frequently distributed by air.

To help with some of the challenges associated with freight and fuel delivery in the Y-K Delta, AVCP is working to develop the YK Freight Corridor project (Figure 19). The purpose of this project is to connect the Yukon and Kuskokwim rivers with the goal of reducing the cost of fuel and freight delivery, and supporting economic development and connectivity. The freight corridor route covers 44 miles beginning just upriver of Kalskag, continuing north to a port site on Paimiut Slough. AVCP has selected a preferred corridor based on engineering, environmental, and economic considerations, and representatives from communities in the project area have reviewed and concur with the corridor selection. The next project development phase will continue engineering, subsistence and environmental tasks, a winter-long series of village meetings, and commence efforts with private land owners and the Bureau of Land Management (BLM) to preserve the corridor ROW. While environmental and final design are likely a few years out, the project's economic studies show the corridor makes sense for the long term.

Figure 19. YK Freight Corridor Project Map.



The Alaska 2036 Long Range Transportation Policy Plan Update (LRTP Update) Freight Element sets out a range of expected needs and opportunities to provide acceptable freight system performance. Relevant needs for the Y-K Delta include:

- Bringing more resources efficiently to markets. Providing freight transportation capacity, particularly to support mining operations.
- Maintaining and enhancing critical connections with Alaska's rural communities, and doing so with constrained public funds.
- Maintaining and improving multimodal connectivity among and between Alaska's urban and rural communities, including standard facilities, mode reliability, cost, and overall performance.

The Y-K Delta is not served by the Alaska Marine Highway System. Unlike the contiguous U.S. where most port facilities were originally developed by private industry, port facilities in the Y-K Delta have been developed almost entirely by the state and federal governments.

Carriers use dock facilities at Bethel on the Kuskokwim River, and Emmonak and Alakanuk on the Yukon River, as redistribution hubs for ocean barge cargo shipments originating primarily in Cook Inlet and Puget Sound. River barges also travel from Nenana and Fairbanks to deliver cargo and equipment for infrastructure projects across western Alaska. The port facility at Saint Mary's acts as a trans-shipment point for barged cargo destined for other remote communities on the Yukon by virtue of its road connection with the St. Mary's regional airport. Cargo includes basic goods and materials, fuel, construction equipment and material, and significant volumes of rock product for regional infrastructure projects. Ocean barges offload and stage cargo in Emmonak, where it can be stored or redistributed to other lower Yukon communities by smaller in-river vessels. This hub system of maritime infrastructure facilitates efficient fuel and cargo distribution in the lower Yukon region where geographical challenges often limit direct deliveries by large vessels.

The chief physical impediment to marine-riverine transport involves seasonality. Winter storms and marine ice restrict the accessibility of coastal port locations. River ice and reduced water flow during the colder months likewise restrict accessibility to communities located in the interior.

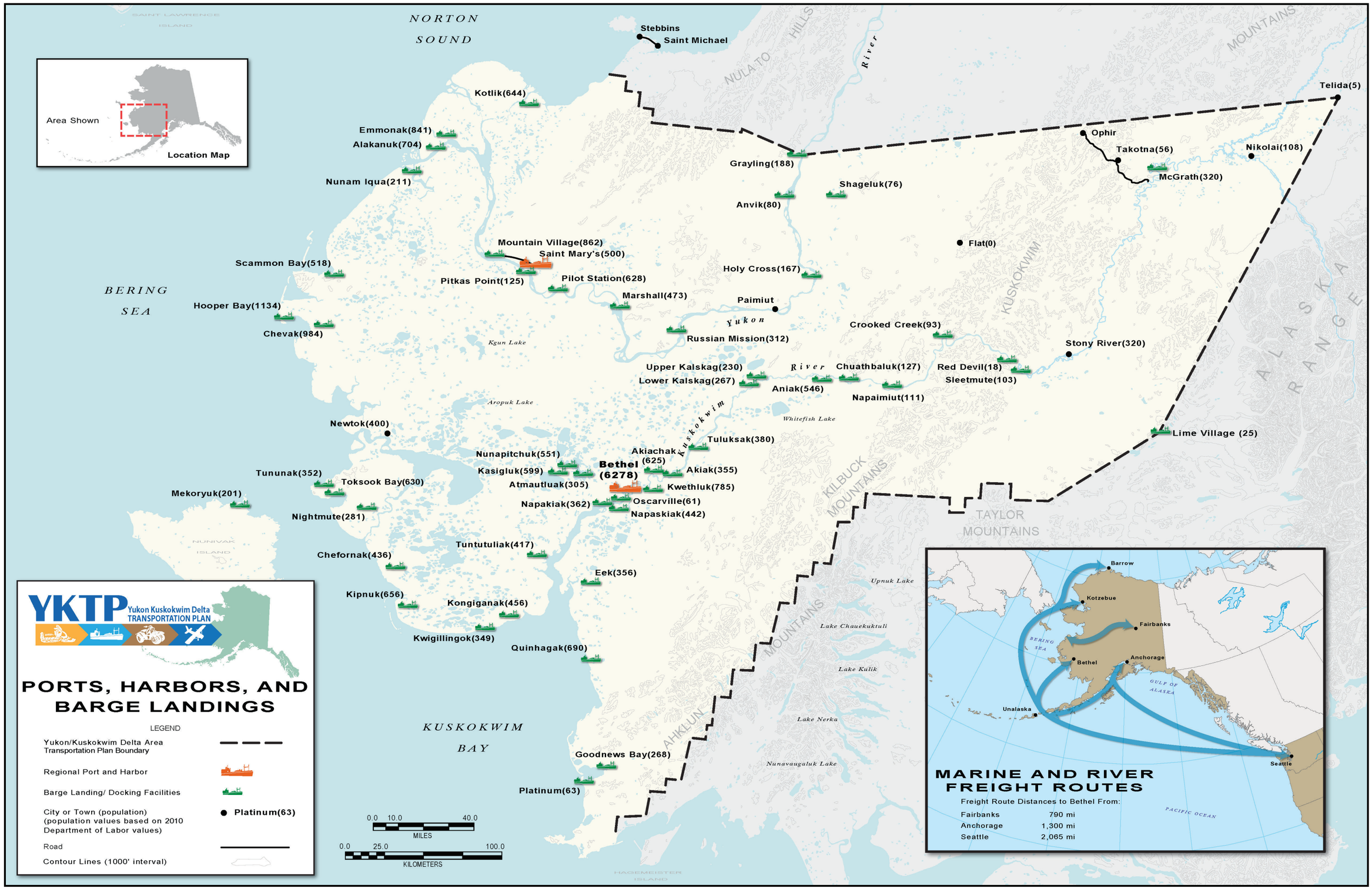
Barge service will remain a dominant transport mode in the Y-K Delta for fuel, large equipment, and industrial supplies. Bypass Mail will remain as the major competitor to marine transport for consumer-related cargo other than fuel. The cost of fuel is approximately 50 percent of the cost of doing business for barge operators, so they try to minimize number of calls to remote facilities. This encourages remote communities to develop local storage facilities. It also promotes a continued reliance on aviation to accommodate unforeseen shortages of essential commodities such as heating fuel.

4.5.1 Ports

Defined as a facility where trans-shipment routinely occurs, there are currently only two ports within the study area: Bethel and Saint Mary's. Emmonak is currently acting as a transshipment hub and is developing a commercial port facility.

The Port of Bethel, a medium-draft facility located about 65 miles upstream from the mouth of the Kuskokwim River, is the northernmost medium draft port in the United States. The Port Cargo Dock is a nine-acre facility originally constructed in 1975 by the State of Alaska. Some upland areas are still owned by the State, but the port is operated by the City of Bethel. The dock consists of four earthen-filled closed sheet pile cells with sheet pile closure walls between. Barges as large as 400' in length can be accommodated on the primary dock face. The petroleum facility, which can berth a 380' barge, handles bulk fuel for Bethel as well as transshipment of fuel throughout the region. The facility's privately-owned tank farm has a capacity of 15 million gallons of fuel storage. The port handles approximately 20 percent of the barged petroleum products and freight activity in the study area. The Kuskokwim area commercial salmon industry also relies on the Port for most of its infrastructure and processing requirements.

Figure 20. Marine Existing Conditions Map.



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Based on the same level of use, the port will need an additional 7.7 acres of uplands by 2030 to handle residential and commercial cargo during the summer and store barges during the winter. Additionally, it is estimated that 16 acres of uplands at Bethel would be required during the construction of the Donlin Mine, including storage space and supporting roads and infrastructure.

The Bethel Small Boat Harbor holds approximately 120 moorage spots, allowing space for 600 to 700 skiffs. It is typical that Bethel sells about 600 moorage permits per year. Residents from the surrounding villages use the small boat harbor to park their skiffs and access public facilities, visit friends and family, attend doctor's appointments, and access other modes of transportation. The small boat harbor is essential for the Y-K Delta economy.

The Bethel Port presently uses nine acres to handle an average of 9,000 tons of cargo annually.

St. Mary's is located on the Andreafsky River, five miles from its confluence with the Yukon River and 100 miles from the Bering Sea. This three-acre port facility has a 350-foot-long dock face and provides the only deep-water sheet-pile dock in the lower Yukon drainage. The relatively quiet waters of the Andreafsky River offer shelter from the rapid water and ice flows characteristic of the Yukon River. Incoming ocean-going barges bring large cargo destined for multiple villages, which unload at the port. The loads are consolidated and reloaded to smaller barges destined for individual villages. Vessels with prop, hull, or shaft problems are regularly hauled out at the dock for repair work. St. Mary's is also a wintering spot for barges, tugs, and other vessels. Some are stored on the dock and others are moored at the dock facing.

The St. Mary's area is also a supplier of gravel to the region. The gravel is loaded on to barges from the dock. According to Northern Economics, the data for barged freight in the planning area is all privately held.

Fuel distributed by barge on the Kuskokwim River comes from Unalaska or Anchorage and goes upriver while most of the fuel distributed by barge on the Yukon River comes downriver from Nenana. Bethel is a distribution point for fuel delivered to communities along the Kuskokwim River, and Emmonak is a distribution point for fuel delivered to communities along the Yukon River.

The proposed $16 million Emmonak port project is intended to accommodate the boat manufacturing and seafood processing industries and provide storage capacity for fuel and freight re-supply of rural communities upriver in the Yukon by ocean-going vessels. The existing unimproved barge landing site at Emmonak consists of bare riverbank soils, which are constructed into a temporary earthen ramp using heavy equipment. Tugs then maneuver barges and push them onto the ramp, holding them in place under power as the barge is offloaded. Heavy equipment is also used as temporary moorings to hold barges in place during offloading. This offloading procedure is difficult, inefficient, and poses considerable risk to shipping industry personnel and equipment. The time and complexity of these operations increase the cost of delivery and delays barges awaiting their chance to offload.

The $11.8-million Marshall waterfront project is intended to facilitate the development of a nearby rock quarry that will save up to $24 million in costs for regionally planned airport and road infrastructure upgrades that otherwise require importation of material from Nome, 250 miles away.

4.5.2 Barge Moorings and Landings

Barge moorings and landings are of modest construction and represent the final destination for water-borne shipping. They often consist of little more than a gravel pad and one or

two attachment points for mooring lines. Due to seasonal erosion, keeping physical structures in place, such as timber pilings and retaining walls, is almost impossible. To load and unload, barges must be held against transfer sites by river tugs. This accelerates river bottom and bank erosion. The movement of unsecured barges during off-loading of petroleum products also increases the potential for oil spills. Finding a long-term solution to this problem has been difficult. Historically, DOT&PF has worked with the Denali Commission and others to fund barge landing improvements.

In January 2009, USACE completed the Phase 1 Report of a Statewide Barge Landing Assessment. The purpose of the study was to analyze the barge mooring and fuel/freight transfer needs at Alaska's coastal and riverside communities. The Phase 1 Report included assessments of barge landings on the Yukon and Kuskokwim Rivers as well as coastal locations on the Y-K Delta. The assessment provided:

- A catalog of existing facilities
- A list of barge landing infrastructure improvement needs by community
- Potential design solutions to address the general categories of infrastructure need
- Concept-level design drawings that address a wide range of site conditions expected in the regions covered by the study
- A project ranking system used to develop priority needs
- A prioritized list of projects
- Site plans showing possible landing site improvements at each of the priority sites
- Estimates of probable construction costs associated with the proposed improvements at each of the priority sites

Projects to address identified needs were prioritized according to their ability to improve operational efficiency and safety. Priority projects were identified for 22 communities in the study area. Appendix E includes a list of these communities. Barge landing improvements and mooring point construction projects began in 2010 and were completed in 2014. Due to federal funding cuts, several prioritized improvements did not get completed. Mooring points that are deteriorating in communities such as Tuntutuliak should be prioritized for improvements to maintain safe, reliable, and efficient barge service.

In 2016, the Denali Commission awarded USACE additional funding to update the USACE 2010 report and to develop an updated, prioritized list of needs (Appendix E).

4.5.3 Federal Freight Policy and Funding

Recent transportation legislation, the FAST Act, includes provisions focused on ensuring the safe, efficient, and reliable movement of freight. The legislation can help provide funding for ports and barge landing facilities in Alaska. The FAST Act:

- Establishes a national multimodal freight policy that includes national goals to guide decision-making.
- Requires the development of a national freight strategic plan to implement the goals of the new national multimodal freight policy. The national freight strategic plan will address the conditions and performance of the multimodal freight system, identify strategies and best practices to improve intermodal connectivity and performance of the national freight system, and mitigate the impacts of freight movement on communities.
- Creates a new discretionary freight-focused grant program that will invest $4.5 billion over five years. This new program allows states, Metropolitan Planning Organizations (MPOs), local governments, tribal governments, special purpose districts and public authorities (including port authorities), and other parties to apply for funding to complete projects that improve safety and hold the greatest promise to eliminate freight bottlenecks and improve critical freight movements.

4.6 Land Transportation

4.6.1 Roads

The Y-K Delta has approximately 225 miles of roads. As shown in Table 10 and Figure 21, only about 50 miles of road connects communities to one another. The remaining roadway miles in the region are used for intra-village travel. The long travel distances, poor soils, and large expanses of water in the Y-K Delta require the main modes of transportation to be aviation, or personal boats or snow machines. Roadway travel within villages is often by ATV, and in many communities in the Y-K Delta, boardwalks are used in place of roads due to wet, unstable ground. Most communities in the region have limited road networks that are unpaved, with the longest road segments being those that access airports and landfill or sewage lagoon sites.

As the regional hub, Bethel has a total of about 7 to 8 miles of paved roads Chief Eddie Hoffman Highway (about 4.5 miles), Ridgecrest Drive (about 1.6 miles), Tower Road (about 1 mile), and 1st Avenue access (about 0.2 miles). Bethel is the only community in the region with a transit system. Transit is not feasible in villages with low populations, limited road networks, and limited passenger vehicles. DOT&PF only documents vehicle traffic counts on a few roads in the Y-K Delta. Maintenance responsibility for roads in the region is shared between DOT&PF and local and municipal entities, with the state maintaining approximately 57 percent of the roads in the Y-K Delta. Maintaining roads in the Y-K Delta is more expensive than in other parts of the state as a result of the remote locations and lack of appropriate materials.

Table 10. Existing YKTP Roads Connecting Communities in the Y-K Delta.

Road	Length	Ownership	Connects the Communities of
Kalskag Road	3 miles	DOT&PF	Lower Kalskag and Upper Kalskag
St. Mary's-Mountain Village Road	23 miles	DOT&PF	Mountain Village and St. Mary's
Sterling Landing/ Takotna/Ophir Road	45 miles	DOT&PF	Sterling Landing and Takotna

4.6.2 Boardwalks

Boardwalks are considered roads in most Y-K Delta communities. Because ATVs and snow machines provide most of the surface transportation, roads have been planned and designed to be vehicle fleet appropriate and easy for the communities to maintain. There are approximately 175 miles of boardwalks in the Y-K Delta (1.2 miles of boardwalk located in Bethel). A typical boardwalk is approximately 10' wide and is built with heavy-duty materials. Boardwalks are easy for the community to build and maintain. The average cost to construct boardwalks in the Y-K Delta is approximately $2.8 million per mile. This type of construction includes wood surface and steel frame and partial helical piers. The construction of boardwalks is typically accomplished by the local workforce. Materials are shipped to the community. A superintendent is hired to oversee the job and residents perform the construction.

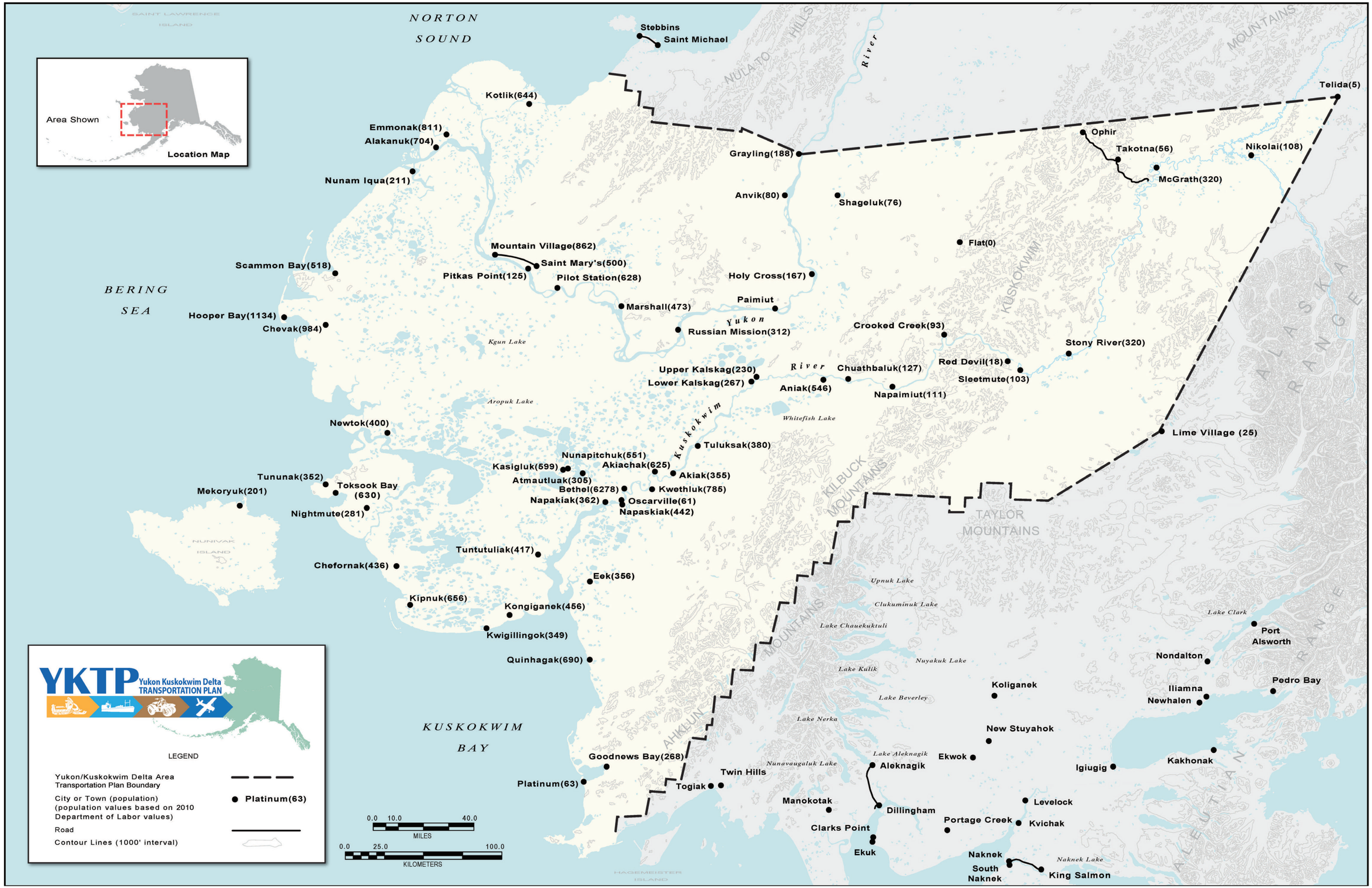
4.6.3 Winter Trails and Ice Roads

Many villages in Alaska are connected by primitive trails that can only be used in the winter months, when the ground is frozen. Residents routinely travel between communities for medical services, church, sporting events, funerals, weddings, cultural dancing events, and for employment. For many, winter is when residents can travel to reach specific subsistence grounds. Many of the trails are not marked and most people simply travel the long distances by familiarity, sometimes getting lost. Weather conditions in this region are unpredictable and can change without warning; therefore, winter trail users are at a greater risk of getting lost and disoriented during blizzard conditions. The vast expanse of land in this region does not have many distinct landmarks to guide the way from village to village. Blowing snow can make visibility poor, leaving the possibility of going the wrong direction or going over open water. Because winter trails have a significant role for the Y-K Delta communities, it is necessary to address the safety needs of these trails. Trail markers not only serve as a visual aid for path finding, but they also provide GPS coordinates for travelers to determine their exact location.

With hundreds of miles of winter trails crossing the region, efforts in recent years to properly mark and maintain the trails have been a priority of a number of organizations. DOT&PF's Northern and Central Regions have completed numerous projects erecting semi-permanent trail markers across the Y-K Delta. DOT&PF and AVCP have already begun a program of funding permanent markers in the Y-K Delta. AVCP is working on a winter trail marking

Tuntutuliak Boardwalk

Figure 21. Existing Road Network in the Y-K Delta.



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project to provide the 15 consortium tribes safe access from village to village across federal lands. Design will be complete in 2018/2019. The plan includes marking approximately 3,000 miles of trail routes between consortium villages, and will include safety shelters in between. A study of the environmental impacts of the project is under way. Figure 22 depicts the existing and proposed trail network, and also includes the location of easements [RS 2477 and 17b], which could potentially be used for future trail development.

Villages located along the river system use the rivers as their main transportation corridor during the winter months. There are several safety concerns about the use of ice roads. According to the Bethel Search and Rescue, the tribal and city governments of Napaimute, Chuathbaluk, Aniak, Kalskag, and Lower Kalskag have pooled their resources and coordinated efforts to establish a safe ice road between the Middle and Lower Kuskokwim River. These routes are plowed to knock down the rough ice that remains after the warm weather earlier in the winter. Trail markers are poles with reflectors spaced less than a mile apart. Small reflective stakes are installed between the poles for extra safety. All known open holes in the vicinity of the ice road are marked with willows and blue reflectors and updates are posted to the Bethel Search and Rescue website.

Winter trails and boardwalks in the Y-K Delta are primarily maintained by the tribe and the city through partnerships and coordinated planning efforts. Funding for maintenance typically comes from TTP funds. AVCP currently receives and administers TTP funds for 15 villages in the Y-K Delta. The TTP program has a set-aside amount of funding each year for tribes for maintenance. These funds are the primary source of maintaining boardwalks and trails in the Y-K Delta region.

4.6.4 Crash Statistics

DOT&PF's Alaska Highway Safety Improvement Program (HSIP), in partnership with the National Highway Traffic Safety Administration, collects traffic safety statistics for all traffic fatalities and non-fatal motor vehicle traffic crashes in Alaska. Data are primarily collected through police reports.

Crash statistics in rural Alaska are very difficult to collect due to small communities not having a police presence, resulting in a lack of reporting. Most crashes are documented at the local or regional health clinic/hospital, or, rarely, they are self-reported to the Alaska State Troopers.

FHWA requires crash data to support and justify safety improvement projects. Given the issues discussed above, DOT&PF and Y-K Delta communities could increase FHWA funding for safety improvements if there was a more effective reporting system to collect crash data in communities that do not have a police presence. It would also be beneficial for DOT&PF and tribal transportation organizations to educate Y-K Delta residents about the benefits of self-reporting.

AVCP is working on a winter trail marking project to provide the 15 consortium tribes safe access from village to village across federal lands. Design will be complete 2018/2019. The plan includes marking approximately 3,000 miles of trail routes between consortium villages, and will include safety shelters in between.

4.6.5 Transit

Bethel is the only community in the Y-K Delta that offers a public transit system. The transit system is funded by Federal Transit Administration and the City of Bethel. The transit service began operating in November 2010, providing two fixed routes in Bethel. Bethel has four transit vehicles, providing 1,700 to 2,000 rides per month.

Bethel recently adopted a Complete Streets policy which will support future development of sidewalks and supporting infrastructure for the transit system. In 2016, Bethel received funding to purchase 14 bus shelters, which are being constructed in 2017 and 2018.

Most Y-K Delta communities do not use standard vehicles for basic transportation, and therefore are not seeking to develop local transit systems within their communities. The residents that are from Bethel's surrounding villages use and support the transit system in Bethel.

4.6.6 Airborne Dust

Throughout the planning process, the public stated at each meeting and public event that one of the biggest concerns in the region is dust control, and that dust is a serious health problem for the villages of the Y-K Delta. Wind generates airborne dust and the passage of road or aviation traffic often exacerbates the frequency and intensity of high particulate exposures and the resulting respiratory impacts.

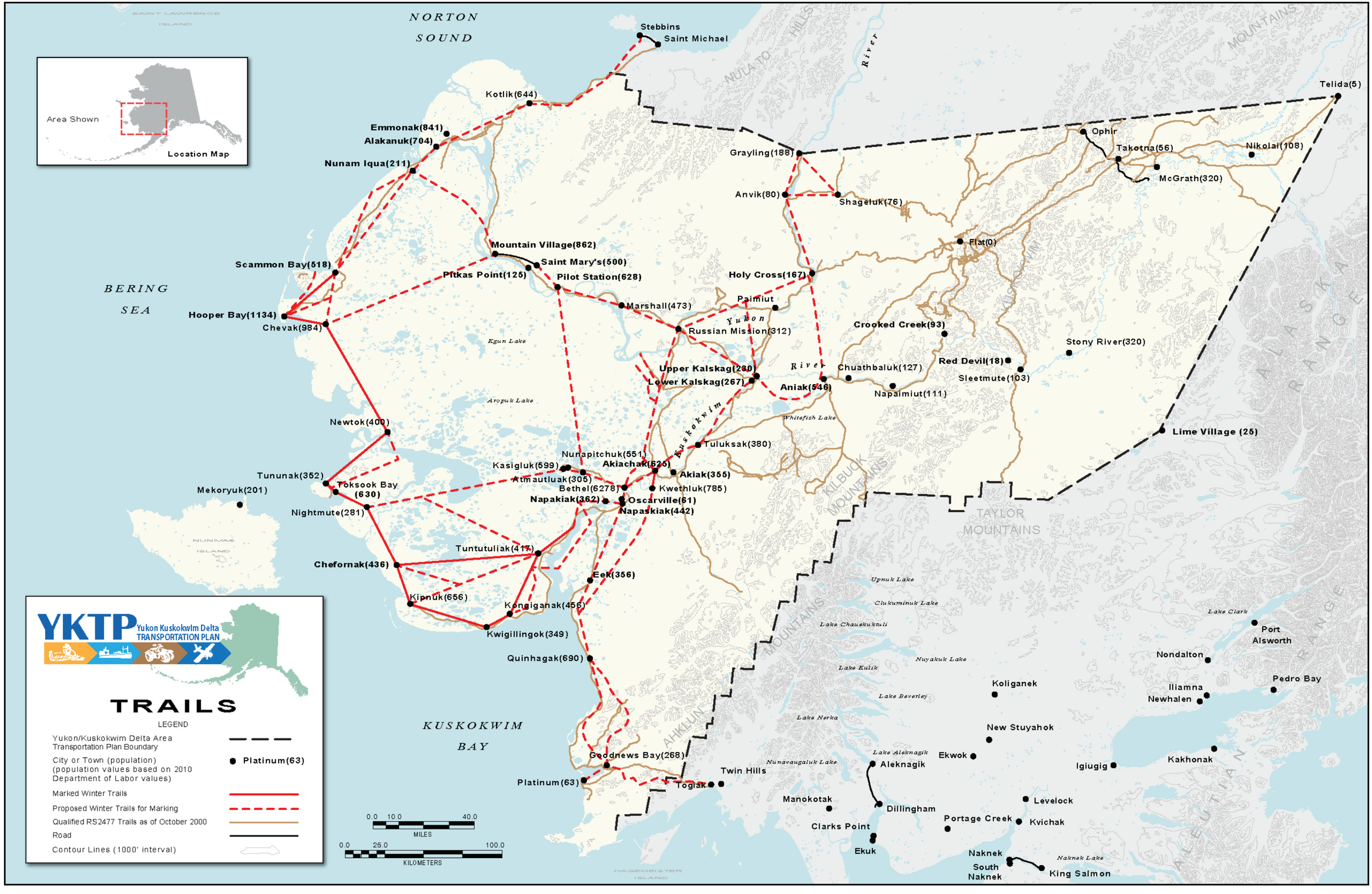
Communities, in partnership with the Denali Commission, University of Alaska, and DOT&PF, have been studying different solutions to help address this concern and evident health issue during the past 10 to 20 years. DOT&PF has applied chemical palliatives at various roads and airport gravel surfaces to attempt to optimize dust reduction efficacy at the lowest total cost. Almost 20 dust palliatives (chemicals prepared to reduce dust releases) have been tried with varying success in order to reduce the threat to Y-K Delta residents' health and improve overall quality of life. BIA TTP road maintenance funding has also been used to accomplish some dust palliative trials; however, allocation of these funds to dust control limits the total funds available for regular road maintenance, so no consistent programs have been established to date. The various governmental entities/agencies responsible for protecting rural Alaska citizens' health, environmental quality, and transportation infrastructure are continuing to attend to the complex problem of viable, cost-effective dust control.

Water trucks in Bethel and St. Mary's are used to alleviate airborne dust in those communities. Most Y-K Delta communities do not have water trucks. Better solutions are needed, since paving is prohibitively expensive to apply and maintain in small communities.

Unfortunately there is no easy solution to help resolve the dust issue in rural Alaska. In February 2015, the State of Alaska Department of Environmental Conservation (ADEC) issued a publication (Appendix F) to educate communities on dust control options. These options include:

- Reduce traffic – walk or bike
- Slow down
- Improve road surface
- Apply gravel to the road
- Water the road
- Reduce exposed ground

Figure 22. Winter Trails and Ice Road Map.



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5.0 IDENTIFIED NEEDS AND RECOMMENDATIONS

5.1 Identified Needs

Through a review of other studies and data, and the public involvement and stakeholder engagement process, a large list of project needs were identified, reviewed, and evaluated. The PIP and notes from stakeholder and public meetings can be found in Appendix A. The stakeholder and public meetings were the foundation that developed the project list included in the Plan.

An initial project list was developed from public outreach efforts and an analysis of the existing transportation system. The planning team reviewed approximately 20 existing transportation and community plans, and 56 tribal long-range transportation plans, airport master plans, airport layout plans, conducted public meetings in four communities, and distributed a survey to the public and existing air carriers to gather input on issues and needs.

Two critical planned developments in the region that greatly influenced several of the recommend projects were the YKHC hospital expansion and Donlin mine. The transportation network in Bethel is dependent on Chief Eddie Hoffman Highway, which is approaching greater than 10,000 vehicles per day. Major improvements and a connector road between Chief Eddie Hoffman Highway and Ptarmigan Street are needed. Because Bethel is a hub community and is growing rapidly, transportation solutions were identified throughout this planning process and are included in this section. A list of transportation projects identified as priorities for the City of Bethel can be found in Appendix G. Bethel surface and marine projects evaluated and recommended for prioritization in the Plan, will support these large regional projects that are currently being planned/ developed.

5.2 Transportation Recommendations

Projects on the following pages are listed in alphabetical order and do not reflect a level of priority. Regionally significant projects are grouped by aviation, surface, and marine projects. The planning team, along with significant public input, developed four goals and evaluation criteria identified in Section 3.1and Figure 3 (Safety, System Preservation, Connectivity, and Economic Value) during the early part of the planning process to help guide the identification and recommendation of projects for the Plan. Projects were then evaluated to determine which ones were regionally significant. For purposes of this analysis, a regionally significant project was defined as project that provides connection between two or more communities; provides access to public facilities such as hospitals, schools, jobs etc.; or provides access to alternative modes of transportation. A total of 107 (40 aviation, 40 land, and 27 marine) projects were reviewed and analyzed by a project evaluation team comprising of members of the planning team and representatives from DOT&PF. The team then evaluated and scored projects that were deemed regionally significant using the goals and evaluation criteria developed for the Plan. The scoring process, project list, and scores were shared with TAC for final input. Meeting notes from TAC review can be found in Appendix A. The goals, evaluation criteria, and project list used to develop recommendations can be found in Appendix H. Recommended projects that were prioritized using this process are identified in Figure 23.

Children in Newtok, Alaska

A Bethel Port Expansion

Scope

This project adds a 721-foot sheet pile dock adjacent to the existing petroleum dock, extending from the existing seawall to the existing boat launch area. Extension to create a larger dock face is feasible but would cause displacement of the boat launch area, which is used by regional residents when they visit Bethel for medical or other reasons. Approximately 20 percent of petroleum products that arrive at Bethel is transported using the petroleum dock, and about 2.5 million gallons of petroleum is distributed to surrounding villages along the Kuskokwim River.

Bethel Port

Status

The project is identified in the City of Bethel's Capital Improvement Plan. The City of Bethel is working to secure funding from the State.

Planning Estimate

$17 million (Source: PND Engineers and City of Bethel - 2010 Port of Bethel Expansion Feasibility Study)

B Bethel Chief Eddie Hoffman Highway 4R Project

Scope

This project will provide a 4R[4] on the Chief Eddie Hoffman Highway, which is the main highway between the City of Bethel and the airport. A 4R project involves major reconstruction activities such as widening to provide additional through travel lanes, horizontal or vertical re-alignment, and bridge replacement work. This project will consider three roundabouts with all-way stops, including two at the hospital and one at Watson's Corner. The improvements include three-lane widening past the Post Office to Hanger Lake Road, an improved pedestrian pathway, signage, safety lighting, and crosswalks/signals for pedestrians and non-motorized transportation users.

Status

DOT&PF completed a Traffic Impact Assessment (TIA) to analyze the traffic impacts generated by the YKHC hospital expansion and clinic project. The TIA provided information regarding average daily traffic in the area which is currently approaching levels greater than 10,000 vehicles per day. DOT&PF is currently working on a 1R[5] project on the Chief Eddie Hoffman Highway to address some of the safety and surfacing concerns on the highway.

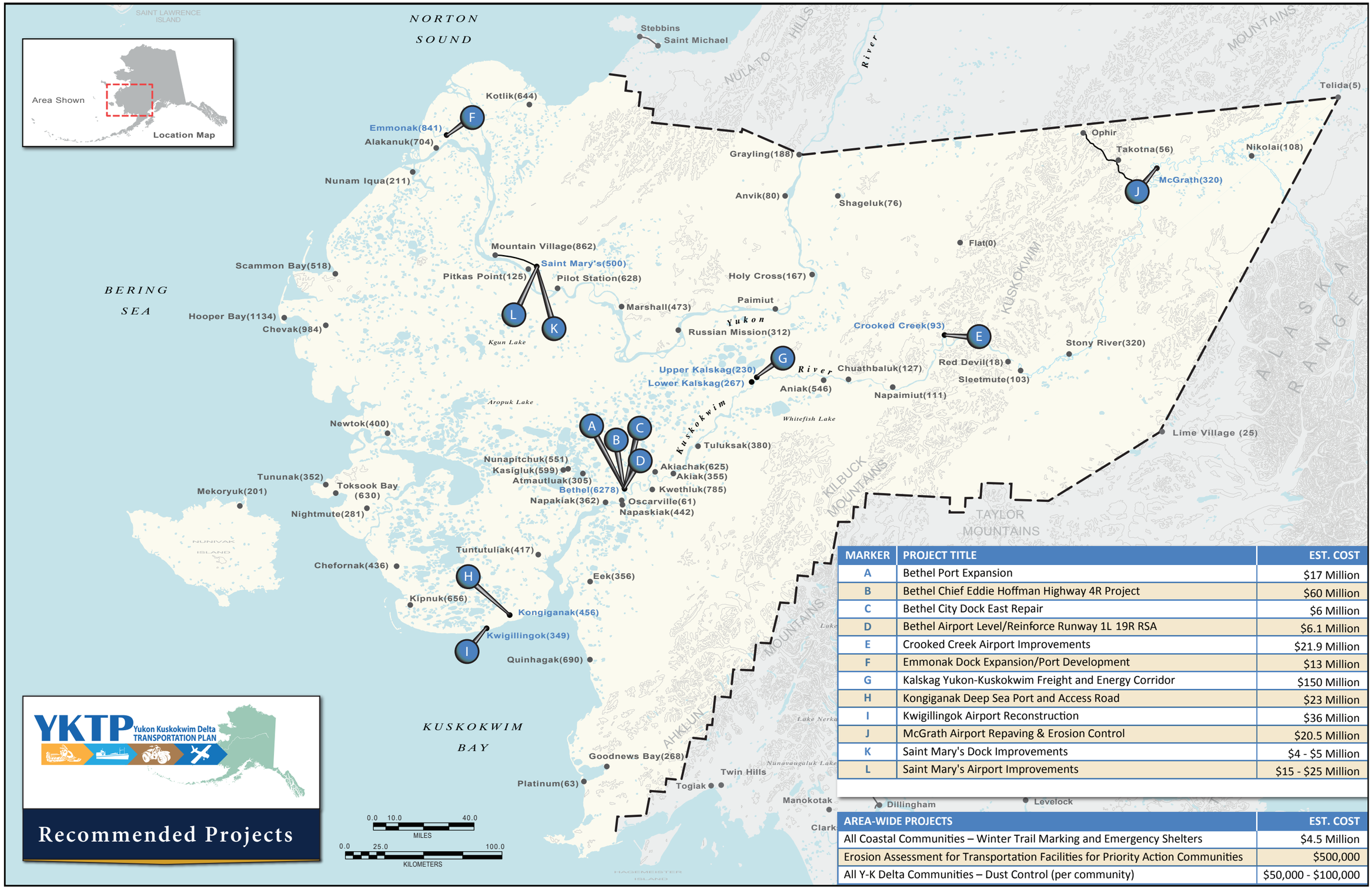
Planning Estimate

$60 million (Source: DOT&PF

4 A transportation reconstruction project that consists of a new roadway or upgrade to an existing roadway to meet geometric design criteria for a new facility. In addition to work described under resurfacing, restoration and rehabilitation, reconstruction work generally includes substantial changes in the geometric character of the highway, such as widening to provide additional through lanes and horizontal or vertical realignment, and major improvements to the pavement structure to provide long term service. Reconstruction work includes bridge replacement work.

5 A transportation reconstruction project that consists of basic rehabilitation of an existing transportation facility. A 1R project only improves an existing transportation facility. It does not consist of new construction.

Figure 23. Recommended Projects.



YKTP Yukon Kuskokwim Delta TRANSPORTATION PLAN

Recommended Projects

MARKER	PROJECT TITLE	EST. COST
A	Bethel Port Expansion	$17 Million
B	Bethel Chief Eddie Hoffman Highway 4R Project	$60 Million
C	Bethel City Dock East Repair	$6 Million
D	Bethel Airport Level/Reinforce Runway 1L 19R RSA	$6.1 Million
E	Crooked Creek Airport Improvements	$21.9 Million
F	Emmonak Dock Expansion/Port Development	$13 Million
G	Kalskag Yukon-Kuskokwim Freight and Energy Corridor	$150 Million
H	Kongiganak Deep Sea Port and Access Road	$23 Million
I	Kwigillingok Airport Reconstruction	$36 Million
J	McGrath Airport Repaving & Erosion Control	$20.5 Million
K	Saint Mary's Dock Improvements	$4 - $5 Million
L	Saint Mary's Airport Improvements	$15 - $25 Million

AREA-WIDE PROJECTS	EST. COST
All Coastal Communities – Winter Trail Marking and Emergency Shelters	$4.5 Million
Erosion Assessment for Transportation Facilities for Priority Action Communities	$500,000
All Y-K Delta Communities – Dust Control (per community)	$50,000 - $100,000

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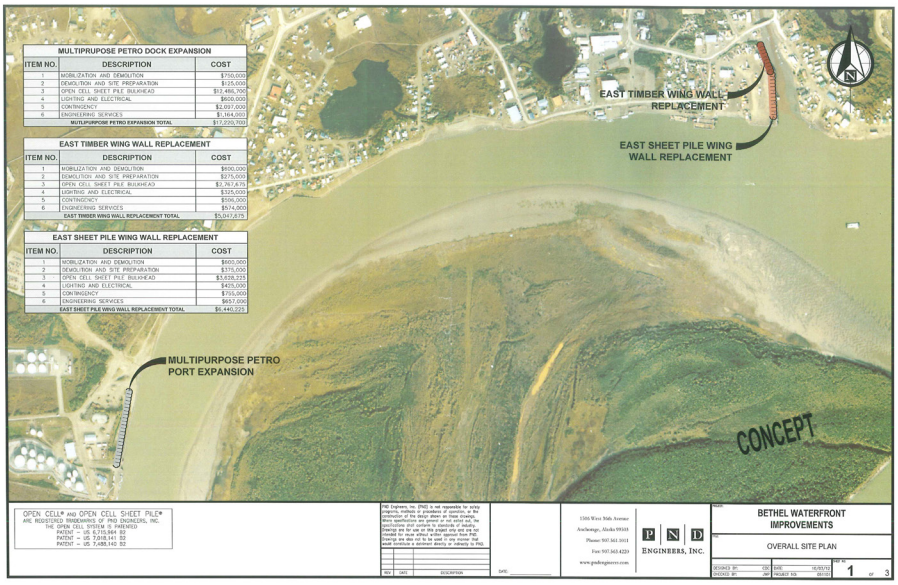
C Bethel City Dock East Repair

Scope

Replace the failing east timber wing wall of the city dock, to the south of the bridge over Brown's Slough. The timber wall would be replaced with a sheet pile design, to tie into the existing sheet pile wall.

Status

The project is identified in the City of Bethel Capital Improvement Plan. The City is working to secure funding from the state. If funding is not secured for this project, the existing infrastructure will continue to deteriorate, causing issues for fuel and freight delivery to communities along the Kuskokwim River.



Bethel Dock Design Concept

Planning Estimate

$6 million (Source: PND Engineers and City of Bethel - 2010 Port of Bethel Expansion Feasibility Study)

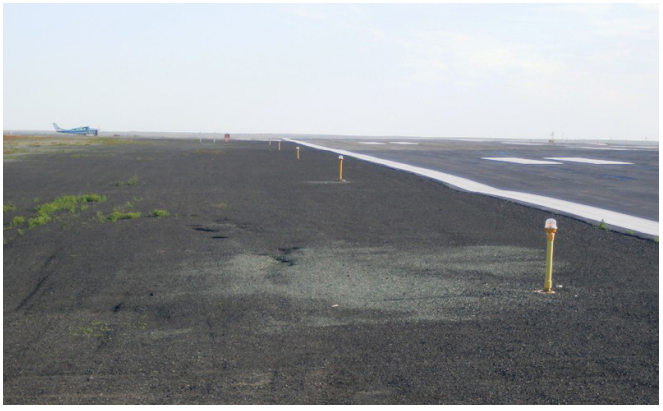
D Bethel Airport Level/Reinforce Runway 1L-19R Runway Safety Area

Scope

Fill and compact the runway safety area near the Bethel runway bump. Install Precision Approach Path Indicators (PAPI). Bethel is a Regional Class Airport.

Status

The DOT&PF Aviation Evaluation Board has evaluated this project, but it is not recommended for funding in the next few years.



Bethel Runway

Planning Estimate

$6.1 million (Source: DOT&PF Airport Improvement Program Spending Plan)

E Crooked Creek Airport Improvements

Scope

The project implements the zero to five-year recommendations of the Crooked Creek Airport Master Plan. It will bring the existing sub-standard airport up to standards. The existing 1,997' x 60' runway will be expanded to 3,300' x 75' and a 250' x 300' aircraft apron will be constructed. The RSA will be expanded to 3,900' x 150' and terrain penetrations will be removed. A new taxiway will be constructed. Medium Intensity Runway Lighting will be installed along with PAPI, Runway End Identifier Lights and an AWOS. A new, two-bay heated Snow Removal Equipment building will be constructed. Property acquisition will occur to accommodate the improvements.

Status

The DOT&PF Aviation Evaluation Board has evaluated this project, but it is not recommended for funding in the next few years.

Planning Estimate

$21.9 million
(Source: DOT&PF Airport Improvement Program Spending Plan)

Crooked Creek Airport

F Emmonak Dock Expansion/Port Development

Scope

The Port of Emmonak is used for trans-shipment of heavy and bulk items to other Y-K Delta coastal and Yukon river communities. The AVCP and Calista Corporation are supporting the City of Emmonak and Yukon Delta Fisheries Development Association (YDFDA) in their efforts to see the Lower Yukon Region Port and Dock constructed in Emmonak. This project will expand the dock and develop a deep-water port. The banks of the Yukon River currently serve as the dock, and need constant reinforcement.

Status

The project is identified in the City of Emmonak's transportation plan. The design is complete, and the City of Emmonak is seeking construction funding to complete the project.

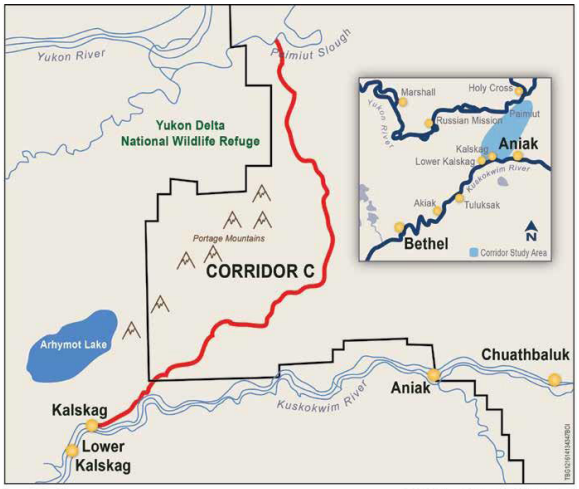
Planning Estimate

$13 million (Source: City of Emmonak)

G Kalskag Yukon-Kuskokwim Freight and Energy Corridor

Scope

The Yukon-Kuskokwim Freight and Energy Corridor project seeks to develop a 44-mile gravel haul road between the Yukon and Kuskokwim Rivers systems to enhance connectivity among communities in the region. The proposed corridor will allow for travel, trade (fuel and freight), and access to public facilities and other modes of transportation within the Y-K Delta.



YK Freight Corridor Project Study Area

Status

The project is identified in the BLM Resource Management Plan and is a high priority for Y-K Delta residents, the community of Kalskag, and AVCP. The State of Alaska has appropriated $450,000 to the AVCP to advance the project toward development, including an engineering, economic, and environmental evaluation of the road corridor and regions it will serve. In 2012, the State of Alaska appropriated an additional $3 million for corridor planning and development. The project is still currently in the planning phase.

Planning Estimate

$150 million (Source: CH2M Corridor Plan)

H Kongiganak Deep Sea Port and Access Road

Scope

This project will provide a new port to allow for safe and efficient fuel and freight delivery to Kongiganak and surrounding villages. It will develop a new barge site on the river, as the existing barge site is becoming too shallow due to silting. The project could potentially provide a safe harbor for hunters and travelers.

Kongiganak

Status

The project is identified in the AVCP's FY13 Community Economic Development Plan. AVCP and the Kongiganak Tribe have secured $500,000 to commence design of this project.

Planning Estimate

$23 million (Source: AVCP)

I Kwigillingok Airport Reconstruction

Scope

This project will reconstruct and expand the existing 1,835' runway to 3,300' by 60' runway plus taxiway, construct a new apron, install an airport lighting system and navigation aids, and construct two single-bay snow removal equipment buildings. The project will also install erosion protection for the runway embankment along the tidal slough and may include some stream realignment.

Status

Project is currently programed in the AIP and is a top priority for DOT&PF because Kwigillingok's short runway is in very poor condition and because the airport is a mini-hub in the region, with flights to other airports with much longer runways.

Planning Estimate

$36 million (Source: DOT&PF Airport Improvement Program Spending Plan)

Kwigillingok Airport

J McGrath Airport Repaving & Erosion Control

Scope

This project will rehabilitate and repave the runway, taxiways, and apron pavement; correct/mitigate the erosion problems at the south end of Runway 16/34; and expand or replace the existing snow removal equipment building.

DOT&PF staff and McGrath leaders viewing erosion problems at McGrath airport

Status

Project was identified during a site visit to McGrath. Resurfacing and erosion control is currently being designed, and construction is anticipated in 2019.

Planning Estimate

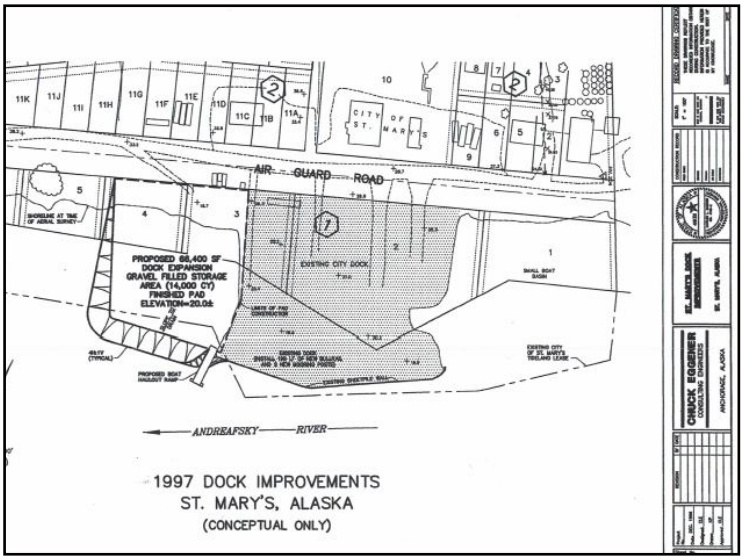
$20.5 million (Source: DOT&PF)

McGrath Airport

K Saint Mary's Dock Improvements

Scope

This project will provide dock improvements to allow better access to barges that deliver cargo and fuel to Yukon river villages. It will increase the size of the dock by approximately 66,000 square feet, creating additional cargo and equipment storage space, construct additional mooring posts for more convenient vessel moorage, provide a haul-out ramp for vessels requiring on-shore hull and power train repairs, allow multiple cargo vessels to tie-up to the port and transfer/consolidate loads, allow simultaneous gravel loading or fish processing during periods of high cargo vessel activity, and increase the revenue generation and self-sufficiency of the port.



St. Mary's Dock Concept Design

Status

This project is new, and funding has not been assigned.

Planning Estimate

$4-5 million (Source: City of St. Mary's)

L Saint Mary's Airport Improvements

Scope

This project will rehabilitate all operating surfaces and replace airport lighting. Additionally, it will address runway safety area deficiencies, replace the 5,000-gallon fuel tank, clear vegetation, and apply dust palliative.

St. Mary's Airport

Status

Programming of this project has been deferred pending the outcome of a study requested by FAA to confirm the amount of runway length needed, and how to address RSA deficiencies. The improvement project is programmed in 2020 for construction.

Planning Estimate

The project estimate is pending completion of a planning study that will confirm the project scope. The project is likely to be between $15 and $25 million. (Source: DOT&PF Airport Improvement Program Spending Plan)

All Coastal Communities

Winter Trail Marking and Emergency Shelters

Scope

Winter trail markers are needed to improve safety for inter-community travel along the commonly used winter routes. The trail markers will not only serve as a visual aid for path finding, but they will also provide GPS coordinates for travelers to determine their exact location. Emergency safety shelters placed along the routes would provide refuge during winter storms for the travelers using these trails.

Winter Trail Marking

Status

DOT&PF and AVCP have commenced a program of funding permanent markers in the Y-K Delta. AVCP is working on a winter trail marking project with 15 consortium tribes, and design was completed in May 2018/2019. The plan includes marking approximately 3,000 miles of routes between consortium villages, including safety shelters along the routes. Environmental impacts are being evaluated.

Planning Estimate

$4.5 million (Source: AVCP)

Priority Action Communities

Erosion Assessment for Transportation Facilities

Scope

Existing transportation facilities in communities suffering from erosion are at risk. These facilities need to be a priority for transportation funding agencies. Napakiak and Newtok are the two communities experiencing the worst impacts from erosion. Other priorities identified by the USACE are Akiak, Alakanuk, Chefornak, Chevak, Emmonak, Kwigillingok, Lime Village, McGrath, and Nunapitchuk. Further investigation into the status of these needs is recommended.

Newtok, Alaska Barge Landing

Status

Projects should be discussed with the Denali Commission and USACE. Both agencies may have the ability to provide support to these communities.

Planning Estimate

$500,000 (planning work only) (Source: DOWL)

All Y-K Delta Communities

Dust Control

Scope

The University of Alaska Fairbanks (UAF) Research Center has highlighted that asthma and lung issues in the YK-Delta are directly related to dust and other airborne particles. Some of the villages are using water trucks to control dust. A dust control application for communities in the Y-K Delta will help improve residents' health.

Status

The ADEC continues to work with the DOT&PF, the Environmental Protection Agency, the Alaska Native Tribal Health Consortium, the UAF, the BIA, and others to develop practical solutions for controlling dust in rural Alaska and simplify the coordination needed to implement solutions.

Planning Estimate

$50,000 to $100,000 per village
(Source: UAF/DOT&PF)

Dust at Community Airport

6.0 AVAILABLE FUNDING SOURCES

The key to implementing the Plan is to start securing funding for projects. Existing funding resources are discussed in the following section. It is vital to leverage TTP funding with other resources, or use it as a match to secure other funding. The next step is to meet with the funding agencies listed below to discuss ways to secure funding.

Funding for rural transportation projects is scarce. MAP-21 and the FAST Act require states to focus their funding on the NHS. Because all Y-K Delta communities are located off the NHS, they are not eligible for a majority of the surface transportation funding. Aviation is a primary mode of transportation to, from, and around the Y-K Delta, and, fortunately, federal funding for aviation projects has, for the most part, not decreased.

One of the most significant challenges for the State of Alaska is maintaining State services in light of reduced oil revenue and changes to federal transportation funding. The development of partnerships between transportation entities (city, tribal, state, and federal governments) will be increasingly important to leverage funding and meet the transportation needs of the area.

6.1 Funding

FORMULA FUNDING

This section discusses the existing formula funds that are allocated to the State of Alaska and BIA/Tribal Governments for transportation projects. The primary sources of these formula funds are FHWA and BIA. FAA offers formula-based funding and competitive grants.

FHWA Program Funds

As FHWA's partner agency for the State of Alaska, DOT&PF is responsible for the planning and programming of funding under the purview of FHWA. Several types of funding DOT&PF administers allow tribal governments, municipal governments, and other similar entities to nominate projects for inclusion in the Statewide Transportation Improvement Program (STIP), or compete for grant-like funding to complete projects. DOT&PF also administers a state HSIP. The HSIP is a core federal-aid program with the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads. Table 11 breaks out the amount of funding allocated to all states and to the State of Alaska. The average yearly apportionment to Alaska for FY16-FY20 is $530 million. The totals over the five-year period are: National Highway Performance Program $1.5 billion, Surface Transportation Block Grant $752 million, HSIP $159 million, Congestion Mitigation and Air Quality Program $143 million.

Bethel Ice Road - Kuskokwim River

Tribal Transportation Program

FHWA and BIA provide funding and oversight through the TTP Title 23 C.F.R. Some of the 256 tribes partner with other tribes, and work with a tribal transportation organization that administers the TTP on behalf of the tribal entities. In order for tribal governments to spend this money, they must have their project identified in a long range transportation plan and have it added to their inventory and transportation improvement program. FHWA and BIA provide the final review and approval for tribal projects.

Federal Transit Authority (FTA) Formula Grants for Rural Areas Section 5311 Funding

FTA's Bus and Bus Facilities program received an increase in funding of $268 million over fiscal year 2015 levels, for a total of $696 million nationwide for fiscal year 2016. This program helps transit agencies fund new buses and replace aging fleets and facilities, and adds a new eligibility to deploy low- or no-emission vehicles.

FTA has a program that provides formula grants for rural areas, Section 5311 funding. This program provides capital, planning, and operating assistance to states to support public transportation in rural areas with populations of less than 50,000. The program also provides funding for state and national training and technical assistance through the Rural Transportation Assistance Program. State agencies, local public bodies and agencies, private-nonprofit and private for-profit (inter-city only) organizations, and operators of public transportation services are eligible to apply directly to FTA.

COMPETITIVE GRANTS

In addition to formula funding, there is a range of funding sources that can be used if the projects meet the core purpose of the funding. These are outlined below.

Transportation Alternatives Program

MAP-21 authorized the Transportation Alternatives Program (TAP) to provide funding for programs and projects defined as transportation alternatives or non-motorized transportation. The TAP replaced the funding from pre-MAP-21 programs including the Transportation Enhancement Activities, Recreational Trails Program, and Safe Routes to School Program.

Table 11. 2016 – 2020 FHWA Formula Funding Allocation for Transportation Projects and Programs.

Federal Funding Program	Purpose	National Funding Amounts	State of Alaska Funding Amounts
National Highway Performance Program (NHPP)	Supports the condition and performance of the NHS for the construction of new facilities on the NHS.	~$23 billion	~$1.5 billion
State Highway Safety Improvement Program (HSIP)	The goal of the program is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads.	~$2.5 billion	~ $159 million
Surface Transportation Block Grant Program	Provides flexible funding to address state and local transportation needs.	~$12 billion	~$752 million
Congestion Mitigation & Air Quality (CMAQ) Program	Provides funding to reduce congestion and improve air quality for areas that do not meet the National Ambient Air Quality Standards. Eligible to MPOs with a population greater than 250,000.	~ $2.5billion	~$143 million

National Highway Freight Program

The FAST Act establishes a new National Highway Freight Program to improve the efficient movement of freight on the National Highway Freight Network (NHFN) and to invest in infrastructure and operational improvements that strengthen economic competitiveness, reduce congestion, and reduce the cost of freight transportation.

Tribal Transportation Program Safety Funds (TTPSF)

The FAST Act provides two percent of the available TTP funds as a set aside to address transportation safety issues in Native America. Funds are available to federally recognized Indian tribes through a competitive, discretionary program. Awarded annually, projects are chosen based on which outcomes will address the prevention and reduction of death or serious injuries in transportation-related incidents, such as motor vehicle crashes. Tribal entities need to have a Tribal Transportation Safety Plan in order to be eligible for these funds. FHWA supports and funds the TTPSF program as well as education programs and capital infrastructure to help improve safety in rural areas.

U.S. Department of Transportation - Transportation Investment Generating Economic Recovery (TIGER)

The USDOT has made nearly $500 million (per year) available for transportation projects since 2010 through the TIGER grant program. Applications under this program can be successful if they demonstrate construction ready projects (National Environmental Policy Act (NEPA) and design work is complete), they leverage funds from other sources, and they create jobs and enhance the economic well-being within a community. The TIGER grant program supports innovative projects, including multi-modal and multi-jurisdictional projects; bicycle lanes, parking, transit, bus shelters and benches, crosswalks; sidewalk improvements such as lighting, curb cuts, and Americans with Disabilities Act (ADA) ramps; and paved shoulders for pedestrian and bicyclist use. The TIGER grant program is focused on capital projects or planning efforts that generate economic development and improve access to reliable, safe, and affordable transportation for communities, both urban and rural. TIGER grant program funding opportunities are highly competitive and are typically announced in late spring.

U.S. Economic Development Administration

The Economic Development Administration (EDA) solicits applications from applicants in rural and urban areas to provide investments that support construction, non-construction, technical assistance, and revolving loan fund projects under the EDA's Public Works and other programs. Grants and cooperative agreements made under these programs are designed to leverage existing regional assets. The EDA provides strategic investments on a competitive merit-basis to support economic development, foster job creation, and attract private investment in economically distressed areas of the United States. This opportunity is open year round. A grant applicant can meet with the local EDA Program Manager to determine eligibility.

Newtok, AK Barge Landing

Western Federal Lands Highway Division

Western Federal Lands Highway Division (WFLHD) of the Office of Federal Lands Highway (FLH) jointly administers the TTP with the BIA. Each federally recognized tribe is eligible for this funding and is allocated an annual dollar amount based on a formula that takes into account tribal population, road mileage, and average tribal shares. These funds are often referred to as "Chapter 2 funds" and can be used by tribes as local match funds on projects funded with Chapter 1 funding.

WFLHD also administers Alaska's Federal Lands Access (FLAP) Program, a program for surface transportation facilities providing access to, or within, federally-owned lands. This program is designed to encourage cooperation and coordination among federal land management agencies, state agencies, and local and tribal governments. Funding is administered through DOT&PF.

Denali Commission

In August 2015, former president of the United States, Barack Obama visited Alaska and announced the Denali Commission would be the lead agency for environmentally threatened communities. This new "Environmentally Threatened Communities Program" will focus on 26 Alaska communities, providing funding to communities that are in danger of losing infrastructure due to climate change. The program was described in the Alaska Dispatch News on August 29, 2015.

As the State of Alaska and other stakeholders plan for improvements to the transportation system in the Y-K Delta, the effects of erosion on transportation needs to be considered. Communities located along rivers and the coastline receive their fuel and freight via barge. Many barge landings are on eroding rivers and coastlines. Erosion caused by storms, permafrost, and human activity can potentially threaten boardwalks, trails, barge landings, airports, boat harbors, roads, and entire communities.

According to the March 2009 Alaska Baseline Erosion Assessment, almost every community located in the Y-K Delta is experiencing erosion. USACE used a scoring matrix to determine the top 26 communities needing help with erosion mitigation Priority Action Communities (PACs), 11 of which are located in the Y-K Delta: Akiak, Alakanuk, Chefornak, Chevak, Emmonak, Kwigillingok, Lime Village, McGrath, Napakiak, Newtok, and Nunapitchuk. Newtok is losing up to 70' of shoreline per year. Newtok is in the process of relocating and should be prioritized for developing transportation facilities and other infrastructure that support the relocation.

The Denali Commission also has a transportation program that receives small amounts of program funding for tribal transportation projects each year. They can provide technical assistance to communities upon request to help with government coordination among state and federal agencies. Denali Commission funds can be used as non-federal match.

U.S. Army Corps of Engineers

USACE has several cost-shared programs that Priority Action Communities can use for assistance. The USACE's authority to construct solutions for erosion control is under Section 117 of the 2005 Energy and Water Development Appropriations Act (Alaska Baseline Erosion Assessment). In addition to the Section 117 funding, USACE and the Denali Commission have an agreement to work on special waterfront and port projects across the State of Alaska. Projects are funded based on a prioritization list that was developed in the 2012 USACE Barge Landing Assessment.

7 A transportation reconstruction project that consists of basic rehabilitation of an existing transportation facility. A 1R project only improves an existing transportation facility. It does not consist of new construction.

Federal Aviation Administration

FAA administers the AIP which is a combination of formula and competitive grant opportunity that provides grants to public agencies and, in some rare cases, to private airport owners and entities for the planning and development of public-use airports that are included in the NPIAS. Eligible projects include those improvements related to enhancing airport safety, capacity, security, and environmental concerns. In Alaska, FAA's partner agency is the DOT&PF. The Plan will be useful in supporting airport projects DOT&PF evaluates under the Aviation Project Evaluation Board (APEB) process.

Y-K Delta airports have been awarded a significant amount of funding for capital improvements over the last 11 years. Since 2003 the FAA has spent over $434 million on airport planning and development on Y-K Delta airports. This represents an average of $39.5 million per year, of which approximately $524,000 per year was spent on planning and $39 million per year was spent on airport development. These federal expenditures have generally covered 93.75 percent of project costs, with 6.25 percent covered by State general funds.

Table 10. FAA Airport Funding of Y-K Delta Airports FFY 2003-2014.

	Airport Development	Planning	Total
Total	$429 million	$5.7 million	$435 million
Annual Average	$39 million	$524,000	$39.5 million

6.1.1 State Sources of Capital Funding

The Alaska Legislature

Each year the Alaska Legislature develops capital and operating budgets for the state. In years when the State's fiscal situation allows, transportation projects using State general funds are included as line items in the capital budget. Additionally, the legislature periodically drafts bond bills that are then voted on by state residents during general elections. Projects identified in an approved bond bill are funded through the sale of general obligation bonds, which are repaid at a later date using specified state revenues.

State of Alaska Department of Commerce, Community, and Economic Development (DCCED)

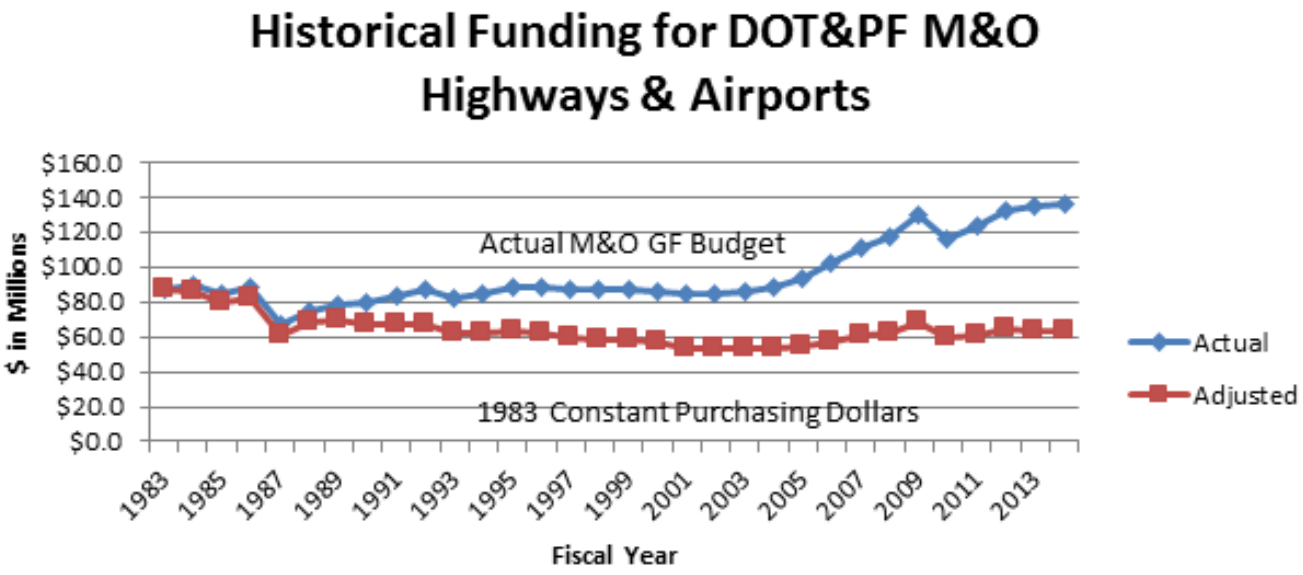
DCCED administers several programs for developing and maintaining transportation infrastructure vital to a community's success. Most notably, it administers the Community Development Block Grant (CDBG) program, funded by the U.S. Department of Housing and Urban Development (HUD). Once each year, municipal governments are able to apply for CDBG funding for an array of project types, which include transportation improvements. In addition to capital projects, HUD also allows CDBG funding to be used for planning efforts.

6.1.2 Operating and Maintenance Funding

Operating and maintenance funding will continue to be a critical concern. While the capital funding received by Alaska from the federal government has resulted in substantial improvements to Alaska's highway, marine, and airport systems, maintenance funding has not kept pace with system growth. Federal transportation programs typically do not fund facility maintenance; individual states and local government owners of transportation infrastructure are expected to maintain the facilities.

Figure 24 shows State funding for highway and aviation facility maintenance received by DOT&PF in 2015 was almost equivalent to the funding received in 1987, adjusted for constant dollars. This does not account for the additional highway lane miles and airport surfaces added to the state transportation system since 1987, which further adds to the underfunded maintenance. These improvements generate additional operating costs for electrical power, snow removal, grading, and pavement maintenance. In addition, DOT&PF's maintenance budget must now also support many federal mandates that did not exist in 1987, like Transportation Safety Administration security directives, new Federal Aviation Regulation Part 139 airport certification requirements, and U.S. EPA storm water and spill prevention requirements.

Figure 24. Historical Funding for DOT&PF M&O Highways and Airports.



Actual $ from 1983 - 2009 from DOT&PF Statewide Aviation; actual $ 2010 - 2014 from AK OMB. Anchorage CPI from AK Department of Labor & Workforce Development.

6.2 Measuring Success

The passage of the FAST Act and MAP-21 fundamentally changed the way that states plan and program transportation projects. States are now transitioning to performance-based programming, which is being driven by the following two factors:

- National Performance Goals
- National Performance Measures

Subsequent sections of MAP-21 established guidelines for the development of national performance measures. Currently, the USDOT is working with state transportation officials to develop performance measures in the following areas (23 USC §150(c)):

- Safety
- Infrastructure condition
- Congestion reduction
- System Performance
- Freight movement and economic vitality
- Environmental sustainability
- Accelerated project delivery

The performance measures for each of these areas will be used to monitor states' progress in meeting the national performance goals.

Because the primary focuses of MAP-21 (and now the FAST Act) performance management framework is the interstate highway system and the NHS, much of this information is not immediately applicable to transportation projects in rural Alaska. Most tribal entities and local governments in small villages are not measuring successes, instead they are focused on getting basic transportation projects built for the first time.

The focus on the Interstate and NHS systems means that there is less FHWA funding for rural communities. Tribal entities receiving funding from FHWA through the TTP should consider incorporating the FAST Act performance measures and targets so projects are aligned with the national goals.

As discussed in Section 4.4.9, the AASP has established aviation service and design standards performance measures that will continue to be measured to monitor progress in meeting state DOT&PF aviation goals. Some ports and harbors are being measured by the income they generate. The main port in the Y-K Delta, Bethel, measures their success on the amount of funding they receive from moorage, offloading, staging, and storage fees.

CONTACT INFORMATION

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YKTP Yukon Kuskokwim Delta TRANSPORTATION PLAN

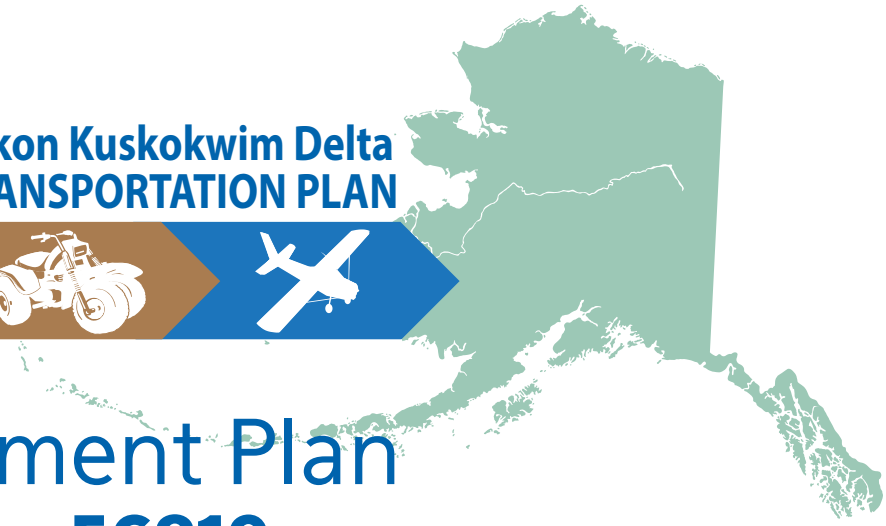
Appendices

March 2018

Appendix A

Public Involvement

YKTP Yukon Kuskokwim Delta TRANSPORTATION PLAN



Public Involvement Plan

AKSAS Project No. 56819

Federal Project No. 001486

TRANSPORTATION & PUBLIC FACILITIES · STATE OF ALASKA ·

December 16, 2014

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PUBLIC INVOLVEMENT PLAN
TABLE OF CONTENTS

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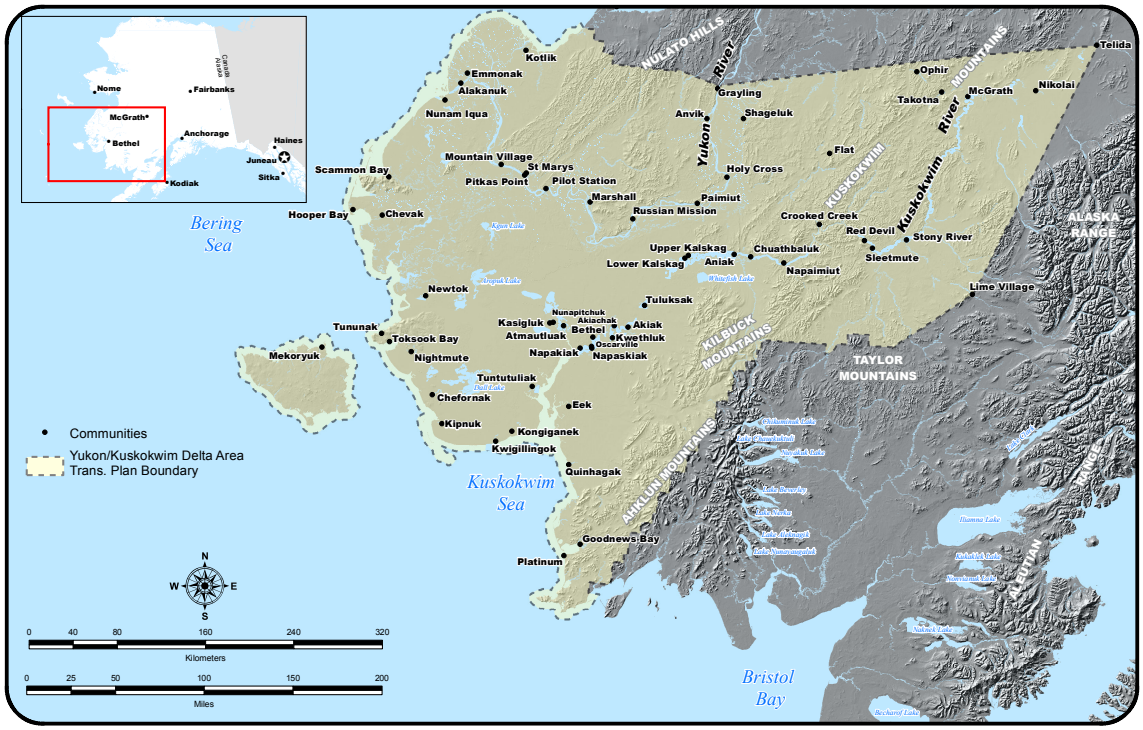
PUBLIC INVOLVEMENT PLAN

1.0 GENERAL INFORMATION

This document outlines the Alaska Department of Transportation and Public Facilities (DOT&PF) Public Involvement Plan (PIP) for updating the Yukon Kuskokwim Delta Transportation Plan (YKTP). The YKTP will be looking at short term (10 year) and long term (20 year) goals for the Y-K Delta Region's transportation system. The plan is one of six regional transportation plans being incorporated into the Alaska Statewide Long Range Transportation Plan (LRTP). The YKTP will guide transportation improvement decisions in the region for the foreseeable future.

Figure 1: Yukon-Kuskokwim Delta Study Area



The previous YKTP was published in 2002. Since then, substantial policy changes effecting Federal Highway Administration (FHWA) and Bureau of Indian Affairs (BIA) transportation programs in Alaska have occurred.

The new highway bill titled MAP-21, Moving Ahead for Progress in the 21st Century Act, was signed into law by President Obama on July 6, 2012. In MAP-21, National

Performance Goals require states to focus FHWA funding on the National Highway System (NHS). Additionally, MAP-21 consolidated the number of federal programs by two-thirds, from about 90 programs to less than 30, to focus resources on key national goals; eliminated earmark programs such as the Denali Commission's Transportation Program, and the BIA IRR (Indian Roads Reservation (IRR)[1] High Priority Programs (HPP); and created a new funding formula that distributes tribal transportation dollars that favors tribes with populations greater than 10,000 members.

In regards to aviation, the Federal Aviation Administration (FAA) experienced budget cuts and shifted their investment focus to priorities such as rural access and pavement maintenance programs.

These policy changes affect the Y-K Delta area for the following reasons:

- Most of the Y-K Delta tribes include populations with less than 10,000 members.
- The Y-K Delta is not a part of the NHS.
- Aviation is the main mode of transportation in the Y-K Delta.

As a result of MAP-21, the focus of the YKTP will be to develop future goals, strategies, and projects for the region, addressing local, regional, statewide and national priorities. Although this is a regional plan, local priorities will be reviewed looking for project priorities that provide support regional economic development, connectivity and multi modal access.

DOT&PF will seek input from the public during key points of the planning process, including:

- Transportation planning process start up
- Goals and objectives
- Surface, marine and aviation transportation issues and needs
- Project evaluation criteria
- Draft transportation plan

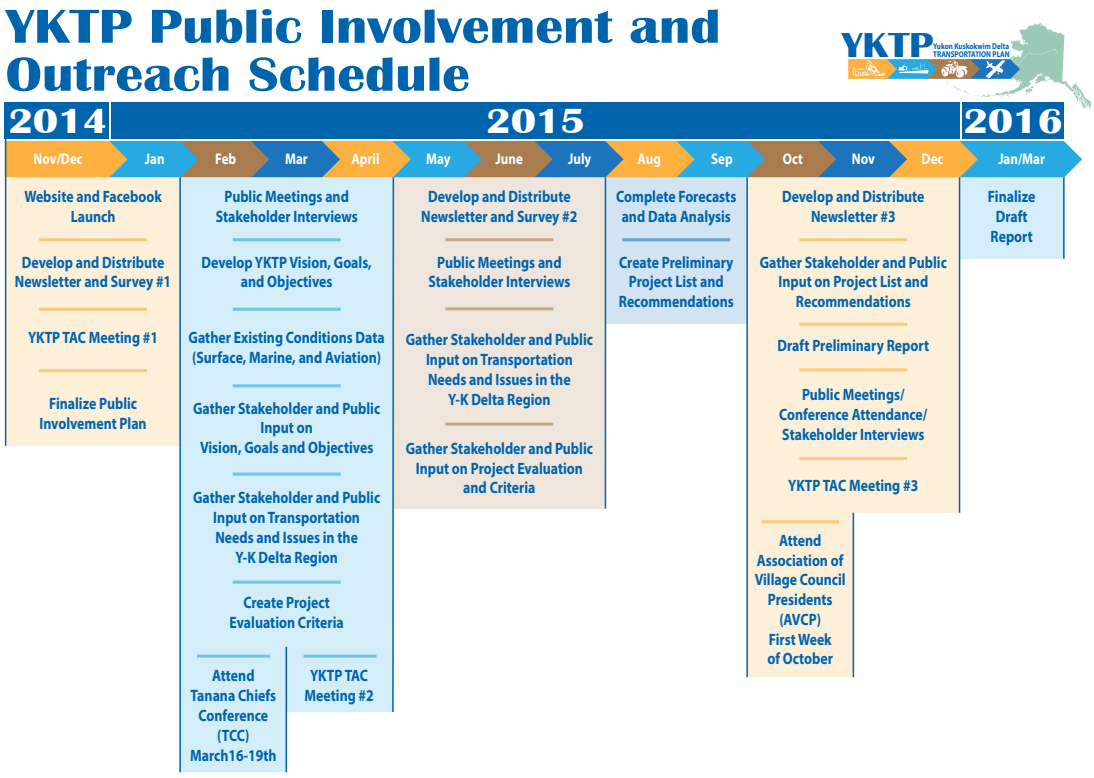
1 MAP-21 established the Tribal Transportation Program (TTP) that replaces the IRR program. TTP contains similar provisions and eligibility requirements as the IRR program.

2.0 PUBLIC INVOLVEMENT METHODS

The region is a vast area with a wide variety of diverse stakeholders, many of whom speak Yup'ik as a first language. Key informational materials used for public involvement methods will be communicated in English and Yup'ik. The planning team will coordinate with Tanana Chiefs Conference (TCC), Kuskokwim Native Association (KNA), The Kuskokwim Corporation (TKC), Association of Village Council Presidents (AVCP) and other tribal organizations or communities to arrange translation.

The graphic below demonstrates a draft schedule of public involvement methods and elements of the planning work to be completed.

Figure 2: YKTP Public Involvement Outreach Schedule



Public involvement methods for the YKTP include:

YKTP Transportation Advisory Committee (TAC)

The planning team will work with the YKTP TAC to review comments on planning documents, and to help develop policy recommendations throughout the planning process.

The YKTP TAC will advise the planning team on:

- The PIP and planning process
- Coordinating with other transportation planning efforts in the region
- Surface, marine and aviation transportation issues and needs
- Project evaluation criteria
- Project/program recommendations
- Draft transportation plan

The YKTP TAC will have five members selected by DOT&PF. YKTP TAC members will include representatives from the following:

- AVCP
- TCC
- Alaska Tribal Technical Assistance Program (AKTTAP)
- The City of Bethel
- Coastal or Yukon River community

The YKTP TAC will meet three times throughout the project at major milestones:

Anchorage, December 2014 – Discuss the project, the planning process, other transportation planning efforts in the region, Y-K Delta regional transportation issues and priorities, and to gather feedback on planning goals and objectives, upcoming community meetings and the public involvement plan for the YKTP.

Bethel, April 2015 – Review existing condition data, criteria based on public involvement feedback and stakeholder interviews.

Bethel, October 2015 – Review prioritized list of projects based on the plan criteria, and discuss the program recommendations.

DOT&PF will pay airfare, hotel and DOT&PF per diem rate for all TAC members traveling to the 3 meetings. DOT&PF staff will attend all YKTP TAC meetings.

Presentations at Existing Stakeholder Meetings and Conferences

The planning team will attend meetings and conferences including one TCC and two AVCP Conventions. The planning team will also will host conference booths to share information and/or hold small planning sessions at the conference locations. Participating in annual events and regional conference is the best method to visit with Y-K Delta residents and stakeholders; the planning team will seek to have the YKTP TAC members at conferences and meetings. The project team will work with the YKTP TAC and conference coordinators to secure attendance and outline the Public Involvement (PI) strategy while at conferences.

Stakeholder Meetings/Interview

Up to six stakeholder meetings/interviews will be held. The planning team will work to identify conferences or other meetings to present project information and solicit feedback. If travel is required that is outside DOWL HKM's budget, DOT&PF staff will perform the interviews or attend and present at meetings.

A list of stakeholders includes, but is not limited to, the following:

- Airlines
- Alaska Energy Authority (AEA)
- Alaska Tribal Technical Assistance Program (AKTTAP)
- Association of Village Council Presidents (AVCP)
- Barge Operators
- Calista
- Doyon
- Tanana Chiefs Conference (TCC)
- The Kuskokwim Corporation (TKC) & Kuskokwim Native Association (KNA)
- United States Postal Service (USPS)
- Utilities
- Yukon Kuskokwim Health Corporation (YKHC)

Surveys

The planning team will develop two surveys (paper and electronic) to gather public input. The survey will be used at conferences/work sessions/meetings and available online via the project website and DOT&PF Facebook page. Surveys will also be distributed to local libraries, AVCP, TCC, & Lower Yukon River Communities meeting rooms, tribal offices, post offices and airports.

Project Website

The planning team will develop and maintain a project website that describes the project, schedule, and how Y-K Delta residents can participate in the planning process. The website will also include project documents, comment forms and surveys, meeting minutes and instructions describing how to reach the project team. The website will be current and updated consistently by DOWL HKM.

Facebook

The planning team will submit content to the DOT&PF Statewide Facebook page, and will run Facebook advertisements during the early stages of the planning process to direct the public to the project website.

Email/Mailing Communications

The planning team will develop three e-newsletters during the planning process. The first newsletter, during the early stages of the plan, will notify stakeholders about the plan and solicit feedback on their vision for the transportation system in the region, and goals and objectives of the YKTP. The second newsletter will notify stakeholders of upcoming public meetings and the progress of the project. The third newsletter will notify stakeholders of the draft report and the public meetings to present the draft report.

The stakeholder mailing list will be built from existing contact lists from regional groups/organizations,

The planning team will also collect email addresses and contact information while attending meetings and conferences, adding them to the contact list. This collective list will be used to send out e-newsletters, newsletters, public meeting announcements, and other project related information.

Public Meetings

Public meetings will be held in hub communities during early stages of the planning process. The planning team will work with the YKTP TAC and DOT&PF staff to determine meeting logistics. The planning team will seek to have an YKTP TAC member, or a tribal representative attend the public meetings to help the planning team with translation and developing relationships within the community.

DOWL HKM will prepare all meeting presentations and materials for the public meetings. DOWL HKM will participate in two public meetings in Bethel.

DOT&PF may conduct other public involvement meetings or stakeholder meetings in the following communities during March/April as time and budget allows:

- Aniak
- Chevak/ Hooper Bay
- Emmonak
- McGrath
- St. Mary's

DOT&PF will report back to the project team on findings from the meetings.

Comment/Response Log

The planning team will develop and maintain a public comment and response log. The comments and responses received will be summarized and shared with DOT&PF, and will be used as guidance throughout the project. We will post the comment and response log on line once the public involvement process is completed.

Media Outreach

The planning team will seek opportunities to update Bethel radio, Tundra Drums and Delta Discovery on plan development and will purchase advertisement space to announce public meetings.

3.0 PROJECT COMMUNICATION

DOWL HKM will be responsible for developing, implementing, and managing the PIP, and communications relating to the plan. Comments regarding the YKTP will be

collected by DOWL HKM, summarized, reported to the DOT&PF, responded to, and incorporated into the planning effort. Table 1 includes the planning team's role and contact information.

Table 1: Project Team Contacts

Name	Agency	Role	Phone	Email
Don Fancher	DOT&PF	Central Project Manager	907-269-0516	donald.fancher@alaska.gov
Alexa Greene	DOT&PF	Northern Region	907-451-2388	alexa.greene@alaska.gov
Tom Middendorf	DOWL HKM	Project Manager	907-562-2000	tmiddendorf@dowlhkm.com
Adison Smith	DOWL HKM	Assistant Project Manager	907-562-2000	adsmith@dowlhkm.com
Lesley Lepley	DOWL HKM	Public Involvement Support	907-562-2000	llepley@dowlhkm.com

4.0 PLAN EVALUATION

After each public involvement event, the planning team will evaluate the public's response and input, and adjust public outreach efforts as needed accordingly to ensure public involvement methods are effective. The project team will solicit feedback from the YKTP TAC and DOT&PF staff regarding the public outreach efforts.

CITY OF BETHEL
Office of the Port Director
P.O. Box 1388
Bethel, Alaska 99559
Ph. (907) 543-2310
Fax (907) 543-2311

Memorandum

To: Adison , Smith

From: Peter Williams, Port Director

Date: April 27, 2015

Re: YKTP

This report lists the ways that the facilities belonging to the Port of Bethel supports the Airport and how the Airport contributes the Ports ability to deliver services.. The report shows how indirectly and directly the services we provide to the public depend on each other.

PORT FACILITIES

1. **Petroleum Dock** – Approximately 250,000 gallons of Avgas and 1,500,000 gals of Jet-A-50 is off loaded and transferred via pipeline to the adjacent tank farm. Some years as much as 2.5M gals. Has been transferred to the Airport. The fuel is then transferred to the Airport by truck.

2. **Beach 2**- Used by DOT to launch floatplanes that are transported from the Airport. These planes use Airport personnel for safely transporting planes from the Airport using the Highway

3. **Roads**- Standard Oil Road and Chief Eddie Hoffman Highway (Highway) is used for transporting the fuel to the Airport and the planes to from the Airport.

4. **Floatplane Area** (beach next to the Lomack Building, between Main St & Kilbuck St.) – This area is used by floatplanes to transport passengers to and from the airport that use commercial hunting and fishing camps. There are two businesses currently using this area commercially.

   Floatplanes use this area because it is the only access point where a floatplane that is loaded has the room ,reach, too taxi and get into the air.

   This area is used by Air transportation companies at the Airport to deliver goods and materials from the Airport too small boats, 26ft-32ft skiffs, that then transport the goods and materials to the boat owner's place of residence up and down the Kuskokwim River. The equipment used by the Air transportation companies deliver goods by box trucks and forklifts too load the boats.

5. **Roads**- The Highway - Main Street –Access across the parking lot at the Lomack Building is the route used for the Floatplane Area.

   ICE ROAD- The Floatplane Area is is used regularly during the winter months by Air transportation companies to transport freight to the surrounding villages. Passengers who travel from the villages to the airport and then return home use this area to access the ice road.

6. **Cargo Dock-** The city dock provides a dock to unload and ship goods, materials and heavy equipment that arrive in Bethel via barge. Some of

this cargo is used by the DOT to maintain the airport and for expansion of Airport facilities. Airports in the Kuskokwim region are supported by the use of the City Dock. Air transportation companies utilize the dock for receiving equipment, material and goods to maintain and operate.

7. Roads- State Highway is used between the Airport and the Port. 2nd Ave on the Dock is a State Rd.

8. **Seawall-** There is 2600ft of usable moorage for vessels along the seawall. Moorage provides safe-harbor and the means for vessels to receive fuel and water, personnel, materials and goods. The seawall has become essential to the operations of the port services.

9. **Roads-** The Port maintains 2600ft roads immediately adjacent to the seawall. East Ave, Front Street (sometimes called 1st Ave.) , Main Street are roads that service the seawall.

10. **Small Boat Harbor**-Provides safe harbor for small boats whose passengers use the Airport to fly in and out of town and to receive materials and goods from to and from the airport.

AIRPORT

Support the Airport provides for the Port Facilities

1. Vessel operators bring personnel to Bethel too repair, maintain and operate their vessels. Operators/owners are Crowley Maritime, Newport Petroleum, Vitus Marine, Delta Western, AML, Alaska Logistics and construction companies with their own vessels such as Bering Pacific, Brice Construction,Bethel Services Inc. too name a few companies.

Transit vessels also use the airport to fly crews into Bethel too access their vessels.

Types of personnel include radio and radar technicians, mechanics and USCG licensed crews for the vessels using the Port. AML and Alaska Logistics construction companies fly personnel to Bethel to unload barges on as need basis.

1. Parts and supplies, including groceries, is a service provided by the airport. Equipment, materials and goods are often needed overnight to continue operations.

2. Government agencies such as the USCG, USACE, DEC,ANG all have personnel and equipment that interact with the port.

3. If there was a major oil spill the Airport would be involved for supplies and personnel and equipment.

4. Air transportation companies that forward freight from Anchorage deliver freight too the cargo dock using box trucks and forklifts to various access areas the Port Facilities operates and maintains. The freight is delivered to boats destined too villages up and down the Kuskokwim River.

Yukon Kuskokwim Delta Transportation Plan Update
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Project Description

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

Lower Fuel costs

What are the most important future regional transportation improvements for the YK-Delta?

Real barge landings/docks

To receive project information, please provide your name and an e-mail or postal address:

Name: A. Towarak
Address:
E-mail: wsdept@gci.net
Phone:

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL HKM • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowlhkm.com*

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

Public transport between close villages to reduce cost of travel.

What are the most important future regional transportation improvements for the YK-Delta?

Road interconnects

To receive project information, please provide your name and an e-mail or postal address:

Name: _____
Address: _____
E-mail: _____
Phone: _____

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DOWL HKM • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowlhkm.com*

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

Airports in all villages - Stony River - 2500
Hanger - Storage unit

What are the most improtant future regional transportation improvments for the YK-Delta?

Barge Landings
Cameras installed in planes.

To receive project information, please provide your name and an e-mail or postal address:

Name: Mary Willis
Address: Box 89 Stony River 99557
E-mail: Stony.River@yahoo.com
Phone: 907-537-3258

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL HKM • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowlhkm.com*

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

Need paved roads -
DUST ROADS - eliminate them.

What are the most improtant future regional transportation improvments for the YK-Delta?

Fix ALL RURAL AK ROADS
Divert back the EXCISE TAXES to the villages. -

To receive project information, please provide your name and an e-mail or postal address:

Name: GEORGE GUY
Address: PO Box 110 Kwethluk, AK 99621
E-mail:
Phone: 757-6613

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL HKM • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowlhkm.com*

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

Village connected via paved and gravel road system, robust ice road construction, marking, and maintenance. Airports, major as well as pioneer, ~~the~~ constructed, funded and maintained for the continued safety of all rural residents.

What are the most important future regional transportation improvements for the YK-Delta?

Access to funding streams that will allow us to maintain our investments, roads & airports, once they are constructed. Rural set-aside or prioritization based on a set percentage of federal and State transportation budgets.

To receive project information, please provide your name and an e-mail or postal address:

* Turn over to see where you missed our Village!

Name: Devron Hellings, President Native Village of Napaimute
Address: P.O. Box 1301 Bethel AK 99559
E-mail: napaimute@gci.net
Phone: 907-543-2887 or 545-2877 Mark Leary, Director Development & Operations

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL HKM • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowlhkm.com*

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

A PLAN THAT CONSIDERS NEAR, mid, and long term MULT. Modal solutions TO BETTER CONNECT THE Y-K Region TO THE REST of ALASKA.

What are the most improtant future regional transportation improvments for the YK-Delta?

TAKING THE OPPERTUNITY TO fund ALL SIZE PROJECTS OUT of SB-138 RELATING TO THE MOVEMENT of FRIGHT & Fuel in THE Region

Thanks!

To receive project information, please provide your name and an e-mail or postal address:

Name: KURT Wald CH2M Hill
Address: 949 E 36th Anchorage AK
E-mail: KWald@CH2M.com
Phone: 208.340.6624

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL HKM • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowlhkm.com*

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

use RSYZTT Trails for winter trail marking
manage the Village corp

What are the most important future regional transportation improvements for the YK-Delta?

To receive project information, please provide your name and an e-mail or postal address:

Name: Johnny Hawk
Address:
E-mail:
Phone:

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowl.com*

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

Cluster → Get with Tiffany
Get with Calista

What are the most important future regional transportation improvements for the YK-Delta?

To receive project information, please provide your name and an e-mail or postal address:

Name: _____
Address: _____
E-mail: _____
Phone: _____

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowl.com*

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We want to hear from you!
What should the YK-Delta transportation system look like in 20 years?

Cape Newenham
port →

What are the most important future regional transportation improvements for the YK-Delta?

To receive project information, please provide your name and an e-mail or postal address:

Name: ______

Address: ______

E-mail: ______

Phone: ______

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowl.com*

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

Improve trail markings. Lake to west of Kasigluk – lots of people get disoriented. Need lake markings. – Sometimes they fall through or get blown over. Trail markings are too spread out.

What are the most important future regional transportation improvements for the YK-Delta?

majority of Seven efforts are from Bethel to Lower Kuskokwim / Nightmute Area.

– From SAR prespective Need Better/more trail markings

To receive project information, please provide your name and an e-mail or postal address:

Name: Alvin Jimmie
Address:
E-mail: ajimmie@avcp.org
Phone:

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowl.com*

VPSO Coordinator for AVCP

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

Emphasis should be on roads and boardwalks that enable the community to get around by foot. This would help with money spent on gas, dust control, and make communities safer. Boardwalks need to be seen as a legitimate form of transportation and not recreation.

What are the most important future regional transportation improvements for the YK-Delta?

For Bethel: The boardwalk connecting the college to the hospital is crucial. Getting it up again will keep people off the side of the highway.

The boardwalk behind the old laundromat ~~[illegible]~~ by the schools needs to be redone. Scores of kids have to walk on/along the road and through the parking lot where the water trucks are filled. Close the "doughnut hole" AKA "Polk Road"

To receive project information, please provide your name and an e-mail or postal address:

Name: Chuck Herman
Address: Bethel, AK
E-mail: cherman@cityofbethel.net
Phone: (907) 545-5394

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • adsmith@dowl.com

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

Airports - need to Pay attention to Bird Nesting grounds.
- Quinhagak has lots of airport / Bird Collisions.
Put money to Airports. & Airport lighting.

What are the most important future regional transportation improvements for the YK-Delta?

Need Blue markers for open Water / orange - Roughtrail / Write for good trails / Red for Caution / Green Shelter
- Additional Trail Markings - "People get lost & Don't Pay attention, Makes it hard for Search & Rescue" - BIG Priority.

To receive project information, please provide your name and an e-mail or postal address:

Name: John [redacted] Wassille
Address: PO Box 41 Bethel, AK 99559
E-mail:
Phone:

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowl.com*

John - S & R - maintain & Check trails.

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

Crap

What are the most important future regional transportation improvements for the YK-Delta?

Highway to Anch

To receive project information, please provide your name and an e-mail or postal address:

Name: _____
Address: _____
E-mail: _____
Phone: _____

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowl.com*

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

Cross bridges between Tununak and Toksook

What are the most important future regional transportation improvements for the YK-Delta?

To receive project information, please provide your name and an e-mail or postal address:

Name: _____
Address: _____
E-mail: _____
Phone: _____

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowl.com*

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email Deanna re projects

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

Hwic needs to: Airport improvements
@ YK freight corridor
ADA compliment.

What are the most important future regional transportation improvements for the YK-Delta?

To receive project information, please provide your name and an e-mail or postal address:

Name: Deanna Lethum.
Address:
E-mail:
Phone:

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowl.com*

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

(1) road systems connecting nearby villages to ~~Bethel~~ - even gravel is good. (2) All local airlines give courtesy rides to town like Dillingham does!! Let's quit giving money to local cab companies (3) Put a price freeze on local airline fares! Costs more to travel regionally than it is to travel outside. (4) can't do anything about weather BUT put ~~safe~~ passenger safety on the front burner.

Airfares are high enough!!

What are the most important future regional transportation improvements for the YK-Delta?

ongoing

(1) Road improvements + ~~so~~ continued maintence on village roads TOO!!

(2) Feel very proud to see and ride ~~a local~~ pilots that are locally grown!!

To receive project information, please provide your name and an e-mail or postal address:

Name: SANDI NICORI

Address: B 45 KWETHLUK AK 99621

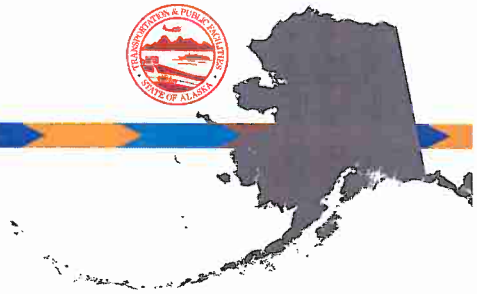
E-mail:

Phone:

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowl.com*

Questions	Bethel Airport (LJ Davis)	Grant Aviation	Northern Air Cargo	Yute Air	PenAir	Alaska Air Transit	Ravn Alaska
1. What are the makes and models of aircraft within your fleet? Total number?	Cessna 182 (1)	Piper Navajo (6) Cessna 208Caravan (10) Cessna 207 (6) GippsAero GA8 Airvan (3)	Boeing 737 200 (2) Boeing 737 300 (2)	Cessna 172 (2) Cessna 207 (13)	SAAB 340B (15) SAAB 340A (2)	Pilatus PC-12 (1) Cessna C-208B Caravan (2) Piper PA-31-350 Navajo Chieftain (2)	Cessna 207 (8) Cessna 208 (7) Cessna 406 (1) Piper PA-31 (1)
2. How are your aircraft configured in the summer? In the winter?	Wheels year round	Wheels year round	Wheels year round	Wheels year round	Wheels year round	Wheels year round	Wheels year round
3. Within the next five years do you expect to change your fleet or add new aircraft to your fleet? If so, which type? **CLICK ANSWER FOR DETAIL**	No	Yes	Yes	Yes	Yes	Yes	Yes
4. In general, what airports have the greatest surface or other maintenance needs? (In order of priority) **CLICK ANSWER FOR DETAIL**	Kwigillingok Kwethluk Chevak	Kwigillingok Tununak Newtok	St. Mary's Bethel	Kwigillingok Quinhagak Kasigluk Newtok	No answer	Crooked Creek Sleetmute	Kwigillingok Newtok Chevak
5. Where are the most important runway extension or safety area needs in the region? **CLICK ANSWER FOR DETAIL**	Kwigillingok Kwethluk Chevak	Kwigillingok Tununak Newtok	St. Mary's	Akiak Kwigillingok	No answer	Crooked Creek Lime Village	No answer
6. What airports are in the greatest need of a weather station? What is the weather station needed? **CLICK ANSWER FOR DETAIL**	None at this time	Kongiganak: AWOS, AWSS Kwigillingok: AWOS, AWSS Nightmute: AWOS, AWSS Newtok: AWOS, AWSS	None	Kongiganak: AWOS Kwigillingok: AWOS Tuntutiliak: AWOS	Aniak: AWOS 3	Crooked Creek Red Devil Lime Village Automated weather for all above	Kwigillingok: ASOS Kongiganak: ASOS Eek: ASOS Newtok: ASOS
7. What airports are in the greatest need of a new instrument approach? **CLICK ANSWER FOR DETAIL**	None at this time	Newtok - ILS Tuntutuliak - ILS Kongiganak - ILS	None	N/A	McGrath - ILS	Sleetmute Red Devil Lime Village LPV or best available GPS approach for all above	Kipnuk Newtok Kwigillingok Kongiganak RNAV for all above
8. Are your aircraft Instrument Flight Rule (IFR) capable? **CLICK ANSWER FOR DETAIL**	No answer	Yes	Yes	No	Yes	Yes	Yes
9. Are you aircraft equipped for Localizer Performance and Vertical Guidance (LPV) approaches? **CLICK ANSWER FOR DETAIL**	Yes	Yes	Yes	No	No	Yes	Yes
10. What airports are in the greatest need of an electrical power source (for heating aircraft)? **CLICK ANSWER FOR DETAIL**	Bethel	No	N/A	All in the Delta YK	McGrath	Crooked Creek Sleetmute Red Devil	No answer
11. Are there concerns with the unavailability of fuel at airports, constricting air service in the community? **CLICK ANSWER FOR DETAIL**	No	Yes	Yes	Yes	None	Yes	No answer
12. Are there any issues with communications with your home base when you're away, or on the ground at the village airport?	Yes	Yes	Yes	Yes	No	Yes	Yes
13. Other needs: (Fleet mix and runway length needs at Chevak, Hooper Bay and Mekoryuk)	Click for detail	Click for detail	Click for detail	Click for detail	Click for detail	Click for detail	Click for detail
14. Which communities would you be willing to provide bypass mail service?	Click for detail	Click for detail	Click for detail	Click for detail	Click for detail	Click for detail	Click for detail

YKTP Yukon Kuskokwim Delta Transportation Plan



Stakeholder Interview

YKTP Team Member		Other Party	
Name:	*Dwight Stuller*	**Name:**	*LJ Davis*
Organization:	*DOWL*	**Organization:**	*Bethel Airport manager*
Study Area:	*Bethel and surrounding airports*	**Phone Number:**	907-543-2498
Date:	*6/3/15*	**Time:**	*9:30 am*
Meeting held by: [X] YKTP Team		[ ] Other Party	

1. What are the makes and models of aircraft within your fleet? (Please check company website for information).
   Aircraft Make: *Cessna* Model: *182* Total Number: *1*

2. How are your aircraft configured in the summer? In the winter? (floats/amphibious/wheels only/ski).
   Wheels only (state leased aircraft).

3. Within the next five years do you expect to change your fleet or add new aircraft to your fleet? ❑Yes ☒No If so which type? *N/A*

4. In general, what airports have the greatest surface or other maintenance needs? (In order of priority)
   Airport: *Kwigillingok* Need/Why: *Soft, narrow and in overall poor condition.*
   Airport: *Kwethluk* Need/Why: *Runway embankment unstable, sinking in some areas.*
   Airport: *Chevak* Need/Why: *Soft during spring and rainy times. Significant rutting.*
   Other Comments: _____

5. Where are the most important runway extension or safety area needs in the region?
   Airport: *Kwigillingok* Why Needed:
   Airport: *Kwethluk* Why Needed:
   Airport: *Chevak* Why Needed:
   Other Comments: *Improved safety*

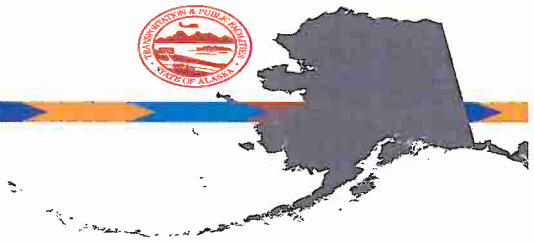
6. What airports are in the greatest need of a weather station?
   Other Comments: *They are all good right now*

7. What airports are in greatest need of a new instrument approach?
   Other Comments: *They are all good right now*

8. Are your aircraft equipped for Localizer Performance and Vertical Guidance (LPV) approaches? Which/how many aircraft?
   Yes, only one aircraft

9. What airports are in the greatest need of an electrical power source (for heating aircraft)?

   Airport: Bethel, south ramp



10. Are there concerns with the unavailability of fuel at airports, constricting air service in the community?
    Other Comments: *No, not currently a problem*

11. Are there any issues with communications with your home base when you're away, or on the ground at the village airport?
    Yes, all airports up river from Aniak do not have cell coverage.

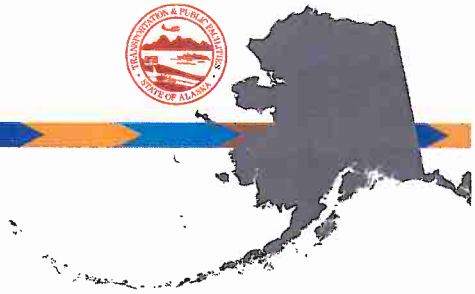
12. Other Needs: (Fleet mix and runway length needs at Chevak, Hooper Bay and Mekoryuk).

    Ok for aircraft that are currently using these airports

13. Which communities would you be willing to provide bypass mail service?

    N/A

YKTP Yukon Kuskokwim Delta Transportation Plan



Stakeholder Interview

YKTP Team Member		Other Party	
Name:	*Meg Jones*	**Name:**	*Austin Engebretson*
Organization:	*DOWL*	**Organization:**	*Grant Aviation*
Study Area:	*YKDTP*	**Phone Number:**	907-952-0437
Date:	*June 24, 2015*	**Time:**	
Meeting held by: [X] YKTP Team		[ ] Other Party	

1. What are the makes and models of aircraft within your fleet? (Please check company website for information).
   Aircraft Make:Piper Model:Navajo Total Number: 6
   Aircraft Make:Cessna Model:208Caravan Total Number: 10
   Aircraft Make: Cessna Model: 207 Total Number: 6
   Aircraft Make: GippsAero Model: GA8 Airvan Total Number: 3

2. How are your aircraft configured in the summer? In the winter? (floats/amphibious/wheels only/ski).
   Wheels year round.

3. Within the next five years do you expect to change your fleet or add new aircraft to your fleet? ☒Yes ☐No. If so which type? *Grant is in the process of phasing out the Cessna 207 and bringing in more Airvans, the plan is to phase the 207's out within five years. The Cessna 207 and the GippsAero Airvan are virtually the identical in payload and passenger numbers. Grant is currently looking for a replacement aircraft for the Piper Navajos. They are looking at a Tecnam twin engine concept aircraft, not certified at this time.*

4. In general, what airports have the greatest surface or other maintenance needs? (In order of priority)
   Airport: Kwigillingok Need/Why: *Frost heaves in between the RWY 33 threshold near the first turnoff, the runway is very narrow at 1835 x40 wide, it is unlit, and the worst runway in the YK Delta!*
   Airport: Tununak Need/Why: Too short, at 1,778 x30 feet
   Airport:Newtok Need/Why: Unlit and needs to be wider; its current width is 35ft.
   Other Comments:

5. Where are the most important runway extension or safety area needs in the region?
   Airport: Kwigillingok Why Needed: Narrow and short
   Airport: Tununak Why Needed: Too short
   Airport:Newtok Why Needed: Too short and not wide enough.
   Other Comments: Some of the runways in the YK Delta are too close to the river and therefore cannot be extended.

6. What airports are in the greatest need of a weather station?
   Airport: *Kongiganek* Weather Station Needed: *AWOS, AWSS any certified weather.*
   Airport: *Kwigillingok* Weather Station Needed: *AWOS, AWSS any certified weather.*
   Airport: *Nightmute, and Newtok* Weather Station Needed: *Same as above*
   Other Comments: *Anywhere that does not have weather, needs weather. Newtok is in between Bethel and the YK western villages. There is no terrain near Newtok, a lot of times it is difficult to tell cloud height from the FAA weather cameras in Newtok because of flat light conditions and the fact that there isn't any terrain (mountains, etc) around to use as a guide.*

7. What airports are in greatest need of a new instrument approach?
   Airport: *Newtok* Approach Needed: *ILS*
   Airport: *Tuntutuliak* Approach Needed: *ILS*
   Airport: *Kongiganak* Approach Needed: *ILS*
   Other Comments: *The new runway at Chefornak was a waste of money, less than 10% of private aircraft fly out of there.*

8. Are your aircraft Instrument Flight Rule (IFR) capable?
   Yes, except for the Cessna 207's they are not IRF capable.

9. Are your aircraft equipped for Localizer Performance and Vertical Guidance (LPV) approaches? Which/how many aircraft?
   Yes, except for the Cessna 207's

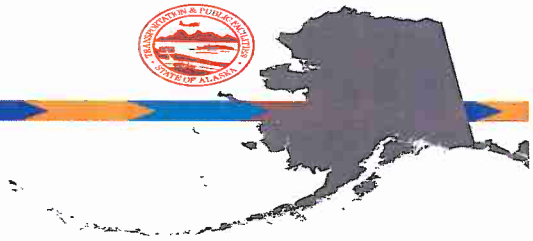
10. What airports are in the greatest need of an electrical power source (for heating aircraft)?
    Other Comments: *Airports within 20-30 miles of Bethel. Place the outlets out of the way so not to interfere with a moving propeller or grader in the winter.*

11. Are there concerns with the unavailability of fuel at airports, constricting air service in the community?
    Other Comments: *The unavailability of fuel at YK airports is not a big issue for Grant as they carry what they need. If fuel was available at the villages, who would provide it and maintain it? Fuel gets stolen all the time.*

12. Are there any issues with communications with your home base when you're away, or on the ground at the village airport?
    Cell phones service is fairly common; Grant will talk to Base and have them relay the information to the villages via a landline. When the repeaters go down, they are out for a while, takes a long time to get them fixed.

13. Other Needs: (Fleet mix and runway length needs at Chevak, Hooper Bay and Mekoryuk)

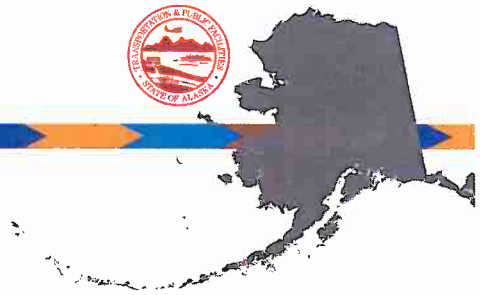
    Adding Chevak as a bypass mail hub was a bad idea; there is no infrastructure there to support it. Mekoryuk is a bad location for mail as it is an island and you have to fly a multi engine aircraft over the water.



14. Which communities would you be willing to provide bypass mail service?

It is not good practice to cipher mail from the hubs to create another bypass mail hub. Ticket prices will just continue to rise and no one will be able to afford it. Mail hubs need to be where the hospitals are. Adding another hub will negatively impact the region; none of the carriers wanted Chevak as a hub.

YKTP Yukon Kuskokwim Delta Transportation Plan



Stakeholder Interview

YKTP Team Member		Other Party	
Name:	*Meg Jones*	**Name:**	*Timo Saarinen*
Organization:	*DOWL*	**Organization:**	*Northern Air Cargo (NAC)*
Study Area:	*YK Delta*	**Phone Number:**	907-229-5430
Date:	*June 23, 2015*	**Time:**	
Meeting held by: [X] YKTP Team		[ ] Other Party	

1. What are the makes and models of aircraft within your fleet? (Please check company website for information).
   Aircraft Make: Boeing *737* Model: *200* Total Number: *2*
   Aircraft Make: Boeing *737* Model: *300* Total Number: *2*

2. How are your aircraft configured in the summer? In the winter? (floats/amphibious/wheels only/ski).
   Wheels year round

3. Within the next five years do you expect to change your fleet or add new aircraft to your fleet? ☒Yes ☐No
   If so which type?
   Will add Boeing 737-400's or more advanced 737-300's.

4. In general, what airports have the greatest surface or other maintenance needs? (In order of priority)
   Airport: *St Mary's* Need/Why: *Needs to be paved, easier on the 737.*
   Airport:*Bethel* Need/Why: *Frost heave bump at the end of the main runway*

5. Where are the most important runway extension or safety area needs in the region?
   Airport: *St. Mary's* Why Needed: *Needs to be paved*
   Other Comments: Aniak and McGrath both have a river on each end of the runway and therefore cannot be extended.

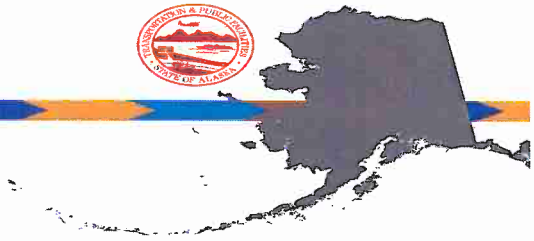
6. What airports are in the greatest need of a weather station?
   Airport: *None* Weather Station Needed: *None*

7. What airports are in greatest need of a new instrument approach?
   Airport: *None* Approach Needed: *None*

8. Are your aircraft Instrument Flight Rule (IFR) capable?
   Yes, all aircraft are IFR capable.

9. Are your aircraft equipped for Localizer Performance and Vertical Guidance (LPV) approaches? Which/how many aircraft?
   Yes, all aircraft are equipped with LPV approaches.

10. What airports are in the greatest need of an electrical power source (for heating aircraft)?
    Airport: *NAC does not need an electrical power source for their aircraft.*



11. Are there concerns with the unavailability of fuel at airports, constricting air service in the community?
    Airport: McGrath Type of Fuel Needed: Jet A
    Airport: St Mary's Type of Fuel Needed: Jet A
    Other Comments: *There is fuel in Aniak, but it is very difficult to acquire. The only community with fuel availability where NAC operates is Bethel.*

12. Are there any issues with communications with your home base when you're away, or on the ground at the village airport?
    NAC uses Satcom. St. Mary's needs high speed internet.

13. Other Needs: (Fleet mix and runway length needs at Chevak, Hooper Bay and Mekoryuk)

    NAC is not interested in providing bypass mail service to Chevak. . There is currently no infrastructure there to support the operation. The runway is too short, not enough mail going into the community to make it feasible to operate a 737. Hooper Bay and Mekoryuk's population is not enough to warrant bypass mail.

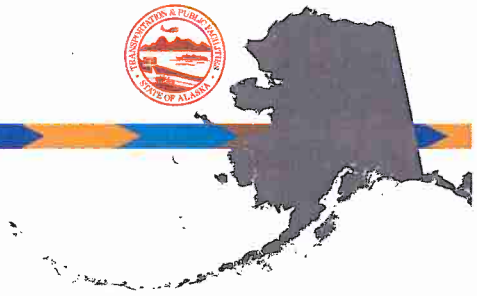
14. Which communities would you be willing to provide bypass mail service?

    In order to provide bypass mail service to a community in the YK Delta region there needs to be enough mail to fly to a community. With the exception of Bethel, YK communities are not growing in size and therefore there is no need for a new bypass mail hub.

    Timo is glad to see the State's effort in lengthening airports to the 3,300 foot state standard, it is much safer. NAC would like to see 4,500 foot runways as it is needed for the larger aircraft in the future.

    What aircraft?

YKTP Yukon Kuskokwim Delta Transportation Plan



Stakeholder Interview

YKTP Team Member		Other Party	
Name:	*Meg Jones*	Name:	*Dan Knesek*
Organization:	*DOWL*	Organization:	*Yute Air*
Study Area:	*YK Delta*	Phone Number:	*(907) 543-3003*
Date:	*5/14/15*	Time:	
Meeting held by: [X] YKTP Team		[ ] Other Party	

1. What are the makes and models of aircraft within your fleet? (Please check company website for information).
   Aircraft Make Cessna Model 172 Total Number 2
   Aircraft Make Cessna Model 207 Total Number13

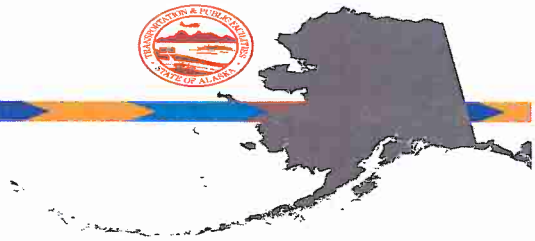
2. How are your aircraft configured in the summer? In the winter? (floats/amphibious/wheels only/ski).
   All aircraft are on wheels year round.

3. Within the next five years do you expect to change your fleet or add new aircraft to your fleet? ☒Yes ☐No If so which type? If Yute Air can find a way to make it profitable, they would add aircraft to the fleet. Adding aircraft to the fleet would be difficult right now due to FAA's current investigation of Hageland's not so prefect safety record. There really is not a decent replacement to the Cessna 207. The Cessna Caravan only gives you three more seats and more cost to maintain. Currently flying less costly aircraft than competitors, allowing them to keep their prices down.

4. In general, what airports have the greatest surface or other maintenance needs? (In order of priority)
   Airport: Kwigillingok Need/Why: Runway surface is poor
   Airport: Quinhagak Need/Why: Runway has several holes
   Airport: Kasigluk Need/Why: Last 1,000ft unusable due to it being too soft
   Airport: Newtok Need/Why: Bad in the winter, runway does not get plowed regularly.
   Other Comments: _____

5. Where are the most important runway extension or safety area needs in the region?
   Airport: Akiak Why Needed: Trees on both north and south end and river on the south end
   Airport: Kwigillingok Why Needed: Useable runway is only about 1835 feet due to frost heaves.
   Airport: _____ Why Needed: _____
   Other Comments: _____

6. What airports are in the greatest need of a weather station?
   Airport :Kongiganak Weather Station Needed: AWOS
   Airport: Kwigillingok Weather Station Needed: AWOS
   Airport: Tuntutiliak Weather Station Needed: AWOS
   Other Comments: Would like a weather reporting station or weather camera in between Hooper Bay to Chevak and Bethel to Nelson Island. It is pretty much a black hole in between those areas.



7. What airports are in greatest need of a new instrument approach?
   Airport: _____ Approach Needed: _____
   Airport: _____ Approach Needed: _____
   Airport: _____ Approach Needed: _____
   Other Comments: Yute air does not fly IFR and the aircraft are not currently rated for IFR flight. The pilots are rated, but the aircraft are not.

8. Are your aircraft Instrument Flight Rule (IFR) capable?
   Yute air does not fly IFR and the aircraft are not currently rated for IFR flight.

9. Are your aircraft equipped for Localizer Performance and Vertical Guidance (LPV) approaches? Which/how many aircraft?
   Aircraft are not maintained for IFR.

10. What airports are in the greatest need of an electrical power source (for heating aircraft)?
    Airport: All Airports in the YK Delta.
    Other Comments: The state will not let Yute plug into their buildings. Yute offered to pay a monthly fee for the electrical, but were denied.

11. Are there concerns with the unavailability of fuel at airports, constricting air service in the community?
    Other Comments: Fuel can only be purchased from Emmonak, St Mary's, Bethel or Aniak. If fuel is needed in other villages, Yute has to buy from other carriers. If they will be doing a lot of intervillage flights, they preposition fuel along the route in order to avoid flying all the way back to a village that sells fuel (Emmonak, St Mary's, Bethel or Aniak).

12. Are there any issues with communications with your home base when you're away, or on the ground at the village airport?
    Yes. They rely on relay through other aircraft or phone on the ground. ADS-B is nonexistent below 2,000ft (Yute is the first air taxi to be outfitted with ADS-B in Bethel). All villages they serve have GCI.

13. Other Needs: (Fleet mix and runway length needs at Chevak, Hooper Bay and Mekoryuk)

    Chevak's runway is not long enough for mainline traffic, such as Everts. Need infrastructure to store mail at airport.

    Who did we interview? Everts?

14. Which communities would you be willing to provide bypass mail service?

    Yute would be willing to provide bypass mail to Chevak if the infrastructure was there, i.e. fuel, storage (cold, dry, freeze). Mekoryuk is not an option as it is an island and Yute flies only single engine aircraft.

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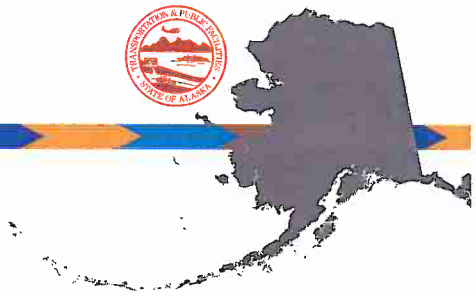


Stakeholder Interview

YKTP Team Member		Other Party	
Name:	*Meg Jones*	Name:	*Matt Macri*
Organization:	*DOWL*	Organization:	*Peninsula Airways (PenAir)*
Study Area:	*YK Delta*	Phone Number:	*(907) 242-4801*
Date:	*3/24/15*	Time:	
Meeting held by: [X] YKTP Team		[ ] Other Party	

1. What are the makes and models of aircraft within your fleet? (Please check company website for information).
   Aircraft Make SAAB Model 340 Total Number 15-B model
   Aircraft Make SAAB Model 340 Total Number 2- A model

2. How are your aircraft configured in the summer? In the winter? (floats/amphibious/wheels only/ski).
   All aircraft are on wheels year round

3. Within the next five years do you expect to change your fleet or add new aircraft to your fleet? ☒Yes ☐No If so which type? Add three SAAB 2000s in September 2015-2016. Will add 3 more SAAB 340s in 2015 (2A models and 1 freighter)

4. In general, what airports have the greatest surface or other maintenance needs? (In order of priority)
   Airport: _____ Need/Why: _____
   Airport: _____ Need/Why: _____
   Airport: _____ Need/Why: _____
   Other Comments: No issues with the airports they fly to in the YK Delta.

   where do they fly to in YK?

5. Where are the most important runway extension or safety area needs in the region?
   Airport: _____ Why Needed: _____
   Airport: _____ Why Needed: _____
   Airport: _____ Why Needed: _____
   Other Comments: None.

6. What airports are in the greatest need of a weather station?
   Airport: Aniak Weather Station Needed: AWOS 3
   Other Comments: Need TAFS throughout the state.

   ?

7. What airports are in greatest need of a new instrument approach?
   Airport: McGrath Approach Needed: ILS
   Other Comments: _____

8. Are your aircraft Instrument Flight Rule (IFR) capable?
   Yes

9. Are your aircraft equipped for Localizer Performance and Vertical Guidance (LPV) approaches? Which/how many aircraft?
   No LPV's, too costly.

10. What airports are in the greatest need of an electrical power source (for heating aircraft)?
    Airport: McGrath
    Other Comments: _____
    _____

11. Are there concerns with the unavailability of fuel at airports, constricting air service in the community?
    Airport: _____ Type of Fuel Needed: _____
    Airport: _____ Type of Fuel Needed: _____
    Airport: _____ Type of Fuel Needed: _____
    Other Comments: No concerns with availability of fuel.

12. Are there any issues with communications with your home base when you're away, or on the ground at the village airport?
    No, Penair uses Satcom.

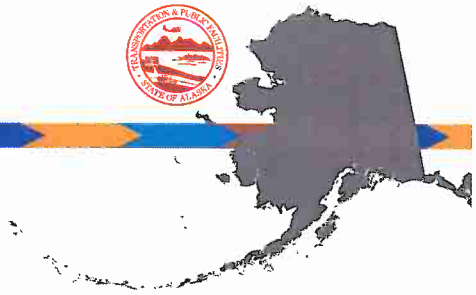
13. Other Needs: (Fleet mix and runway length needs at Chevak, Hooper Bay and Mekoryuk).

    Not at this time.

14. Which communities would you be willing to provide bypass mail service?

    Not at this time.

YKTP Yukon Kuskokwim Delta Transportation Plan



Stakeholder Interview

YKTP Team Member		Other Party	
Name:	*Meg Jones*	**Name:**	*Dan Owen, Director of Operations*
Organization:	*DOWL*	**Organization:**	*Alaska Air Transit*
Study Area:	*YK Delta*	**Phone Number:**	*(907)276-5422*
Date:	*5/13/15*	**Time:**	
Meeting held by: [x] YKTP Team		[ ] Other Party	

1. What are the makes and models of aircraft within your fleet? (Please check company website for information).
   Aircraft Make Pilatus Model PC-12 Total Number one
   Aircraft Make Cessna Model C-208B Caravan Total Number two
   Aircraft Make Piper Model PA-31-350 Navajo Chieftain Total Number two

2. How are your aircraft configured in the summer? In the winter? (floats/amphibious/wheels only/ski).
   All aircraft are on wheels only, all year long.

3. Within the next five years do you expect to change your fleet or add new aircraft to your fleet? ☒Yes ☐No
   If so which type? Add additional IFR turboprops

4. In general, what airports have the greatest surface or other maintenance needs? (In order of priority)
   Airport: Crooked Creek Need/Why: short, surface with large humps
   Airport: Sleetmute Need/Why: soft, sandy surfaces
   Other Comments:

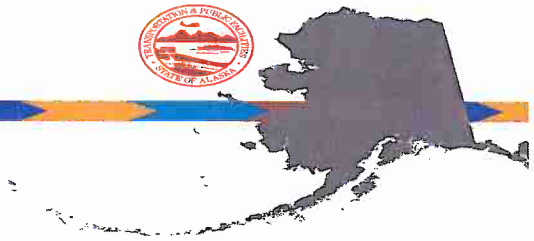
5. Where are the most important runway extension or safety area needs in the region?
   Airport: Crooked Creek Why Needed: short runway
   Airport: Lime Village Why Needed: short runway

   Other Comments: The Donlin Creek mine is a major project that is currently progressing through permitting. Once permitted, the mine will become the largest employer in the region. Its land lease includes contractual obligations to use "local hire", so any community in the vicinity will see a substantial increase in both flights and passenger enplanements. These short runways are suited only for smaller aircraft, such as the Cessna 206, or a lightly loaded Cessna Caravan, but will be inadequate to support a passenger demand favoring aircraft in the nine seat or even nineteen seat capacity classes.

   what did we learn from Donlin?

6. What airports are in the greatest need of a weather station?
   Airport: Crooked Creek Weather Station Needed: automated weather
   Airport: Red Devil Weather Station Needed: automated weather
   Airport: Lime Village Weather Station Needed: automated weather

   Other Comments: See previous comments reference the Donlin Creek mine



7. What airports are in greatest need of a new instrument approach?
   Airport: Sleetmute Approach Needed: LPV or best available GPS approach
   Airport: Red Devil Approach Needed: LPV or best available GPS approach
   Airport: Lime Village Approach Needed: LPV or best available GPS approach

   Other Comments: See previous comments reference the Donlin Creek mine

8. Are your aircraft Instrument Flight Rule (IFR) capable?
   Yes

9. Are your aircraft equipped for Localizer Performance and Vertical Guidance (LPV) approaches? Which/how many aircraft?
   Yes, 100% of fleet is equipped with dual WAAS GPS navigation, certified for LPV approaches.

10. What airports are in the greatest need of an electrical power source (for heating aircraft)?
    Airport: Crooked Creek
    Airport: Sleetmute
    Airport: Red Devil

    Other Comments: See previous comments reference the Donlin Creek mine

11. Are there concerns with the unavailability of fuel at airports, constricting air service in the community?
    Airport: Sleetmute Type of Fuel Needed: Jet A
    Airport: Red Devil Type of Fuel Needed: Jet A
    Airport: Crooked Creek Type of Fuel Needed: Jet A
    Other Comments: See previous comments reference the Donlin Creek mine. Also, nearest available fuel is in Aniak, 50 miles southwest/ downriver from Crooked Creek and 70 miles downriver from Sleetmute. This restricts payload for flights originating and returning eastbound to Anchorage.

12. Are there any issues with communications with your home base when you're away, or on the ground at the village airport?
    Yes, always. There are no public phones at most village airports, and cell phone coverage is spotty. AAT carries a Sat phone if we anticipate a need to communicate from a village airport.

13. Other Needs: (Fleet mix and runway length needs at Chevak, Hooper Bay and Mekoryuk)

    Air traffic control and flight service station remote communications covering the mid-Kuskokwim region. Communications in the vicinity of Crooked Creek and the Donlin Creek mine are not currently possible at altitudes below about 6,000 feet.

14. Which communities would you be willing to provide bypass mail service?

    Sleetmute, Red Devil, Crooked Creek, Lime Village

YKTP Yukon Kuskokwim Delta Transportation Plan

Stakeholder Interview

YKTP Team Member		Other Party	
Name:	*Dwight Stuller*	**Name:**	*Peter Wilson*
Organization:	*DOWL*	**Organization:**	*Ravn Alaska*
Study Area:	*Bethel and surrounding villages*	**Phone Number:**	907-543-3800
Date:	*5/29/15*	**Time:**	*1:00 pm*
Meeting held by: [X] YKTP Team		[ ] Other Party	

1. What are the makes and models of aircraft within your fleet? (Please check company website for information).

Aircraft Make	Cessna	Model	207	Total Number	8
Aircraft Make	Cessna	Model	208	Total Number	7
Aircraft Make	Cessna	Model	406	Total Number	1
Aircraft Make	Piper	Model	PA 31	Total Number	1

2. How are your aircraft configured in the summer? In the winter? (floats/amphibious/wheels only/ski).
   Wheels Only

3. Within the next five years do you expect to change your fleet or add new aircraft to your fleet? ❑Yes ❑No If so which type?
   No Fleet changes anticipated

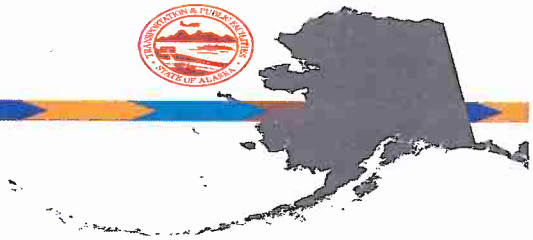
4. In general, what airports have the greatest surface or other maintenance needs? (In order of priority)

Airport: Kwigillingok	Need/Why: Short, Narrow and Poor Surface
Airport: Newtok	Need/Why: Short, Narrow and Poor Surface
Airport: Chevak	Need/Why: Very poor surface during periods of heavy rains and spring breakup

   Other Comments: Scammon Bay is a close runner up for poor runway conditions.

   Hooper Bay has cracks/ breaks in pavement that need to be filled, they are hard on the aircraft suspension.

5. Where are the most important runway extension or safety area needs in the region?
   Airport: _____ Why Needed: _____
   Airport: _____ Why Needed: _____
   Airport: _____ Why Needed: _____



Other Comments:

_____

_____

6. What airports are in the greatest need of a weather station?

Airport: Kwigillingok / Kongiganak Weather Station Needed: ASOS
Airport: Eek Weather Station Needed: ASOS
Airport: Newtok Weather Station Needed: ASOS
Other Comments:

_____

_____

7. What airports are in greatest need of a new instrument approach?

Airport: Kipnuk Approach Needed: RNAV
Airport: Newtok Approach Needed: RNAV
Airport: Kwig or Kong Approach Needed: RNAV

_____

Other Comments:

_____

_____

8. Are your aircraft Instrument Flight Rule (IFR) capable?
Yes

9. Are your aircraft equipped for Localizer Performance and Vertical Guidance (LPV) approaches?
Which/how many aircraft?
__Yes, All Cessna 208 turbine aircraft, 8 total

10. What airports are in the greatest need of an electrical power source (for heating aircraft)?
Airport: _____

_____

Airport: _____
Airport: _____
Other Comments:

_____

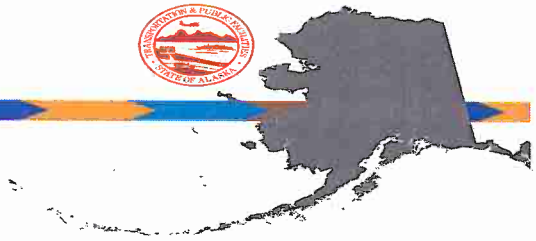
_____

11. Are there concerns with the unavailability of fuel at airports, constricting air service in the community?

Airport: _____ Type of Fuel Needed: _____
Airport: _____ Type of Fuel Needed: _____
Airport: _____ Type of Fuel Needed: _____
Other Comments:

_____

_____



12. Are there any issues with communications with your home base when you're away, or on the ground at the village airport?
    Marshall. No cell or radio service at the airport.
    Dead zones with Anchorage center radio coverage southwest of Bethel.

13. Other Needs: (Fleet mix and runway length needs at Chevak, Hooper Bay and Mekoryuk).

    None

14. Which communities would you be willing to provide bypass mail service?

    All communities currently being served, except for Tundra and up river.

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

~~I~~ Make more mark Trails for our young Kids for Kids and it will be Safe.

What are the most important future regional transportation improvements for the YK-Delta?

Snow-machie Mark. I like them most it Will be easy for me and other People who travel on ~~thunder~~ thunder. even on ice for fishing

To receive project information, please provide your name and an e-mail or postal address:

Name: Evelyn Lupie
Address: BOX 8091 Tuntutuliak, Ak 99680
E-mail:
Phone: (907) 256-6428

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL HKM • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowlhkm.com*

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What should the YK-Delta transportation system look like in 20 years?

1. Oscarville & Napaskiak connected too Bethel by road.
2. Roads paved in Bethel
3. Small Boat Harbor improvements too the uplands

What are the most ~~important~~ important future regional transportation improvments for the YK-Delta?

1. Development / expansion of the Petroleum dock and adjacent waterfront upriver for use of marine transportation

To receive project information, please provide your name and an e-mail or postal address:

Name: Peter D.W. Williams
Address: pwilliams@cityofbethel.net
E-mail:
Phone: 907 545-4150

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL HKM • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowlhkm.com*

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What should the YK-Delta transportation system look like in 20 years?

maybe construct bridges from one village to next that are, less than 5 miles apart?

What are the most important future regional transportation improvements for the YK-Delta?

For the existing dirtroads, to find how to lessen sand blowing for board roads, maybe add on to painting that will let them last longer, but not exactly paint.

To receive project information, please provide your name and an e-mail or postal address:

Name: Marvella Brink
Address: PO Box 3125, Bethel AK 99559
E-mail: mbrink@avcp.org
Phone: 545-2318

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
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Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowlhkm.com*

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

there should be easier access to surrounding villages like bridges through

What are the most important future regional transportation improvements for the YK-Delta?

I believe there should be an actual building for people in the villages to wait for the planes

To receive project information, please provide your name and an e-mail or postal address:

Name: Jamie Brink
Address: brinkag@live.com
E-mail: _____
Phone: _____

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL HKM • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowlhkm.com*

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

Air transportation from Anchorage to down-States are very cheap and from Bethel to Anchorage is very expensive. It will be better if airfare was all the same. Or a road from Bethel to Anchorage "might" make it more affordable.

What are the most important future regional transportation improvements for the YK-Delta?

I know there are airports that are located by or not too far from the river and it would be better to see some of the airports be moved away from the river.

To receive project information, please provide your name and an e-mail or postal address:

Name: Bertha Chase
Address: Box 2021 Bethel, AK 99559
E-mail: bibeie@hotmail.com
Phone: 543-4022

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL HKM • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowlhkm.com*

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What should the YK-Delta transportation system look like in 20 years?

Donlin Creeks plans of 3 barges a day going to their camp up the Kuskokwim is just plain scary.

What are the most ~~important~~ important future regional transportation improvments for the YK-Delta?

Improve/upgrade barge loading docks in all coastal + river villages.

Bethel: bypass Polk road cut off so that Bethel people have road connecting Tundra Ridge to airport

To receive project information, please provide your name and an e-mail or postal address:

Name: Susan Taylor
Address: P.O. Box 1774 Bethel AK 99559
E-mail:
Phone: 545-4368 or 545-7524

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL HKM • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowlhkm.com*

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

Building Highways between Anchorage, Bethel and YK Delta villages

What are the most important future regional transportation improvements for the YK-Delta?

Build road systems to lower costs for travel and freight

To receive project information, please provide your name and an e-mail or postal address:

Name: Phillip Brink
Address: Box 783, Bethel, Ak 99559
E-mail: phil_brink@yahoo.com
Phone: 907-545-2652

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL HKM • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowlhkm.com*

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We want to hear from you!
What should the YK-Delta transportation system look like in 20 years?

Tram From Yukon to Kusko!

What are the most important future regional transportation improvements for the YK-Delta?

Plane, 4 wheeler, snow go.

To receive project information, please provide your name and an e-mail or postal address:

Name: Mike Samuelson & [illegible] P Peters
Address: Anc
E-mail:
Phone: 907-545-4545 907-891-9833

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL HKM • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowlhkm.com*

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

All villages should be connected, need port around Hooper bay or the Yukon mouth, for mid port for freight, the Artic is opening up for shipping

What are the most ~~important~~ important future regional transportation improvments for the YK-Delta?

Need road system between Yukon River and Kuskokwim River near Kalskag, for freight system: or maybe a canal would do:

To receive project information, please provide your name and an e-mail or postal address:

Name: Robert LeKander
Address: Box 1577 Bethel, Alaska 99559
E-mail:
Phone: 545-2013 Cell

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL HKM • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowlhkm.com*

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

Much safer travel to villages → Roads. Also cheaper airfare to surrounding villages

What are the most important future regional transportation improvments for the YK-Delta?

The Airfare to other places.

To receive project information, please provide your name and an e-mail or postal address:

Name: RANDELL ANDREW
Address: BOX 783, BETHEL. 99559
E-mail: randell.andrew55@gmail.com
Phone: 907 751 2576

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL HKM • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowlhkm.com*

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

Taved Road, Dust control, cheaper Transportation.

What are the most improtant future regional transportation improvments for the YK-Delta?

To receive project information, please provide your name and an e-mail or postal address:

Name: Tiana Lupie
Address: Box 3443 Bethel Ak 99559
E-mail:
Phone:

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
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Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowlhkm.com*

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

Currently anchorage to Las Vegas NV is 2x's cheaper than Bethel to Anchorage. Transportation should be affordable ~~esp~~ especially from the villages to major health centers, not to mention the freight charges.

What are the most improtant future regional transportation improvments for the YK-Delta?

Transportation via air, and land, whether by ~~air~~ airplane snowmobile or atv & automobile should be able to travel without regard to the threat of being lost ~~of~~ or stranded. Waiting ports or offices should be instituted @ all airports.

To receive project information, please provide your name and an e-mail or postal address:

Name: Patrick Samson
Address: Box 927 Bethel AK 99559
E-mail: psamson@nativecouncil.org
Phone: 907 543 2608

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

Wow! I hope I'm still here! Roads connected to nearby villages; the dirt roads maintained - dust free; and or paved. To use multiple routes to our final stop to prevent traffic congestion.

What are the most improtant future regional transportation improvments for the YK-Delta?

Something to do about the Korean Cab drivers: AWKWARD driver. To keep on with the city Bus system around town At LOW Fares than the cab companies. This is for those that can't drive. Add a ferry system?

To receive project information, please provide your name and an e-mail or postal address:

Name: MARY Kilbuck
Address: PO Box 1955 Bethel, AK 99559
E-mail:
Phone:

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

Subregional connections between communities (surface). With major cuts on the horizon it may be economically beneficial for communities to connect by subregion. That way education, freight, fuel, etc might cost less.

What are the most improtant future regional transportation improvments for the YK-Delta?

Regulatory exemptions for air carriers wanting to use safer aircrafts. Community surface infrastructure improvements. Strategically located ports to help reduce freight costs. Consultation from USCG on proper lightering locations. Sub-regional surface connections.

To receive project information, please provide your name and an e-mail or postal address:

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E-mail: Clarence@avcp.org
Phone: 543 7451

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

I don't really know what it would look like in 20 years, but I think it would be some boats, plane, snow machine, and possible vechles.

What are the most improtant future regional transportation improvments for the YK-Delta?

I think the most important furture regional improvement would be from ~~6~~ sled dog to snow machine and canoes to motor boats including the air transportation

To receive project information, please provide your name and an e-mail or postal address:

Name: Thomas A. Daniel
Address: [redacted]
E-mail: Tuntsonic@gmail.com
Phone: (907) 545-7408

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
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Phone: 907-562-2000 • Fax: 907-563-3953 • adsmith@dowlhkm.com

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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

Roads to the villages.

What are the most ~~important~~ important future regional transportation improvments for the YK-Delta?

Air fair. Right now I dont understand why the fair to Los Vegas is chaper than from Bethel to Anchorage.

To receive project information, please provide your name and an e-mail or postal address:

Name: Geraldine Brink
Address: Box 783 Bethel
E-mail: geraldine-brink@yahoo.com
Phone: 545-3141

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

As long as it is safe & kid friendly ATE()...

What are the most important future regional transportation improvments for the YK-Delta?

Kid, elderly & handicap friendly

To receive project information, please provide your name and an e-mail or postal address:

Name: Roberta Lowe
Address: PO Box 1883 Bethel AK 99559
E-mail: heartflowers212@yahoo.com
Phone:

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
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We want to hear from you!

What should the YK-Delta transportation system look like in 20 years?

What are the most ~~important~~ important future regional transportation improvments for the YK-Delta?

cost less, fuel/groceries

To receive project information, please provide your name and an e-mail or postal address:

Name: Lucille A. Alexie
Address: 1064 Bethel
~~E-mail:~~
Phone: 545 2174

To submit comments, or for additional information contact: Adison Smith, Transportation Planner
DOWL HKM • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowlhkm.com*

Yukon Kuskokwim Delta-mi Transportation-aam Pillerkiuraan Qanrutkellra Caliam Qaillun Ayuquciа/Qanerkalgem Igarvigkaa

Caliam Qaillun Ayuqucia

Una allrakut yuinaat aturluki pillerkiurauguq, apertualluki tekitarkami Transportation-aamun akinek elliilriit ilangellerkaitnun, Alaska-m Kanavalirnerani. Yuvriqait aprumalriit nunat cailkaat Yukon Kuskokwim Delta Region-aamitut. Pillerkiurauluni nunani tamaani, YKDTP-iim urenkutmek caliaqerkauluki tamaani ayagassuutet wall'u ayagacissuutet nuuqekngait, makut ilakluki ayagalalriit allanun nunanun, cali-llu aprumalriamun nunamun tamaarvirtaallrat. Una pillerkiuraq arvinlegen ilakaat pillerkiurat ilauskengaita wavet Alaska Statewide Long Range Transportation Plan-amun (LRTP).Uum Alaska Statewide LRTP ilakluki tamalkuita arvinelgen yuvriqait aprumalriit nunat, ayuqucirtuumaat Department of Transportation-aaq cali-llu Public Facilities Capital Budget Program-at.

Niicugtukut elpecenek!

Qaillun tangellra ayuqeqciqa YK-Delta-mi Transportation-aaq allrakuni yuinarni?

Tangruallemni piyugngakuuneng -tuarr' tumyarar tangciqellria ciumek nunacuarnek caniimeluntellrianek.

Caugat pinricunailnguut tekitarkami Transportation-aat assirikaniutekait YK-Delta-mi?

Akiircarluki tengaulleq mamterellaa-mun nunaacuarnek. Cali-llu mamterillermek amaavet nunarpagmun. Anchorage-aamun.

Caliam ayuqucianek pingyukuvet, atren, e-mail-an, post office-aami-llu kalikiviin, nanlucin-llu apertuqiki:

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Qanerkangqerkuvet, wall'u cali ayuqucianek caliam nallunriqaniryukuvet una qanercuuteqiu:
DOWL HKM • 4041 B Street • Anchorage, Alaska 99503
Phone: 907-562-2000 • Fax: 907-563-3953 • *adsmith@dowlhkm.com*

Number	Date	Source	Keywords	Comment/Question	Response/Resolution	Name
1	4/15/2015	Public Meeting		Open-Ended Response		Open-Ended Response
2	4/15/2015	Public Meeting				Patrick Samson
3	4/15/2015	Public Meeting		Tangruallemni piyugngakuuneng-tuarr. tumyarar tangciqellria ciumek nunacuarnek cunniimeluutellrianek		Lena S Brink
4	4/15/2015	Public Meeting				Lucille Alexie
5	4/15/2015	Public Meeting		As long as it is safe and kid friendly Also...		Robert Lowe
6	4/15/2015	Public Meeting		Roads to villages		Geraldine Brink
7	4/15/2015	Public Meeting		I dont really know what it would look like in 20 years but i think it would be some boats, plane, snowmachine and mobile vehicles		Thomas A Daniel
8	4/15/2015	Public Meeting		sub regional connections between communities (surface). With major curt on the horizon it may be economically beneficial for communities to connect by sub-region. that way education freight fuel, etc might cost less.		Clarence Daniel
9	4/15/2015	Public Meeting		Wow! I hope im still here! Roads connected to nearby villages; the dirt roads maintained-dust free and or paves. to use multiple routes to our final stop to prevent traffic congestion.		Mary Kilbuck
10	4/15/2015	Public Meeting		currently Anchorage to Las Vegas is 2X's cheaper than Bethel to Anchorage. Transportation should be affordable especially from the villages to major health centers, not to mention the freight chanrges		Patrick Samson
11	4/15/2015	Public Meeting		Paved road, dust control, cheaper transportation		Tina Lupie
12	4/15/2015	Public Meeting		Much safer travel to villages- roads. Also cheaper airfare to surrounding villages		Randell Andrew
13	4/15/2015	Public Meeting		all villages should be connected, need port around Hooper Bay on the Yukon mouth, for mid port for freight, the arctic is opening up for shipping		Robert Lekander
14	4/15/2015	Public Meeting		tram from yukon to kusko!		Mike Sandborn
15	4/15/2015	Public Meeting		building highways between Anchorage, Bethel, and YK delta villages		Phillip Brink
16	4/15/2015	Public Meeting		Donlind Creek plans of 3 barges a day going to their camp up the kuskokwim is just plain scary		Susan Taylor
17	4/15/2015	Public Meeting		air transportation from Anchorage to down states are very cheap and from Bethel to Anchorage is very expensive. It will be better if airfare was all the same or a road from Bethel to Anchorage might make it more affordable		Bertha Chase
18	4/15/2015	Public Meeting		there should be easier access to surrounding villages like bridges		Janine Brink
19	4/15/2015	Public Meeting		maybe construct bridges from one village to the next that are less than 5 miles apart		Marvella Brink
20	4/15/2015	Public Meeting		1.Oscarville & Napiak connected to bethel by road 2. roads paved in bethel 3. small boat harbor improvements too the uplands		Peter Williams
21	4/15/2015	Public Meeting		Make more mark trails for our young kids and it will be safe		Evelyn Lupie
22	4/15/2015	Public Meeting		Plan should assist in reducing travel cost and transport of goods to the villages. - Recieved 3/12/15 at the Tanana Chiefs Conference -Anonymous		
23	4/15/2015	Public Meeting		Bush or Rural Alaska communities that are not on the "road system" should have air transportation access and develop more hub locations that would be able to provide service up to 7 0r 8 villages but the location of the hub should not be where it is prone to flooding. Will save thousands of dollars for aviation industry, postal services that deliver mail and bypass, and boost local economies for the hub and villages it provide services for.		
24	4/15/2015	Public Meeting		Open-Ended Response		Open-Ended Response
25	4/15/2015	Public Meeting				Patrick Samson
26	4/15/2015	Public Meeting		Akiircarluki tengaulleq mamterell-mun nunaacharnek. Cali-llu mamterillermek amaavet nunarpgmun. Anchorage0aamun		Lena S Brink
27	4/15/2015	Public Meeting		cost less, fuel/grocheries		Lucille Alexie
28	4/15/2015	Public Meeting		Kid friendly and handicap friendly		Robert Lowe

Number	Date	Source	Keywords	Comment/Question	Response/Resolution	Name
29	4/15/2015	Public Meeting		air fare. right now i dont understand why the fare to Las Vegas is cheaper than from Bethel to Anchoage		Geraldine Brink
30	4/15/2015	Public Meeting		I think the most important future regional improvement would be from sled dog to snow machine and canoes to motor boats including air transportation.		Thomas A Daniel
31	4/15/2015	Public Meeting		regulatory exemptions for air carriers wanting to use safer aircraft. Community surface infrastructure improvements. Strategically located ports to help reduce freight costs. Consultation from USGS on proper lighting locations. Sub-regional surface connections.		Clarence Daniel
32	4/15/2015	Public Meeting		something to do about the Koream Cab drivers: awkward driver. to keep on with the city buss system around town at low fares than the cab companies. This is for those that cant drive. Add a ferry system?		Mary Kilbuck
33	4/15/2015	Public Meeting		transportation via air, and land, whether by airplane snowmobile or ATV and automobile should be able to travel without regard to the threat of being lost or stranded. waiting ports or offices should be instituted at all airports.		Patrick Samson
34	4/15/2015	Public Meeting				Tina Lupie
35	4/15/2015	Public Meeting		the airfare to other places		Randell Andrew
36	4/15/2015	Public Meeting		need road system between yukon river and kuskokwim river near Kalskag, for freight system, or maybe a canal would do		Robert Lekander
37	4/15/2015	Public Meeting		plane, 4 wheeler, snow go		Mike Sandborn
38	4/15/2015	Public Meeting		build road systems to lower cost for travel and freight		Phillip Brink
39	4/15/2015	Public Meeting		improve/upgrade barge loading docks in all coastal river villages Bethel: bypass Polk road cutoff so that Bethel people have a road connecting Tundra Ridge to airport		Susan Taylor
40	4/15/2015	Public Meeting		I know there are airports that are located by or not too far from the river and it would be better to see some of the airports moved away from the river.		Bertha Chase
41	4/15/2015	Public Meeting		i believe there should be an actual building for people in the villages to wait for the planes		Janine Brink
42	4/15/2015	Public Meeting		for the existing dirt roads, to find how to lessen sand blowing. For board roads maybe add on to painting that will let them last longer but not exactly paint.		Marvella Brink
43	4/15/2015	Public Meeting		development/expansion of the petroleum dock and adjacent waterfront upriver for use of marine transportation		Peter Williams
44	4/15/2015	Public Meeting		Snow- machine mark. I like them most, it will be easy for me and other people who travel on thunder. even on ice for fishing		Evelyn Lupie

YKTP Yukon Kuskokwim Delta TRANSPORTATION PLAN

Vision Statement Worksheet - break up into groups to develop a vision statement. The vision statement will help us communicate the YKTP's goals to public and important stakeholders in a single sentence or a few concise paragraphs. An example of a vision statement is: "The purpose of the Yukon Kuskokwim Transportation Plan is to guide transportation development decisions that maximize public benefits from public transportation investments in Western Alaska."

"The purpose of the YKTP is to ....."

Plan should assist in reducing travel cost and transport of goods to the villages.

(2) Lesley - Please insert into Survey monkey comment recieved 3/12/15 at Tanana Chiefs Conference -Anonymous

City of Chevak

US Postal Service announced in 2011 that Chevak is designated as the postal hub to serve Chevak, Hooper Bay, Scammon Bay, Newtok, Tununak, Toksook and Mekeryuk. Scoping work was done by Alaska Department of Transportation to improve our airport to meet the requirements of larger aircrafts. To extend the runway was approved and funding was available but in 2012 AKDOT pulled out the funding due to FAA pushing for safer airports to those communities that needed to upgrade because of safety issues. I believe on the state side explanation to tribes why the funds were pulled out was existing projects that were funded need to be completed vs funding new projects including, state projects throughout the state like bridges or marine transportation.

Before they (US Postal Service) made the decision they had identified Chevak or Hooper Bay as the choices to determine which would be designated. They found that by designating the hub in Chevak would save the postal service over 1 million dollars annually than they would if Hooper Bay was designated.

It is a more logic and economical choice for Chevak as during flooding season in the fall, Hooper Bay's airport is not accessible due to low land flooding that separates three town sites into islands. We would be stuck with a hub that would not be able to respond to an emergency and that would impact the other communities in the long run. State would have to spend millions of dollars to upgrade roads and built bridges, including upgrades to the airport and access road to airport. Getting material fill for the roads or airport are not readily available in Hooper Bay and they cannot use the last of the sand dunes they have near the beach on the Bering Sea side. This is their line of defense from storm surges during storms in the summer time. They would have to get material fill that would require a long haul to the site.

Community of Chevak is located on the 30 foot bluffs on the banks of ninglikfaq river where there is no impact to our airport from flooding. The material fill is available right in the area of the new airport as we have hills that have abundance of sand available for fill material. We can work with Askinuk Corporation to provide gravel for surfacing. This will save in project funds as material would be right there in the area of the airport and 30 miles from Chevak for gravel

. We need to be prepared to be able to respond to emergencies and successfully. Bypass mail is vital to communities and the **need** for *efficient delivery* through the postal bypass operation is critical to all communities. Direct flight to the Chevak hub will provide faster delivery of all postal bypass mail to the seven communities, than the route through Bethel. Our businesses are losing on orders they make when Bethel cannot deliver the items more quickly as they have to many hub communities they serve and is a problem. Orders by businesses are stuck or forgotten to be loaded to communities and the loss for businesses is hurting them and the community they provide goods for. Complete loss of frozen goods and items outdated like produce.

The **need** for *lower freight costs* is important as the large items or bulk freights are the snowmobiles, ATVs, outboard motors, nets and other essential items that are used for subsistence, transportation, household needs, construction material needs, our energy

infrastructures. Businesses need the reduced cost of large and bulk items as they would sell more bulk and large items and help with our economic base development. Residents would save more on bulk items and have enough to provide for other needs. Even hub communities will save more on freight costs as they are all closer to Chevak than they are to Bethel, and they save more by picking up their snowmobiles and large items when they come by snowmobile or by boat. They would purchase more bulk items with the savings they get through the Chevak hub. This provides more business to airlines as they deliver the goods.

Need for *direct flights* to Anchorage for passengers is very important as travel to Anchorage would be more cost effective and travelers would spend more for their needs rather than spending most of their money on airfares that are very expensive. Especially for medical emergencies as they can be in the hospital in Anchorage in two and half hours versus layovers in Bethel delaying their arrivals to the hospital quicker.

Hub in Chevak would *save* state officials, that travel out to communities, on travel expenses and cost, and provide more meaningful services to villages, when they can get to a community more quickly and address and complete their work in that community. State officials traveling through Bethel have to pay more for airfare and waste their time in layovers while waiting for flights to villages. They spend more if they miss their connecting flights in Bethel. If they traveled to Hooper Bay, Chevak or Scammon Bay, that is an hour or more airplane ride from Bethel. Direct flights to Chevak from Anchorage would be about a two and half hour ride and getting to our hub communities will be faster as they are closer to Chevak than Bethel, The longest airplane ride would be about 25 to 30 minutes to our furthest community. So Chevak hub would save the state more money and would be *more efficient* and meaningful travels to villages.

State would save on millions of dollars spend on Medicaid travel from villages. Our communities of Chevak, Hooper Bay and Scammon Bay have a population that is almost 3,000 in a particular location. Direct flight to Anchorage from Chevak would save thousands of dollars to Medicaid spending. Flying through Bethel is very expensive and state has to pay 250.00 one way per person from Chevak to Bethel, 350.00 to over 400.00 one way from Bethel to Anchorage and more to Seattle. Missing or cancelled flights from Bethel causes the state to spend more for overnight stays. Especially for weather delays that last up to as much as five days. Chevak has a low median income (LMI) percentage of 74.6%, that means that many are below poverty level. Hooper Bay has 81.2%, Scammon Bay has 71.9% according to the 2012 census data that was released in 2014 to DCRA (Dept of Community and Regional Affairs). 80% to 90% or more of residents depend on the Medicaid program to address their health needs and travel to hospital in Anchorage. They have no means to pay for their medical travels because of high unemployment rates. I am sure the problem is the same in our other hub communities, wanted to show numbers from our area for comparison.

There is no economic stability in our area due to lack of resources and most of all opportunities that would help us start our economic base. Chevak and the hub communities have been labeled as having the highest unemployment rate and have been underserved for so long. Our poverty rate status is high because we have no economic opportunities.

If the postal hub becomes a reality and our airport is funded to extend the runway, than this will be our only opportunity for developing our economic base for Chevak and the hub communities. We need this opportunity and is very vital for the communities in the new Kuzilvak census area (formally Wade Hampton census area) to finally have the chance to experience the development of our economic outlook. With the new Census area name of Kuzilvak lets change that image and label (poverty) associated with formally known, Wade Hampton Census Area. Let us provide a new image and a new focus to provide an opportunity for economic development. If you look at our area we are stuck between the Kuskokwim and the Yukon and in the Yukon there are two hub communities and one in Bethel and Dillingham area. There is nothing in between, and as whole in developing a hub in our area will help Chevak and the hub communities.

Meeting Notes

December 17th, 2014
9:30am-1:00pm
DOWL HKM Office

Planning Team Attendees:

Tom Middendorf, DOWL HKM
Adison Smith, DOWL HKM
Meg Jones, DOWL HKM
Michelle Ritter, DOWL HKM
Mike Maynard, CDM Smith
Bart Rudolph, AK DOT&PF
Don Fancher, AK DOT&PF
Sara Mason, AK DOT&PF
Alexa Greene, AK DOT&PF
Chris Harrington, DOWL HKM

Transportation Advisory Committee Attendees:

Bosco Olson, City of Hooper Bay
Byron Bluehorse, Alaska Tribal Technical Assistance Program (AKTTAP)
Clarence Daniel, Association of Village Council Presidents (AVCP)
Melanie Herbert, Tanana Chiefs Conference (TCC)

Public/Stakeholder Attendees:

Jodi Fondy, Denali Commission
Katrina Moss, Federal Aviation Administration (FAA)
Mike McKinnon, McKinnon and Associates LLC.
Tasha Deardorff, United States Department of Agricultural (USDA), **VIA PHONE**
Deana Lethem, Yukon Kuskokwim Health Corporation (YKHC), **VIA PHONE**

Meeting Overview

The Planning Team for the Yukon Kuskokwim Transportation Plan (YKTP) hosted its first Transportation Advisory Committee (TAC) Meeting on Wednesday, December 17th, from 9:30am -12:00pm. The purpose of the meeting was to provide an overview of the YKTP and the transportation planning process; the purpose and role of the YKTP TAC; discuss and gather feedback on the project status to-date, Public Involvement Plan (PIP) document, and other transportation planning efforts currently going on in the region; discuss the vision, goals, objectives, and Y-K Delta transportation issues/needs/priorities for the YKTP.

Introductions

The TAC, Planning Team, and other stakeholders in the room introduced themselves; and then discussed the experience they bring to the group, why they are here today and why the YKTP is important to them. Below is a brief summary from the introductions:

Melanie Herbert - TCC, Transportation Manager. Melanie works for TCC and is representing a few villages in the study area.

Bosco Olson – City of Hooper Bay, City Manager. Bosco has worn many hats; he is from Hooper Bay and has worked with tribes and the city. He is currently with the Sea Lion Corporation, ANSCA (Alaska Native Claims Settlement Act). Bosco worked on the IRR Indian Road Plan in the late 1990's and 2000. Bosco retired in 2014 as the City Administrator of Hooper Bay, but is currently still holding the position.

Clarence Daniel -Transportation Director, AVCP. Clarence was born and raised in Tuntutuliak; Clarence worked eleven years for the regional housing authority, and has traveled to almost every community in the YK Delta region. Clarence has a good understanding of the issues, needs and priorities in the YK Delta region. Clarence would like to see the plan contribute to sustainability in the region. He would like the team to keep an eye on the cost of oil as it is declining and the cost of living within the region.

Byron Bluehorse - Program Manager for the AKTTAP. Byron is originally from the Navajo Nation; he has lived in Fairbanks for nine years and currently works the AKTTAP. One of his key focuses at the AKTTAP is providing training for tribes that receive funding from Federal Highways Administration or the Bureau of Indian Affairs for transportation projects. Byron is also currently working on the Lower Kalskag LRTP; being engaged in the YKTP planning process will be helpful in implementing the Lower Kalskag LRTP.

Don Fancher - DOT&PF, YK Planner. Don has worked in the YK Delta Region for the Lower Kuskokwim School District and Regional Housing Authority. Don has a unique interest in the YKTP because it affects the region where he is from and he wants to be a part of planning for the region's future. Don is interested in determining what the priorities are for the region when the current funding climate is uncertain.

Alex Greene-DOT&PF, Northern Region Planner. Alexa is originally from Nome. Alexa has worked on long range plans, and is representing communities in the interior region that are located in the study area.

Bart Rudolph - DOT&PF, Planning Manager for Central Region. Bart has a background in both rural and urban long range transportation planning. Bart is hoping DOT will get a useful product out of the YKTP that looks at making long term strategic investments in the Y-K Delta region.

Sara Mason – DOT&PF, Chief of Surface Transportation Planning. Sara has an extensive background in transportation planning; she is involved in this meeting because of her interest in planning and her knowledge of State and Federal Planning requirements and priorities.

Katrina Moss – FAA. Katrina is focused on the aviation side of things for the YKTP; she has worked as the YK Delta region planner position at DOT&PF in the past and has extensive knowledge of airports in the region. She represents FAA Airports Division for airports in the YK Delta and Northern Region. Katrina's goal is to see what the aviation priorities are.

Jodi Fondy – Denali Commission, Energy Program Manager. Jody is interested in coordinating energy and transportation planning efforts. Many of their energy programs as well as other programs have touched many of the communities in the YK Delta region, and she hopes to continue that in the future.

On the phone

Deanna Lathum – YKHC, Capital Projects Manager. Deanna is originally from Quinhagak; she is interested in the YKTP, since transportation touches every aspect of how they are able to deliver health care services to all of the communities.

Derrick Evan- YKHC, Project Development Tech. Derrick is originally from Kwigillingok; he operates 48 village clinics and 5 sub-regional clinics and he is interested in participating in planning for future transportation projects that coordinate with health projects and future funding opportunities for YKHC and the YK Delta region.

Tasha Deardorff - USDA Rural Development Program Manager. Tasha is interested to see how rural development programs can help with the projects in the region.

Meeting Summary

The Planning Team provided a presentation on the purpose and role of the YKTP TAC, the purpose of the YKTP Update, the PIP, and the YKTP progress to-date. The Planning Team requested that the TAC provide guidance and feedback on the items presented and discussed.

The Planning Team provided an update on the aviation work completed to-date, and explained that they are updating the 2002 YKTP data by gathering updated information from the Alaska Aviation System Plan (AASP), Department of Commerce and Community and Economic Development (DCCED), and other existing sources, as well as adding important items such as approaches, weather stations and passenger shelters.

CDM Smith presented on the preliminary aviation analysis completed, including the aviation forecast, passenger enplanements, total cargo for the region, airline route structures and fleet mix. At the end of the meeting, there was time allowed for comments from the public.

TAC Members Comments/Feedback

Aviation/Other Modes

The TAC expressed the need for weather stations at all airports in the region. AVCP is including weather stations into their tribal transportation safety plan, and they have the ability to purchase weather stations as long as the FAA will allow it. Tom, with the DOWL HKM Planning Team noted that weather and approaches are also being looked at under the Alaska Aviation System Plan (AASP).

The TAC expressed their concern and the need to address approach control in Bethel. They explained that the infrastructure is in place, but it is not being used due to staffing issues. There are many pilots that travel from the Lower 48 and they are unfamiliar with unique Bethel air traffic control rules. In bad weather (which is common in Bethel), VFR aircraft are circling for a long period of time, while waiting for the Instrument Flight Rules (IFR) aircraft to land. If approach control is resolved in Bethel, the IFR planes could land faster and would allow the VFR planes to have less circling time. The Planning Team noted that this was also brought up to FAA during the recent Bethel Airport Master Plan.

The TAC expressed the need for passenger shelters at the airports in the region, but also discussed their concern about vandalism and poor condition of existing passenger shelters. They recommend that the community or possibly the airlines that fly into those villages take some responsibility of the shelters.

The TAC suggested that the Twin Otter was a good airplane for the region, and the recommended that the government should create a tax break or an incentive to have it return to the region.

A representative from the YKHC suggested that the FAA may have resolved issues related to oxygen tanks on aircraft. They also expressed their concern relating to the high cost of travel to access health care.

The TAC expressed the need for barge delivery policy. Currently barges deliver whenever and wherever they can. There is no policy in place, that the TAC is aware of, that limits what times

of year or where the barges can deliver. Sometimes the barge deliveries unintentionally interrupt subsistence areas.

The TAC expressed the need to coordinate with energy organizations and other agencies that operate and deliver fuel to address the issue of fuel header locations.

Public Involvement

The TAC suggested that the Planning Team present at the TCC meeting in Fairbanks. TCC is divided up into sub regions and they have smaller meetings prior to the TCC meeting. The TAC believes it would be beneficial to get together with the sub regions prior to the TCC meeting.

The TAC suggested that an Alaska Native Tribal Health Consortium (ANTHC), and Western Federal Lands (WFL) representative be invited to participate/listen to the YKTP TAC meeting. Bryan Allen with WFL was recommended as someone to contact.

The TAC suggested that the Planning Team hold public meetings in Bethel in March/April prior to the YKHC Tribal Gathering; and hold the 2nd YKTP TAC meeting after the public meeting and the YKHC Tribal Gathering.

The TAC suggested that the Planning Team hold public meetings in Bethel in October prior to AVCP Convention; and hold the 3rd TAC meeting after the AVCP Convention.

The TAC suggested that the Planning Team select a cluster of villages and to hold public meetings in during the winter months so residents can travel on their snow machines to the meetings via trails and ice roads; more people will attend the meetings this way. The best time for snow machine travel is February and March, depending on the weather. DOT&PF and the Planning Team noted that the public involvement budget is limited so DOT&PF staff may travel to any additional communities and hold public meetings.

Vision Exercise

The TAC and stakeholders completed worksheets to help the Planning Team develop a vision statement for the YKTP. TAC members made the following suggestions and statements for their idea of a vision statement.

- Develop a plan to guide transportation decisions within the region that will promote safety, economic development, and connectivity.
- Connect and provide better access between communities.
- Improve safety for travelers and fuel delivery.
- Improve economic development.
- Improve the condition of airports and roads.
- Provide safe, warm and well maintained airport shelters.
- Provided equipment to help with snow removal and debris for all airports, not just the six hubs.
- Ability to enjoy the benefits of transportation like other communities in the United States.
- Efficient and connected.
- Support multi- modal functionality.
- Support and enhance safety for all modes of transportation.
- Enhance the quality of life.
- Provide a safer transportation system in western Alaska where there is diverse land conditions.
- Develop a sustainable, efficient, affordable, and safe transportation system that is connected and provides access to other communities and economic development opportunities.

Issues and Needs Worksheet

The TAC broke into three groups and ranked issues from 1-5, 1 being less important and 5 being most important. The results of the ranking are below:

x's represents the number of responses.

	Less Important-----Important------More Important					
Issue	**1**	**2**	**3**	**4**	**5**	**Comments:**
Surface						
Winter Trail Markings					xxxx	
Dust Control			xx	x	x	
Maintenance of Existing Roads			x		xxx	Lack of equipment
Transit		xxx		x		
Safety					xxxx	

	Less Important-----Important------More Important					
Issue	**1**	**2**	**3**	**4**	**5**	**Comments:**
Aviation						
Runway Extensions/Improvements			xxx		x	
Snow Removal and Maintenance Equipment			x	x	xxx	
Bypass Mail			x	xx	xx	
Dust Control			x	x	xx	
Navigation Aids/Approaches			xx		xx	
Maintenance of Existing Runways			x	x	xx	
Security		x		xx	x	
Safety				xx	xx	
Passenger Shelters		xx		x	x	
Marine						
Barge Landing Improvements			x	xx	x	
Fuel and Freight Delivery				xx	xx	
Safety			x	x	xx	
Ports/Harbors/Portages		x	xxx			
Other						
Emergency Response			x		xxx	
Hazard Mitigation		x	x	x	x	
Cost of Living			x		xxx	
Federal and State Funding Climate			x	x	xx	
Water and Sewer Coordination			xx	x	x	ANTHC Coordination
Access to Landfill Facilities			x	xx	x	
Intermodal Access				xx	xx	
Economic Development		x			xxx	
Access to Subsistence			x		xxx	
Partnerships with Local, State, and Federal Agencies			x		xxx	
List issues/needs not listed above:						
Cost Transparency					x	
Regulations Against Monopolies					x	
Infrastructure Improvements to Fuel Headers					x	Per Village
Climate Change-Fall Flooding					x	

Goals and Objectives Worksheet

The TAC completed a goals and objectives work sheet. ***The Planning Team prepared the goals and objectives below using TAC input from the exercise.***

Strategies

The following strategies were discussed to be used as a filter for projects that will be considered in the YKTP.

1. **Regional Significance:** Projects located on a facility which serves regional transportation needs.
2. **Cost Review:** The cost of the project and return on the investment for the region and the State of Alaska.
3. **Project Review:** Projects proven to be regional significant, have a return on investment, and meets the goals of this plan will be reviewed, scored and prioritized. Projects that are not regionally significant, do not have a return on investment, or do not result in meeting the goals of the plan, will be reviewed, but not scored or prioritized. However, DOT&PF recognizes that these projects are priorities to communities and will include them in Appendix A.

Goals and Objectives

Goal #1: Intermodal Connectivity and Accessibility. Improves intermodal connections and provides access to airports, barge landings, ports or docks, public services and facilities, and communities within or outside the region.

Objectives - Near Term

- Publish a map of the existing regional transportation system, including the different modes of transportation and recommended routes.
- Develop an intermodal connectivity policy that is vehicle fleet appropriate for the region's transportation system.
- Promote transit in communities in the YK Delta and Interior regions.

Objectives- Long Term

- Develop projects that provide access to multiple communities and other modes of transportation.
- Develop projects that provide pedestrian facilities that access other modes of transportation.
- Develop projects that improve existing transportation facilities.
- Complete barge landing improvements that were identified in the United States Army Corps of Engineers (USACE) Barge Landing System Improvement Design Study.

- Develop a transit system that is vehicle fleet appropriate and provides access to other modes of transportation, public facilities, and jobs in communities.
- Support transportation projects in hub communities.

Goal #2: System Preservation. Preserves and maintains the existing YK Delta Transportation System.

Objectives – Near Term

- Complete life cycle cost analysis for all modes of transportation.
- Maintain the existing transportation systems that provide access to multiple communities and modes of transportation.
- Develop projects that are sustainable.

Objectives – Long Term

- Complete preventative maintenance of the existing transportation system.

Goal #3: Economic Development. Improves economic conditions locally and/or regionally; provides intermodal connections that enhance economic activity.

Objectives – Near Term

- Promote transit in communities in the YK Delta and Interior regions.
- Support interagency coordination working with existing economic development, energy and other plans and projects.
- Support local hire on transportation projects where laws allow.

Objectives – Long Term

- Develop projects that connect users to access the Port of Bethel.
- Develop projects that connect users to access all modes of transportation.
- Develop projects that support tourism by providing access to recreational activity, shopping, events and community activity.
- Develop projects that support communities that operate small businesses, exporting items such as fish, groceries, supplies, fuel, Alaska Native art work, and other goods.

Goal #4: Safety and Security. Improves operational safety and security and helps reduce risks for the YK Delta and the Interior transportation system users.

Objectives – Short Term

- Provide airport lighting and security.
- Provide facilities for 24-hour medevac at hub communities.
- Provide safety education to the YK Delta and Interior residents that operate on the transportation system.
- Coordinate with regional health providers to align needs and priorities with transportation and health projects.
- Develop partnerships with cities, tribes, boroughs and other stakeholders to coordinate planning and funding efforts for markings on the trails and river channels.

Objectives – Long Term

- Develop projects that improve safety and security.

Goal #5: Focus on Improving the Quality of Life. Consider community concerns regarding subsistence, environmental priorities, health, sanitation, energy, and interface with local infrastructure.

Objectives:

- Consider project impacts to subsistence.
- Promote projects providing access to public services.
- Look for opportunities to coordinate project development and planning activities with energy, health, and sanitation projects.
- Look for opportunities to coordinate project development and planning activities with the Bureau of Land Management (BLM) and Department of Natural Resources (DNR) and other land users.

Goal: Good Governance. Ensure openness, transparency, and accountability during the transportation planning and decision making process.

Objectives:

- Promote and engage in interagency coordination.
- Establish early and continuous public involvement activities that provide timely information about transportation projects.
- Provide public access to technical information.

- Provide adequate public notice of meetings.
- Leverage internet and mobile resources appropriate for the community.
- Encourage use of Gov Delivery for updates to the public and other government officials.
- Comply with DOT&PF's Non-Metropolitan Local Consultation Policy.
- Comply with DOT&PF's Tribal Consultation Policy.
- Comply with Federal Highways Administration (FHWA) transportation planning process, and funding regulations.
- Comply with Federal Aviation Administration (FAA) Community Involvement Policy.
- Comply with FAA's funding regulations.
- Develop an implementation plan for the YKTP.
- Develop an implementation team to monitor and report back to system users and Federal Highways Administration on the implantation of the plan.

Public Comment

Mike McKinnon presented on a Yukon-Kuskokwim Freight and Energy Corridor Plan. The presentation explained the current status of the project and the importance of having it considered as one of the planning efforts in the YK Delta region. He explained that this is a plan for a 40 mile road route along the Portage Mountains between the port at Kalskag and a proposed port on Paimiut Slough. The Corridor Plan should conclude in January 2015. Public meetings will be held in 2015.

Closing Comments

- The next TAC meeting needs to be a full day.
- Need to break goals and objectives into short term and long term.
- The YKTP will be looked at nationwide; we need to ensure there is an educational section for non-Alaska residents about the YK Delta transportation system, its issues and needs in the region.
- Local roads and ATV roads need to be identified in a plan for state appropriation or other funds from other funding agencies. The TAC recommends reviewing and referencing BIA's local roads plans in the YKTP so communities can seek funding from various sources.
- The TAC would like to see a list of projects that were recommended in the last plan; what has been completed from that list; and what is left to be completed.

Action Items

- Revise the public involvement plan to reflect the TAC's guidance and feedback.
- Prepare information materials using the feedback from the TAC, located in this document, for upcoming presentations at conferences and public meetings.

- Coordinate with TCC, AVCP, and YKHC on upcoming conferences to present at in March/April/October.
- Coordinate with DOT&PF, TCC, AVCP, and YKHC to schedule public meetings around the conferences in Feb/March/April/October.
- Invite representatives from the Alaska Native Tribal Health Consortium (ANTHC), and Western Federal Lands (WFL) to participate/listen to the YKTP TAC meeting.

The meeting ended at 1pm.

YKTP Yukon Kuskokwim Delta Transportation Plan

Yukon-Kuskokwim Transportation Plan Transportation Advisory Committee Meeting #2

Meeting Notes

Date: April 16, 2015
Time: 9:00am-4:00pm
Location: Association of Village Council Presidents (AVCP), Bethel

Attendees:
Adison Smith (DOWL)
Meg Jones (DOWL)
Mike Maynard (CDM Smith)
Sara Mason (AKDOT&PF)
Don Fancher (AK DOT&PF)
Alexa Greene (AKDOT&PF)
James Boyle (DOT &PF)
Clarence Daniel (AVCP)
Melanie Herbert (Tanana Chiefs Conference)
Pete Williams (City of Bethel)

Other Attendees
Frank Neitz (Bethel) Aviation Advisory Board
Mary Satler (AVCP in Juneau)
Myren Nanning (AVCP President)
Jolene Jon, United States Department of Agriculture – Rural Development

Summary

Introductions were conducted and the purpose of the meeting was reviewed. The purpose of the meeting was to provide a Statewide DOT&PF/Legislative and YKTP planning progress update; discuss and gather feedback on the plan and other transportation planning efforts going on in the region; continue discussion on the draft vision and goals, and Y-K Delta Transportation issues/needs/priorities. A presentation was conducted and facilitated by the DOWL planning team. DOT&PF presented on the Statewide Surface Planning Update.

State of Alaska Update

Ms. Sara Mason with DOT&PF provided an update on the Statewide Long Range Transportation Plan (LRTP) currently in progress. The Statewide LRTP is a policy document that will provide guidance to the DOT&PF regions and stakeholders. The document is expected to be complete by the end of December. Ms. Mason presented the draft policy areas identified in the Statewide LRTP, which include:

1. New Facilities
2. Modernization
3. System Preservation
4. System Management and Operations
5. Economic Development
6. Safety and Security
7. Livability
8. Community and Environment

The YKTP TAC used the draft Statewide LRTP to develop a set of goals for the YKTP update.

Ms. Mason discussed the Statewide Bicycle and Pedestrian Plan Update. The original plan was completed in 1995 and needs to be updated in order to address non-motorized transportation throughout the State of Alaska. She shared DOT&PF's concerns on how to delineate streets from sidewalks in small communities throughout rural Alaska. DOT&PF wants to help make non-motorized transportation safer. They understand that residents use gravel roads that do not have designated sidewalks for bicyclists or pedestrians. DOT&PF will issue an RFP to update the plan, which is expected to be released sometime this summer.

The TAC discussed the issue of pedestrians using the streets in Bethel as their walkway. A TAC member, who resides in Bethel, mentioned that there are huge concerns with safety in town. The streets are used for all modes of transportation and they are not safe.

Ms. Mason provided an update on the Statewide Transportation Improvement Program (STIP). She stated that she is currently working on the 2015 STIP. The 2012-2015 STIP is expiring and there are no new projects being added. It should be out for public comment summer of 2015. Programming must be fiscally constrained and heavily dependent on current federal legislation, Moving Ahead for Progress in the 21st Century (MAP-21). The Capital and Operating Budget has been cut. DOT&PF is reprograming to adjust to the budget cuts and the

MAP 21 has increased funding for the National Highway System (NHS) and safety projects. It also has decreased funding for the DOT&PF's Surface Transportation Program (STP) funding, and instituted mandates for performance standards and asset management. MAP-21 was extended to May, 2015.

There is new transportation legislation, The Generating Renewal, Opportunity, and Work with Accelerated Mobility, Efficiency, and Rebuilding of Infrastructure and Communities throughout America Act (GROW AMERICA), is currently being considered. This act is a six year, $478 billion dollar authorization that focuses on highways, bridges, transit, and rail. GROW AMERICA proposes a transition tax. It includes $317 billion for the highway system and road safety in rural and tribal areas and $115 billion for transit and expanding transportation options. It will also increase funding for the Bureau of Indian Affairs (BIA) Tribal Transportation Program (TTP) to $517 million.

AVCP Update

Ms. Mary Satler with AVCP provided a Legislative Update. She discussed that the State is facing a major budget crisis. The operating budget requests/needs are ~ $4.1 billion, while the available budget is ~ $2.1 billion. The budget was based on assuming that the price of oil would still be ~ $117 a barrel. The price of oil today is ~ $50 a barrel. Difficult decisions have to be made and discussions of implementing State taxes or using PFD funds are starting to take place.

Public Comment

Mr. Myren Nanning (AVCP President) shared that he would like DOT&PF to consult with Hooper Bay about the Hooper Bay Airport project. He mentioned that the word on the street is that DOT&PF wants to transport sand from Bethel to Hooper Bay (~100 miles) for the project. Mr. Nanning said that this is not the best option because of the distance between communities. He asked DOT&PF why they are transporting sand if Hooper Bay has it available within the community. He shared his frustrations about this decision being made without community input, and that these decisions will impact a community for years to come.

YKTP Planning Progress Update

DOWL provided a presentation on existing transportation conditions in the YK Delta region. The Power Point can be found as Attachment A.

The TAC provided feedback and discussed issues and needs. Below are some suggestions provided by the TAC:

- AWOS (Automated Weather Observation System) should be installed in all villages.
- VFR (Visual Flight Rules) is an issue. Bethel Approach Control has issues getting planes in and out during low minimums
- Twin Otter is the safest airplane for our region, but is not flown out here because of its expense and strenuous regulatory requirements. If the FAA could possibly provide airlines with regulatory waivers or tax breaks to help decrease cost, airlines might fly the Twin Otter.
- LP/LPV approaches should be in villages with higher passenger numbers or daily flights.
- Passenger shelters need to be added to the aviation inventory. The survey should ask air carriers about the need for passenger shelters. Passenger shelters are a high priority for residents in the YK Delta and the TAC. Ownership and vandalism can be a problem. DOWL should document shelters in the inventory and public input and provide a programmatic recommendation on this issue.
- Bethel needs to designate a place for float planes, such as Hangar Lake. Currently float plans land on the beach next to barges in Bethel which can cause added wear and tear to the coast and dock area. The City of Bethel is maintaining the area where they land which is a huge expense that is not in their budget. DOT&PF mentioned that the U.S. Fish and Wildlife Service used to maintain a fuel tank in the area. The seaplane base is being maintained by private users. The existing conditions of the road need to be documented as well.
- The plan needs to consider climate change and flooding issues.
- Most of the roads within the City of Bethel are owned by the City but maintained by DOT&PF. The City of Bethel and DOT&PF have several resolutions addressing maintenance and ownership. Pete Williams provided Adison with this information. The YKTP will document current road ownership and maintenance responsibility within the City of Bethel.
- The YKTP needs to document dust control issues, which is a concern throughout the region. Currently, water trucks or sodium chloride are being used as dust palliative. Current methods do not last long; methods that last longer are needed. Adison will get with Clark Milne (a former DOT&PF employee who used to lead the dust control initiative at DOT&PF and currently works at DOWL). There is not enough funding for

dust control initiatives. The Denali Commission and DOT&PF previously provided funding for dust control palliatives and equipment. Since the Denali Commission is no longer funding transportation projects, communities need help from other sources. Current dust control programs and potential funding opportunities will be documented in the YKTP.

- Winter trail and ice road maintenance and connectivity was discussed as a huge need. The TAC discussed maintenance issues such as lighting and beacon needs. Solutions that could help residents navigate between communities and find safety in case of getting lost include:
    - Solar lights, which are going to be tested in the ice during the winter of 2016.
    - Fluorescent paint on markers. This alternative is expensive, but it is fairly durable.
    - Locator beacons that will be provided to a resident before they travel a long distance. This effort could be led by village leaders (City, Tribe, Bethel Search and Rescue, Native or Village Corporation).
- Ice Roads were discussed. They were not identified in the 2002 YK Delta Plan. DOWL shared that information about ice roads was difficult to find and that we would appreciate information from the TAC The TAC commented on ice roads:
    - Residents haul lumber from Napaimute to Bethel, then on to Tuntutuliak.
    - Most trails are maintained for snow machine use, not vehicle travel.
    - Getting on and off the ice safely on the harbor in Bethel is an issue due to overflow.
    - DNR limits travel for vehicles over 1,000 lbs. on the ice, unless you have a permit.
- State-owned roads to airports need to be examined for maintenance responsibility. The TAC shared with DOT&PF that in Shageluk the road to the community is three miles and is not being maintained. The gravel source is on the opposite end of the runway, and there is no road to it.
- The City of Bethel's petroleum dock-holds 17 million gallons of fuel. The dock was built in the 1980's and is in need of major repairs. The cost of repairs is almost as great as building a new dock.
- The City of Bethel's docks are beginning to fail due to the river moving in behind the docks. Coastal erosion is getting worse.
- The City docks will not be able to support an increase in operations, in particular if Donlin Gold begins operating in the region.The City seawall needs repairs.

- The small boat harbor is used by many residents within Bethel and the surrounding communities. Traveling by river is much cheaper than flying in the summer. Small boat harbor improvements should be planned.
- Fuel headers and docks are in separate locations in many of the villages. This means the barge has to stop at two separate locations to deliver fuel, causing long delays for the barges in the villages. The Denali Commission began an initiative that looked at communities that might benefit (reducing the cost of fuel) from fuel header relocation. The TAC agreed that this initiative should be documented in the plan and potentially looked at further.
- The TAC suggested that maybe having a fuel truck in a village to help transport fuel to several locations would benefit the barges.

DRAFT Vision and Goals Review

The vision statement was discussed. Ms. Smith reminded the TAC that the vision statement was created using the TAC's suggestions at the December TAC meeting.

"Develop a plan to guide transportation decision with the region that will help improve the transportation system; promote safety, livability, economic development, and intermodal connectivity for all users."

The TAC liked the vision statement and had no further edits. Next they discussed the goals of the plan and the projects identified. They requested that the goals be kept the same for all modes of transportation and that objectives, short and long term, be included. The draft goals include:

- Intermodal Connectivity
- System Preservation
- Economic Development
- Safety and Security
- Project Support

The TAC also requested that the goals reflect the community holistically. The Lower Yukon Kuskokwim School District is considering sub regional schools, which would eventually develop clusters of villages, with one community in the middle acting as a hub. It will be important to have surface connection to those surrounding villages. Education costs are being cut, and this

could be a backup plan for the future. Being that the YKTP is a long term planning document, it is very important that this be looked at further and documented.

Next Steps

The planning team will continue with aviation stakeholder interviews, marine and surface existing conditions and finalize goals.

Community meetings in Aniak, Toksook Bay, Saint Mary's, Emmonak, and McGrath will take place during the spring or late summer.

DOWL will revise the goals and objectives and send out to the TAC for review/comment.

The final TAC meeting will be in Bethel September 29th-October 1st, 2015. This date is tentative.

The YKTP draft will be available in October for the final TAC meeting, pending the public meetings and status of the plan.

YKTP Yukon Kuskokwim Delta Transportation Plan

Yukon-Kuskokwim Transportation Plan Transportation Advisory Committee Meeting #3
Meeting Notes

Date: August 19, 2016
Time: 11:00 am – 4:00 pm
Location: DOWL, 4041 B Street, Anchorage, AK 99515

Attendees:
Adison Smith (DOWL)
Mark Mayo (DOWL)
Jovie Garcia (DOWL)
Don Fancher (AK DOT&PF)
Alexa Greene (AKDOT&PF)
Clarence Daniel (AVCP) Tribal transportation
Melanie Herbert (Tanana Chiefs Conference)
Pete Williams (City of Bethel)
Byron Bluehorse (Alaska Tribal Technical Assistance Program Center)

Summary
Introductions were conducted and the purpose of the meeting was reviewed. The purpose of the meeting was to provide an update on the plan, present and discuss the analysis and key findings for each mode, and gather TAC member input on the projects identified and recommended projects. The presentation was conducted and facilitated by the DOWL planning team.

Additional Comments:
Byron Bluehorse suggested bringing Anna Bosin, the new Tribal Liaison for DOT&PF (Anchorage) into the project team, or at least make her aware of the project.

Action: Alexa Greene to distribute Anna Bosin's contact information to the project team. – completed.

Project Management – Schedule Update (DOWL)

Adison went through the Y-K area planning process and updated project schedule. Due to public outreach delays in the summer, the updated deliverable date of the final plan to DOT&PF is end of January 2017.

Additional comments:

Byron suggested project presence/information at the AFN Convention (public outreach – suggested newsletter/postcard). Clarence suggested speaking with AFN to add the project link to the AFN website. *Action:* Adison to work with Anna Bosin (DOT&PF) regarding a paper/newsletter to include in AFN packets.

Action: Jovie to add open house date into the project schedule and online open house process. - completed

YKTP Planning Analysis and Key Findings – Presentation (DOWL)

Top 4 of our key findings identified through public outreach efforts are:
1. Cost of travel – airline tickets
2. Erosion mitigation projects
3. Cost control Health issues, i.e. dust control
4. Winter trails and ice roads

Aviation – factors considered (but not limited to):
- Forecasted demand and capacity
- USPS proposal for new postal hub
- Runway length and surfacing
- Runway lighting
- Runway approach guidance and weather info
- Lease lots, tie downs and fuel
- Passenger shelters
- No overall airport system capacity issues
- Intermittent airport capacity issue at Bethel
- No new “hub” airports
- Runway lengths adequate with nine exceptions
- Drainage and surfacing
- Runway lighting, approach guidance and weather information
- Airport maintenance
- Passenger shelters (need, issue with maintenance, i.e. vandalism)

Additional comments:

Don emphasized the importance of having the plan made available on the project website, especially highlighting information about passenger shelters.

Clarence suggested possibly in the future, contacting the airlines who flies into the village and doing a pilot project for sustainability at one of the villages, passenger terminal (43 mins).

Surface – factors considered (but not limited to):

- Funding for rural transportation projects is scarce
- Vehicle accidents are mostly related to ATV, skiffs and snow machine accidents and has been collected from YKHC
- AVCP's transportation department is working on winter trail markings and other critical infrastructure projects
- Dust control
- Bike and pedestrian facilities
- Ice roads and winter trails
- Erosion is a real issue for coastal communities in the YK Delta
- Newtok is relocating to Mertarvik
- The President announced ~$700 million to help communities that are environmentally threatened
- Denali Commission is tasked with being the lead agency to carry out the President's announcement and will be developing an environmentally threatened communities program to help communities like Newtok

Additional comments:

DOT&PF, due to the low population and low mileage, the do not track accident/incident statistics. Our team has been tracking the information from the hospitals and the State Troopers.

Byron met with Injury Prevention last week and will email Adison link to data collection. Pete mentioned Joe from Kids Don't Float (KDF) program can provide additional data and statistics, if required. (http://dhss.alaska.gov/dph/Chronic/Pages/InjuryPrevention/KidsDontFloat/Default.aspx)

Clarence mentioned AVCP received four safety awards – one of the safety awards received was creating a universal data system to get information on accidents and incidents that are not available on FARS (http://www.nhtsa.gov/FARS).

Byron advised to take a look at the FHWA's All Road Network of Linear Referenced Data (ARNOLD) Reference Manual. (https://www.fhwa.dot.gov/policyinformation/hpms/arnold.cfm).

Clarence is the main contact for all AVCP projects. AVCP will work with DOT-Aviation to select which Tribe/community will require consortium, weather system.

Erosion is a real issue for coastal communities in the YK Delta. Adison talked briefly about the Mertarvik relocation project and federal budget constraints that could impact future surface projects.

Marine – factors considered (but not limited to):

- Funding for marine projects is scarce
- FAST Act established the National Highway Freight Program investing $4.5 million over the next five years
- Emmonak, St. Mary's and Bethel are all in need of basic improvements to keep freight moving for all YK Delta communities

Additional comments

Pete mentioned that the existing ports are getting old and deciding whether to build brand new or rehabilitate and maintain the existing facilities. Pete is the best contact for Bethel port and harbor facilities. There is minimal funding for the smaller barges and ports. Because the Y-K Delta is not connected to any other community by road or rail, the Bethel general cargo dock and staging area are critical to the shipment of freight to the Delta.

Mooring points have started to erode on some of the barges in the villages. The next time Clarence visits a village; he will take photographs and share his images to Adison to forward on to USACE before October for presentation to the Denali Commission for additional projects. (1:04)

The Alaska Association of Harbormasters and Port Administrators has a new report coming out in November/December on the ports and harbors of Alaska. Pete has read it and will forward to Adison once it's available.

The FAST Act established the National Highway Freight Program investing $4.5 million over the next five years. Emmonak, St. Mary's and Bethel are all in need of basic improvements to keep freight moving. The plan will give clear directions on how to apply for these monies.

Regarding barge landing and fuel headers in the village, Clarence suggested that in the villages for efficiency, if the organizations in the village have multiple locations where they have field, if they can look for some funding at the village level to try and get a pipeline at one header to fill up all the tanks at one stop, that would lower costs at the village level.

General – factors considered (but not limited to):

- Donlin Gold existing and future conditions
- YKHC hospital expansion and services

Recommendations - Aviation:

The top five regionally significant recommended aviation projects are:

AVIATION	Score
Aniak Airport Runway Relocation & Improvements	69
McGrath Airport Repaving & Erosion Control	68
Saint Mary's Airport Improvements	64
Emmonak Airport Improvements	64
Kwigillingok Airport Reconstruction	64

The committee has decided to remove project Aniak Airport Runway Relocation and Improvements, because it's an area being done. This can also be removed on the Needs list (Don Fancher to confirm).

Clarence has asked to bump up Lime Village Airport Maintenance project - Furnish all labor, tools, local supervision, and perform routine summer and winter maintenance of the Lime Village Airport facility which includes Alaska Department of Transportation and Public Facilities owned maintenance equipment, building structures and roadways located on airport property unless otherwise designated. The State may opt to offer renewal of this contract for four (4) additional one year periods.

Action: Add Lime Village Airport Maintenance Project as an Identified Needs in final plan.

Action: Include graphics/image for each regionally significant project in final plan.

Some of the station managers at Bethel Airport have talked to Clarence saying that the approach control, all of the infrastructure is being used, but not used. Some of the 207's are circling for hours and letting the IFR in every half hour, if it's stacked up to 7, that's 2-3 hours circling. This could possibly be a safety issue.

The committee has decided to move up project Bethel Airport Airspace Control Analysis into the top 5 recommended projects list.

The final regionally significant recommended aviation projects are:

1. McGrath Airport Repaving & Erosion Control
2. Saint Mary's Airport Improvements
3. Emmonak Airport Improvements
4. Kwigillingok Airport Reconstruction
5. Bethel Airport Airspace Control Analysis

Recommendations – Surface:

The top five regionally significant recommended surface projects are:

SURFACE	Score
All Coastal Communities -Winter Ice Road Marking	64
Bethel Transit System	59
All YK Delta Communities - Trail Marking	58
All Coastal Communities - Erosion Control	54
McGrath Connector Road from Parks Highway to McGrath	53

Action: Winter Ice Road and Trail Markings – develop an estimate on what's on the maps provided and have Clarence to update the road markings. Clarence does not have the total cost estimates completed. Rough planning estimates will be provided prior to draft plan. Adison to work with Clarence on the estimate costs prior to draft plan.

Action: Combine projects Winter Ice Road Marking and Trail Marking as one project.

Bethel Transit System – Transit to and from town and the airport. Additional education to the public about the transit system. Suggested solution to provide additional funding to allow the operations to go to and from town and the airport. Currently, there is a transit system, but it is not widely known about. It does not go to the airport. There have been emails sent to city asking about more details relating to the transit system.

Action: Adison to follow up with John Sargent. Recommendation could be to provide a small study or transportation analysis/plan for the City of Bethel. We will need solid information before developing plans.

All Coastal Communities – Erosion Control: We need to identify the five communities and what their immediate needs are and go to Denali commission for funding. Napakiak and Newtok are the two communities experiencing the worst impacts from erosion. We can provide erosion protection measures for the transportation system in the communities experiencing worst impacts.

McGrath Connector Rd from Parks Hwy to McGrath – Access to public facilities and services, cheaper fuel and freight, and other modes of transportation. In FY16 - Barge companies are not going to be able to make it to McGrath. All of their fuel and freight will have to be flown in. If the Donlin mining project is approved, a road will need to be built anyway. This project has not been planned or prioritized yet. It wasn't until this meeting that the Public Works members began to speak about such a big project. The discussion was about looking 20 years into the future. This connector road is a top priority.

Action: Remove McGrath Connector Rd from Parks Hwy to McGrath, from project list since it's already added to aviation projects.

Action: Add All YK Delta Communities - Dust Control project to top list. A dust control application for communities in the YK Delta will help improve residents' health. Currently, the AVCP is helping Chevak and Alakanuk and Scammon with dust palliative solution.

Action: Move up Kalskag - Yukon Kuskokwim Freight/Energy Corridor project, connectivity between the Yukon and Kuskokwim River Communities to help reduce the cost of fuel and freight delivery. The project will develop a transportation corridor to transfer products to and within the Kuskokwim - to provide opportunities for markets. The project is slowly moving forward. The transportation of fuel and reduction in cost was relying on fuel and gas being generated in Fairbanks (Flint Hills) which shut down in 2014. There may be a time in the future when they open Fairbanks operations again.

The final top five regionally significant recommended surface projects are: (2.24)

1. All YK Delta and Coastal Communities -Winter Ice Road & Trail Marking (combined)
2. Bethel Transit System (rename title, after discussion with John Sargent)
3. Five Identified Communities – Erosion Control
4. All YK Delta Communities - Dust Control
5. Kalskag - Yukon Kuskokwim Freight/Energy Corridor

Recommendations – Marine:

The top five regionally significant marine projects are:

MARINE	**Score**
Emmonak Dock Expansion/Deep Water Port	70
Phase 1: Bethel City Dock West Extension	51
Phase 2: Bethel East Harbor Expansion	50
Bethel Petro Dock Expansion	49
Kongiganek Deep Sea Port and Access Road	47

Action: Remove Phase 1: Bethel City Dock West Extension - Dock improvements to ensure safe and efficient fuel and freight delivery. Pete suggested to remove Phase 1 and Phase 2: Bethel East Harbor Expansion – is not going to happen. There are two projects for Bethel - the city dock needs to be repaired and expand the petroleum dock expansion. Project rewording required for the Bethel City Dock Expansion.

Kongiganek Deep Sea Port and Access Road - Erosion protection - New port to allow for safe and efficient fuel and freight delivery to Kong and surrounding villages. Develop a new barge site on the mouth of the river. The existing barge site is getting too shallow. This project will also provide a safe harbor for hunters and travelers. The AVCP and the Kongiganek Tribe are working together on this project. The project is currently in design. Notes: Cruise ships are now traveling through the Northwest Arctic Passage. This Port would also provide a safe harbor for potential cruise ships.

The final top five regionally significant marine projects are:

1. Emmonak Dock Expansion/Deep Water Port
2. Bethel City Dock Expansion
3. Bethel Petroleum Port Expansion
4. Kongiganek Deep Sea Port and Access Road
5. St. Mary's Dock Improvements

Any additional comments to be submitted by Friday, September 2, 2016.

Next Steps:

- Draft the report
- Prepare Newsletter #1
- Prepare Online Open House materials (website)

Meeting ended: 2:15 pm

Appendix B

Aircraft Descriptions

Common Passenger Aircraft* in YK Delta Region

	Carrier	Aircraft	Airports with >100 Arrivals	ARC
 **Source: Alaska Airlines**	Alaska Airlines	B737-400	BET	C-III
 **Source: Era**	Era	Dash - 8	KSM, ANI	A-III
 **Source: Pen Air**	Pen Air	Saab 340	MCG, ANI	B-II
 **Source: Ravn Alaska**	Ravn Alaska	B1900	KSM, ANI	B-II
	Grant Aviation	Cessna 208**	Multiple	A-II

Source: Grant Aviation				
 **Source: Hageland**	Hageland	Cessna 207**	Multiple	A-I
 **Source: Ryan**	Ryan	Pilatus PC-12	Multiple	A-II
 **Source: Era Alaska**	Era Alaska	Piper PA 31	Multiple	B-I

** Aircraft provides cargo option.

Table A-2: Common Cargo Aircraft in YK Delta Region

	Carrier	Aircraft	Airports with >100 Arrivals	ARC
 **Source: Northern Air Cargo/www.Planespotters.net**	Northern Air Cargo	B737-200	ANI, BET, KSM, MCG	C-III
 **Source: Lynden Air Cargo**	Lynden Air Cargo	L100	BET	C-IV
 **Source: WikiMedia**	Everts Air Cargo	DC-6	EMN, KSM	B-III
 **Source: Everts Air Cargo**	Everts Air Cargo	DC-9-33	ANI, BET, KSM, MCG	C-III

 **Source: Ryan Air**	Ryan Air	Casa 212	Multiple	A-II

Table A-3: Future Aircraft to the YK Delta Region**

	Carrier/Aircraft Brand	Aircraft	Supporting Hub Airports	ARC
 **Source: Horizon Air**	Horizon Air/ Bombardier	Q400	ANI, BET,KSM	A-III
 **Source: GippsAero**	GippsAero	GA8 Caravan	Multiple	A-II
 **Source: www.thegearpage.net**	Shorts	360	ANI,BET, ENM	B-II
 **Source: Quest/ www.airvectors.net**	Quest	Kodiak	Multiple	A-II
	Lockheed Martin	CargoLifter	Multiple	N/A

 **Source: Lockheed Martin**				

** Possible future aircraft based on assumptions of future need and aircraft availability

Appendix C

Mail Service

Intra-Alaska Mail Service by Air

Mail Service in Alaska: Established by law (39 USC 5402) the United States Postal Service (USPS) is required to perform its mail delivery mission of "providing universal service at universal rates" to all persons in the United States. In order to meet its mission to deliver mail to all persons in Alaska, the USPS must use air transportation to deliver *all* mail to many of the 82% of Alaska communities not accessible by road.

There are two categories of intra-state mail delivery in Alaska:

1. Priority rate mail (First Class, Priority, and Express Mail)
2. Non-priority rate mail (Parcel Post / Bypass Mail)

Priority-rate mail, which travels by air to most locations within the U.S., constitutes about 6% to 7% of the total Alaska intra-state mail. The remainder of the mail is non-priority rate mail, which travels under the label of parcel post—the USPS's *ground-based* delivery service. In Alaska, however, parcel post mail travels by air rather than by surface route to many locations. That is to say, shippers pay ground-based delivery postage rates, but the USPS uses air service to move that mail. The cost to the USPS to transport parcel post mail by air far exceeds the revenue from postage paid by customers (i.e., the USPS moves the mail at a considerable financial loss). For example, in 2009, it cost $15.09 to ship a 68 pound parcel to Cold Bay, but the USPS paid $153.00 to transport it (D. Macy, USPS, 2009).

Bypass Mail: Bypass mail is unique to Alaska. Bypass mail is a type of mail that falls within the non-priority rate category. About 20% of Alaska's non-priority mail is handled just as it would be anywhere else in the U.S.; it is received and handled at any Post Office in Alaska and is delivered to its in-state destination. The remaining 80% of the non-priority mail ships as "bypass mail."

Bypass mail is prepared so as not to require handling in a postal facility—mail is able to move directly from shipper to customer without passing through a Post Office, hence it "bypasses" the postal facilities. Mail shipped under this category has specific requirements that distinguish it from regular non-priority mail, such as the minimum weight of the shipment, the packaging and sizing requirements, the locations at which this mail can be accepted, and the locations where this mail is authorized for delivery. The bypass mail program was established and designed to:

- Prevent overloading of Alaska's limited postal facilities.
- Provide affordable means of delivering everyday necessities to rural Alaskans.
- Support affordable and reliable passenger and non-mail freight service.

Bypass mail shipments originate in Anchorage and Fairbanks only. Service is currently provided to 16 regional hubs and 120-130 bush community destinations. Five mainline carriers transport mail to the regional hubs, and 20-25 bush carriers transport mail to the bush destinations presently.

The minimum weight of each shipment must be at least 1,000 pounds, and the shipment must be palletized. Shippers apply in advance with the USPS to send goods via bypass mail. Qualified shippers become responsible for weighing the shipment, affixing all postage and labels, and tendering the shipment directly to the air carrier. The air carrier then becomes responsible for delivering the shipment to the final addressee at the bush destination.

Current Events Affecting Alaska's Mail System:

The USPS's position on bypass mail has been that the agency is committed to the program, recognizes its valuable purpose, and currently has no plans to end it. Bypass mail volume is on the rise, even though first class & priority mail volumes have decreased drastically. However, the USPS is mandated by Congress to run much like a private enterprise – required to break even in business. The USPS reported a loss of $8.5 billion for fiscal year 2010. In Alaska, the USPS pays air carriers approximately $155 million each year to deliver mail at a loss of nearly $60 million annually. Since bypass mail makes up approximately 75% of Alaska's mail volume, this loss can be largely attributed to bypass mail.

In light of its financial situation, the USPS has been aggressively searching for cost savings (aka loss avoidances). The need to reduce losses led to the USPS hub expansion proposal, which would increase the number of hubs statewide. As a general rule, the USPS pays lower mainline rates to air carriers for mail delivery to hubs and more expensive bush rates for service to bush destinations (approximately 7-8 times more expensive than mainline rates). The cost savings of hub expansion are realized by converting a bush destination into a hub, thereby reducing the rates paid to move mail to that location.

The current hub expansion proposal is looking at nine top candidates in three geographic regions of Alaska for designation as new hubs. These top candidate communities are Hooper Bay, Chevak, Togiak, Sand Point, Shishmaref, Wales, Savoonga, Kiana, and Noorvik. Only one new hub would be designated for a geographic region. The hub expansion proposal was introduced in late 2007 and began with a year-long consultation period with affected communities, air carriers, and other stakeholders. The USPS proposed Savoonga as a new hub in February 2009 and after a year-long comment period formally announced it as a new hub, effective May 1, 2010. Togiak and Hooper Bay or Chevak were proposed as new hubs in May 2010. No further action has been taken on these locations, as of July 2011. Even if any of these locations is designated as a new hub, there is no guarantee that a mainline carrier will choose to provide service to that location.

In addition to seeking loss reductions through the addition of hubs, the USPS has also made efforts to cut its costs by making greater use of surface transportation modes. Examples include the use

of hovercraft in the Bethel area and the trucking of mail from Fairbanks to Deadhorse for subsequent air delivery to Barrow and other northern communities. While these changes have provided the USPS with some loss avoidance realizations, the effects on customers, the public, and the mail carriers may not be equally appreciated.

Working to Create a More Effective and Efficient System: The Alaska Department of Transportation & Public Facilities (DOT&PF) established a work group in 2009 specifically to address postal hub considerations as part of the Alaska Aviation System Plan (AASP). The work of this group was targeted at coordination between the DOT&PF and the USPS on infrastructure and funding priorities at Alaska's airports. Air carrier participation and input was fundamental to understanding infrastructure needs and limitations. Through the work group, the following considerations were identified in regards to the proposed hub expansion:

USPS-Identified Benefits of New Postal Hubs

- Financial loss reductions for the USPS.
- Mail volume distributed more widely, reducing mail accumulation and delivery delays at existing hubs.
- Direct and faster service to new hub communities and bush locations served by the new hub.
- Less handling means less time in transit and less loss/damage potential.
- Opportunity for larger cargo products to be delivered by air via the larger mainline aircraft serving new hub communities.

Community-Identified Issues

- While potential new hub communities anticipate an improved level of service and greater job/economic opportunities, existing hub communities perceive a potential decrease in the level of service and loss of business and jobs with the designation of a new hub.
- Bush carriers in an existing hub community could lose business to carriers serving a new hub community and its bush points.

Carrier-Identified Issues

- Hub expansion creates an instable operating environment, presenting carriers with the following challenges:
  - Financing is difficult to obtain for infrastructure investments that may be rendered obsolete with hub changes.
  - Business planning difficulties.
  - High financial and operating risks.
- Air carriers often front the cost to construct the USPS-required mail handling infrastructure at newly designated hubs. Carriers' operating costs are reimbursed by the USPS through the Federal DOT Intra Alaska mail rate setting process, but capital development costs are not. Air carrier infrastructure needs at hubs typically include:
  - Available lease lots of adequate size and suitable for construction
  - Fuel delivery and storage
  - Deicing chemicals and sand storage
  - Buildings with securable space for mail storage

- Runway dimensions at many new hub candidate airports are inadequate to accommodate some mainline aircraft currently in use.

DOT&PF-Identified Issues

- The USPS hub selection has typically not taken into account infrastructure (runway and facilities) requirements or the deficiencies of existing infrastructure.
- The DOT&PF often shoulders the cost of upgrading airfield infrastructure to safely and adequately accommodate air traffic serving a new hub. Infrastructure needs include:
  - Adequate runway length, width, & strength
  - Parking apron and lease lots of adequate size
  - Power availability on lease lots
  - Adequate building and equipment
- Using DOT&PF funding to upgrade a new hub may divert funding from other critical—possibly life safety—needs elsewhere in the state.

In summary, the capital and operating costs borne by other parties (carriers, the State, communities) due to hub expansion would likely outweigh the projected savings by the USPS.

The Future of the Bypass Mail Program

While changes to the bypass mail program (such as the designation of new hubs) have significant impact, the potential elimination or reduction of the entire program is exponentially more alarming. In early 2011, the USPS began a sweeping reorganization in an attempt to curb its losses. Although the USPS has long held its position that it is committed to sustaining the bypass mail program, many long-time USPS employees have recently retired, leaving the future of the bypass mail program uncertain. Furthermore, the current federal budget constraints may impact Alaska's ability to defend this program in Congress. With the USPS – and the nation as a whole – ambitiously searching for ways to balance budgets, the bypass mail program may very well be in the crosshairs.

In the end, the consumers may bear most of the costs associated with reductions to the bypass mail program. Rural Alaska residents would suffer the greatest impact of higher costs to move necessities and reduced levels of service for passenger travel and non-mail freight delivery. However, the benefits of the bypass mail program that are appreciated by *all* who live in, work in, and do commerce with rural Alaska would be in jeopardy.

For More Information

Intra-Alaska Mail Service by Air
USPS Handbook PO-508
http://www.usps.com/cpim/ftp/hand/po508.pdf

39 USC Chapter 54 – Transportation of Mail by Air
http://uscode.house.gov/download/pls/39C54.txt

Yukon-Kuskokwim Delta Transportation Plan
Appendix C: Bypass Mail
http://www.dot.state.ak.us/stwdplng/areaplans/pub/YKDelta_appendices.pdf

Appendix D

Aviation Forecasts

Y-K Delta Aviation Forecasts

The following forecast for the Yukon Kuskokwim Delta were extracted from the statewide forecast of aviation activity produced for the Alaska Aviation System Plan (AASP) by HNTB for the Alaska Department of Transportation and Public Facilities in 2011. Growth indicators examined are passenger enplanements, cargo tonnage, aircraft operations, and based aircraft. While two sources of historic data were used in the AASP forecasts, the most complete historic information came from the T-100 data, and that is the data series used in this review of air traffic activity within the Yukon Kuskokwim Delta.

The AASP forecasts considered published historic data from both the Air Carrier Activity Information System (ACAIS), and the U.S. Department of Transportation Form T-100 aviation data (T-100), as well as Federal Aviation Administration (FAA) forecasts, interviews, reviews of existing airport master plan forecasts, and evaluation of socioeconomic trends at the time the forecasts were developed. The AASP forecasts have a broader, more statewide focus than in-depth forecasts for specific airports do, so they may be less accurate for individual community airports.

Some of the factors considered in the AASP forecasts include changes to the national, state, and local economies; fuel costs; federal EAS and Bypass Mail programs; and changes to aircraft fleets. AASP forecast assumptions included, but were not limited to, the following:

- Airport capacity: Airport facilities will be able to handle all future demand.
- Regulatory climate: There will be no return to airline regulation and no changes to Bypass Mail and EAS programs (which could have significant effects on these forecasts).
- Economic performance: No sustained economic downturn will occur.
- International events: No major international conflict that disrupts aviation will occur.
- Security: Practices of the Transportation Security Administration will not change substantially.
- Fuel: Fuel costs will increase, but no disruptions to the fuel supply will occur.
- Environment: No restrictions on burning hydrocarbons or major fuel tax increases will be introduced.
- National Airspace System: FAA will accommodate changes needed to fit demand.
- Airline Consolidation: Some consolidation will continue, but will not hinder competition.

Because the Yukon-Kuskokwim Delta is remote with limited modes of access, residents have a high reliance on aviation for shipment of people and goods. Consequently, local socioeconomic conditions may have more of an impact on air traffic in this region than in areas with alternative modes of travel. AASP statistical models incorporating past socioeconomic factors with past aviation activity were used to develop the forecasts of future aviation activity used in that study.

Small changes in a community with low population can create large impacts on air traffic, thus aviation activity can fluctuate greatly from year to year in these small communities. For this reason, the historical data and projections presented in this plan should not be relied on for detailed planning. These forecasts give only a general idea of likely trends.

All study area airports within the AASP forecasts were included here with a few exceptions where some of the data was not available. The airports not included in this forecast are Akiachak, Akiachak Bay Seaplane Base (SPB), Bethel SPB, Hangar Lake SBP, and Newtok SPB. The summaries in this section aggregate airports by hubs and smaller community (village) airports. Bethel, the most active airport in the region, is presented separately, followed by the four secondary hubs in the study area (Aniak, Emmonak, McGrath, and St. Mary's), and the remaining 45 villages in aggregate.

Table 1
Forecasted Percentage of Statewide and Regional Air Traffic Totals

	Bethel	Secondary Hubs	All Hubs	Villages	Total YK Delta
2013 Population					
Percent of YK Region	23.4%	8.6%	32.1%	67.9%	100.0%
Percent of Alaska	0.9%	0.3%	1.2%	2.5%	3.6%
Passengers					
Percent of YK Region	46.7%	14.8%	61.4%	38.6%	100.0%
Percent of Alaska	3.1%	1.0%	4.1%	2.6%	6.6%
Cargo (in and outbound)					
Percent of YK Region	50.5%	25.4%	76.0%	24.0%	100.0%
Percent of Alaska	0.3%	0.2%	0.5%	0.2%	0.6%
Commercial Operations					
Percent of YK Region	29.1%	17.4%	46.4%	53.6%	100.0%
Percent of Alaska	4.1%	2.5%	6.6%	7.6%	14.2%
Based Aircraft					
Percent of YK Region	83.5%	15.3%	98.8%	1.2%	100.0%
Percent of Alaska	3.8%	0.7%	4.5%	0.1%	4.6%

Source: Alaska Aviation System Plan Forecast Report, prepared for Alaska Department of Transportation and Public Facilities by HNTB Corporation, 2011.

Notes: Secondary hubs include Aniak, Emmonak, McGrath, and St. Mary's. Airports in the study area but not included in this analysis are Akiachak, Akiachak SPB, Bethel SPB, Hangar Lake SPB, and Newtok SPB.

Table 1 shows the proportion of population and forecasted air traffic activity in the components of the Yukon Kuskokwim Delta and the entire region, as well as the state. Bethel contains less than a quarter of the population, but about half of the passenger and cargo traffic in the region.

The secondary hubs also host a high proportion of passengers and cargo in the region. Those higher proportions result from pass through passengers and cargo that land at the hub airports, but have destinations in other communities in the region. In addition, Bethel has 83.5% of the forecasted based aircraft in the region, but makes up less than a third of the Delta's forecasted commercial aircraft operations, further showing that community's high level of aviation activity.

The region's reliance on air traffic is evident from the high proportion of forecast commercial operations (14.2%) and passenger (6.6%) activity within Alaska compared to the proportion of population (3.6%) within the state. Cargo activity within the region appears light compared to population, however, much of the cargo destined for the region is also handled and counted at Anchorage before traveling to the region.

Passenger Enplanements Forecast

Table 2 and Figure 1 present the passenger enplanement forecasts for airports within the YK Delta compiled by major hub (Bethel), secondary hubs (Aniak, Emmonak, McGrath, and St. Mary's), and the remaining 45 villages in the region. Detail of the passenger enplanements forecast by airport is presented at the end of this report in Table 6.The statewide forecast is also included for comparison. Growth in passenger enplanements in the YK Delta is forecast to be about 10% higher than in the state as a whole.

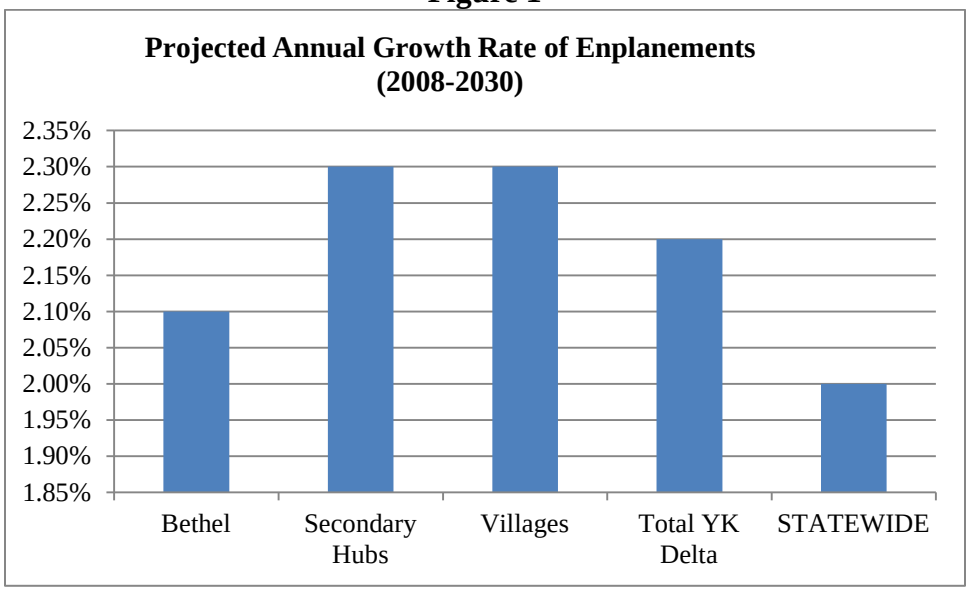
Table 2
Passenger Enplanement Forecast, Yukon Kuskokwim Delta and Statewide
2008 to 2030

Airport	2008	2015 Estimate	2020 Estimate	2025 Estimate	2030 Estimate	Projected Annual Growth Rate (2008-2030)
Bethel	139,995	152,711	167,638	184,059	203,193	2.1%
Secondary Hubs	42,682	46,259	51,579	57,452	64,255	2.3%
Villages	110,893	120,824	134,731	150,115	168,076	2.3%
Total YK Delta	293,570	319,794	353,948	391,666	435,524	2.2%
STATEWIDE	4,580,304	5,086,72	5,550,156	5,888,816	6,580,325	2.0%

Source: Alaska Aviation System Plan Forecast Report, prepared for Alaska Department of Transportation and Public Facilities by HNTB Corporation, 2011.

Notes: Secondary hubs include Aniak, Emmonak, McGrath, and St. Mary's. Airports in the study area but not included in this analysis are Akiachak, Akiachak SPB, Bethel SPB, Hangar Lake SPB, and Newtok SPB.

Figure 1



Source: Alaska Aviation System Plan Forecast Report, prepared for Alaska Department of Transportation and Public Facilities by HNTB Corporation, 2011.

Notes: Secondary hubs include Aniak, Emmonak, McGrath, and St. Mary's. Airports in the study area but not included in this analysis are Akiachak, Akiachak SPB, Bethel SPB, Hangar Lake SPB, and Newtok SPB.

Cargo Forecast

Table 3 and Figure 2 present the forecast of inbound and outbound cargo (freight and mail) in tons for airports within the YK Delta compiled by major hub (Bethel), secondary hubs (Aniak, Emmonak, McGrath, and St. Mary's), and the remaining 45 villages in the region. Detail of the cargo forecast by airport is presented at the end of this report in Table 7. The statewide forecast of inbound and outbound cargo is also included for comparison. Growth in the YK Delta is less than a third the growth in the state as a whole. However, state growth is high because nearly 98% of cargo traffic in the state is at Anchorage International Airport, and that airport offloads, reconfigures, and reloads most of the freight destined for in-state and out-of-state markets, inflating the statewide growth rate.

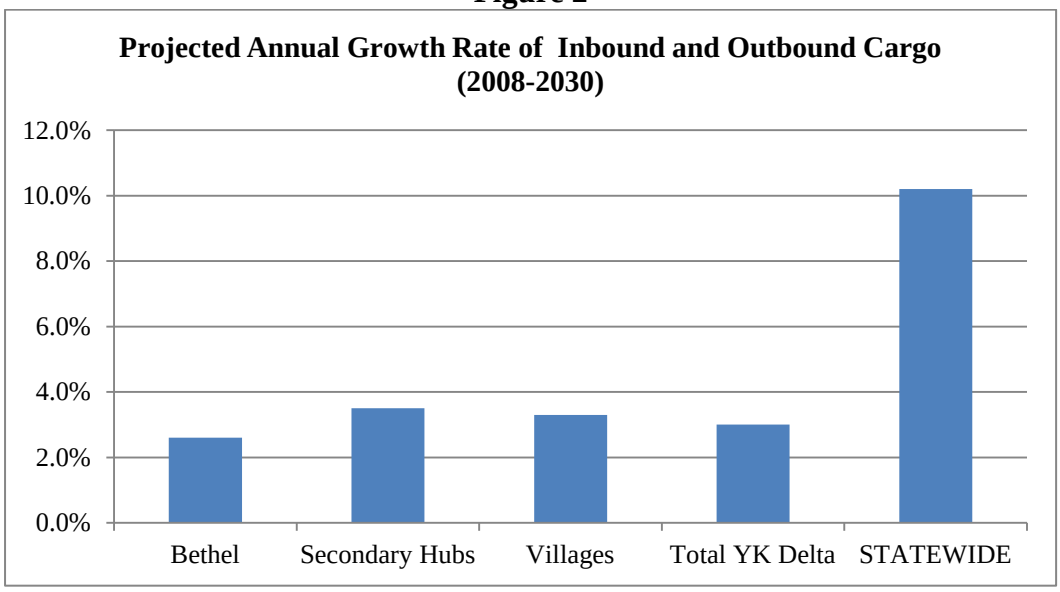
Table 3
Forecast of Inbound and Outbound Cargo by Ton
Yukon Kuskokwim Delta and Statewide, 2008 to 2030

Airport	2008	2015 Estimate	2020 Estimate	2025 Estimate	2030 Estimate	Projected Annual Growth Rate (2008-2030)
Bethel	35,611	39,220	43,630	49,269	55,842	2.6%
Secondary Hubs	15,808	17,782	20,521	23,984	28,060	3.5%
Villages	15,297	17,169	19,665	22,842	26,567	3.3%
Total YK Delta	66,716	74,171	83,816	96,095	110,469	3.0%
STATEWIDE	5,306,724	7,850,891	10,650,779	12,556,750	17,245,589	10.2%

Source: Alaska Aviation System Plan Forecast Report, prepared for Alaska Department of Transportation and Public Facilities by HNTB Corporation, 2011.

Notes: Secondary hubs include Aniak, Emmonak, McGrath, and St. Mary's. Airports in the study area but not included in this analysis are Akiachak, Akiachak SPB, Bethel SPB, Hangar Lake SPB, and Newtok SPB.

Figure 2



Source: Alaska Aviation System Plan Forecast Report, prepared for Alaska Department of Transportation and Public Facilities by HNTB Corporation, 2011.

Notes: Secondary hubs include Aniak, Emmonak, McGrath, and St. Mary's. Airports in the study area but not included in this analysis are Akiachak, Akiachak SPB, Bethel SPB, Hangar Lake SPB, and Newtok SPB.

Commercial Operations Forecast

Table 4 and Figure 3 present the forecast of aircraft operations by type (Commercial, General Aviation, and Military) for airports within the YK Delta compiled by major hub (Bethel), secondary hubs (Aniak, Emmonak, McGrath, and St. Mary's), and the remaining 45 villages in the region. Detail of the commercial operations forecast by airport is presented at the end of this report in Table 8. The statewide forecast of aircraft operations by type is also included for comparison. Growth in the YK Delta is about 28% below the growth in aircraft operations in the state as a whole.

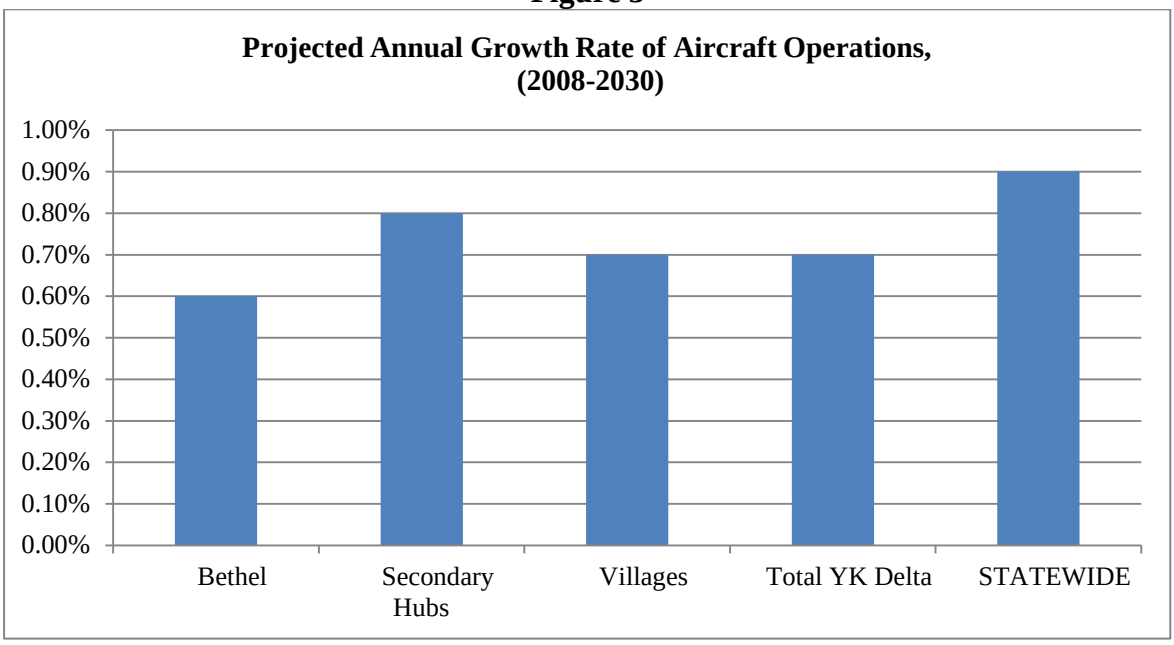
Table 4
Forecast of Aircraft Operations by Type
Yukon Kuskokwim Delta and Statewide, 2008 to 2030

Airports	2008	2015 Estimate	2020 Estimate	2025 Estimate	2030 Estimate	Projected Annual Growth Rate (2008-2030)
Commercial						
Bethel	88,132	84,263	89,000	96,314	99,418	0.6%
Secondary Hubs	47,794	45,202	48,438	53,104	55,443	0.7%
Villages	167,426	159,637	170,677	186,845	194,914	0.7%
Total YK Delta	303,352	289,102	308,115	336,263	349,775	0.7%
General Aviation						
Bethel	9,371	9,288	9,851	10,719	11,912	1.2%
Secondary Hubs	9,064	8,939	9,465	10,581	11,436	1.2%
Villages	9,836	9,481	9,829	10,531	11,385	0.7%
Total YK Delta	28,271	27,708	29,145	31,831	34,733	1.0%
Military						
Bethel	524	524	524	524	524	0.0%
Secondary Hubs	0	0	0	0	0	0.0%
Villages	0	0	0	0	0	0.0%
Total YK Delta	524	524	524	524	524	0.0%
Total						
Bethel	98,027	94,075	99,375	107,557	111,854	0.6%
Secondary Hubs	56,858	54,141	57,903	63,685	66,879	0.8%
Villages	177,262	169,118	180,506	197,376	206,299	0.7%
Total YK Delta	332,147	317,334	337,784	368,618	385,032	0.7%
STATEWIDE	2,253,476	2,246,489	2,378,737	2,551,516	2,717,063	0.9%

Source: Alaska Aviation System Plan Forecast Report, prepared for Alaska Department of Transportation and Public Facilities by HNTB Corporation, 2011.

Notes: Secondary hubs include Aniak, Emmonak, McGrath, and St. Mary's. Airports in the study area but not included in this analysis are Akiachak, Akiachak SPB, Bethel SPB, Hangar Lake SPB, and Newtok SPB.

Figure 3



Source: Alaska Aviation System Plan Forecast Report, prepared for Alaska Department of Transportation and Public Facilities by HNTB Corporation, 2011.

Notes: Secondary hubs include Aniak, Emmonak, McGrath, and St. Mary's. Airports in the study area but not included in this analysis are Akiachak, Akiachak SPB, Bethel SPB, Hangar Lake SPB, and Newtok SPB.

Based Aircraft Forecast

Table 5 and Figure 4 present the forecast of based aircraft by type (single engine, multi engine, helicopter, and other) for airports within the YK Delta compiled by major hub (Bethel), secondary hubs (Aniak, Emmonak, McGrath, and St. Mary's), and the remaining 45 villages in the region. The statewide forecast of aircraft operations by type is also included for comparison. Growth in based aircraft seems to increase with size of airports, and the small rural airports in the Yukon Kuskokwim Delta are expected to have negative growth over time. Growth at the Bethel airport mirrors statewide growth.

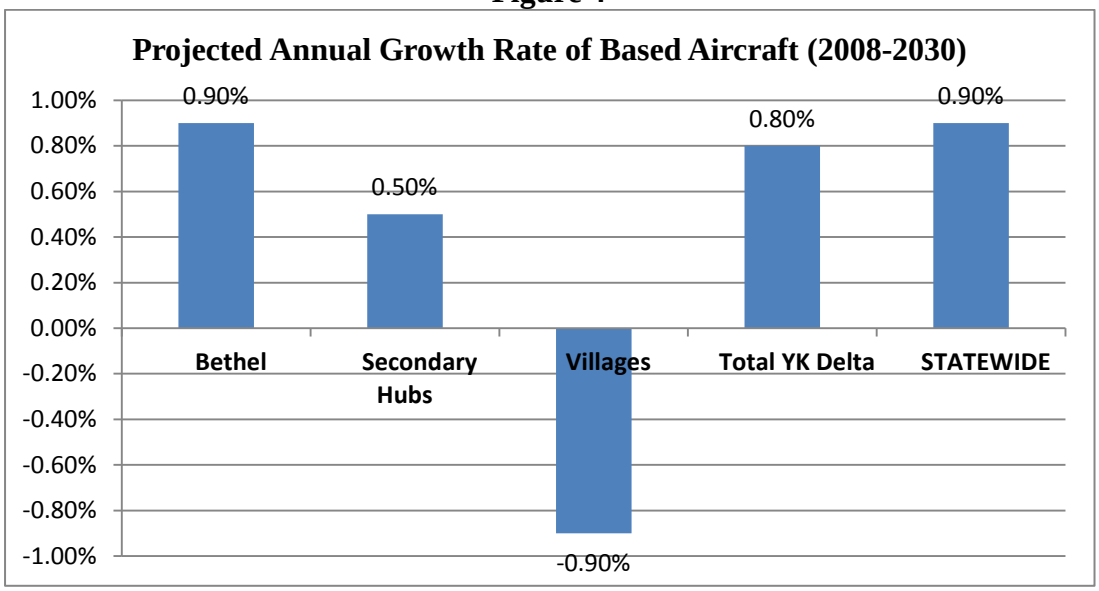
Table 5
Forecast of Based Aircraft by Type
Yukon Kuskokwim Delta and Statewide, 2008 to 2030

Airports	2008	2015 Estimate	2020 Estimate	2025 Estimate	2030 Estimate	Projected Annual Growth Rate (2008-2030)
Single Engine						
Bethel	209	215	220	230	246	0.8%
Secondary Hubs	43	43	45	46	48	0.5%
Villages	5	5	5	5	4	-0.9%
Total YK Delta	257	263	270	281	298	0.7%
Multi-Engine						
Bethel	17	18	18	19	20	0.8%
Secondary Hubs	3	3	3	3	3	0.0%
Villages	0	0	0	0	0	0.0%
Total YK Delta	20	21	21	22	23	0.7%
Helicopter						
Bethel	4	5	6	8	9	5.7%
Secondary Hubs	0	0	0	0	0	0.0%
Villages	0	0	0	0	0	0.0%
Total YK Delta	4	5	6	8	9	5.7%
Other						
Bethel	2	3	3	3	4	4.5%
Secondary Hubs	0	0	0	0	0	0.0%
Villages	0	0	0	0	0	0.0%
Total YK Delta	2	3	3	3	4	4.5%
Total						
Bethel	232	241	247	260	279	0.9%
Secondary Hubs	46	46	48	49	51	0.5%
Villages	5	5	5	6	4	-0.9%
Total YK Delta	283	292	300	314	334	0.8%
STATEWIDE	6,076	6,327	6,562	6,883	7,271	0.9%

Source: Alaska Aviation System Plan Forecast Report, prepared for Alaska Department of Transportation and Public Facilities by HNTB Corporation, 2011.

Notes: Secondary hubs include Aniak, Emmonak, McGrath, and St. Mary's. Airports in the study area but not included in this analysis are Akiachak, Akiachak SPB, Bethel SPB, Hangar Lake SPB, and Newtok SPB.

Figure 4



Source: Alaska Aviation System Plan Forecast Report, prepared for Alaska Department of Transportation and Public Facilities by HNTB Corporation, 2011.

Notes: Secondary hubs include Aniak, Emmonak, McGrath, and St. Mary's. Airports in the study area but not included in this analysis are Akiachak, Akiachak SPB, Bethel SPB, Hangar Lake SPB, and Newtok SPB.

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Table 6
AASP Historical and Forecast Passenger Enplanements, Yukon Kuskokwim Delta

Airport	2003	2004	2005	2006	2007	2008	2015 Estimate	2020 Estimate	2025 Estimate	2030 Estimate	Projected Annual Growth Rate (2008-2030)
Akiak	1,828	2,019	2,609	1,475	1,983	1,612	1,758	1,930	2,135	2,340	2.1%
Alakanuk	3,791	3,949	3,109	3,518	3,527	4,015	4,407	5,097	5,940	6,782	3.1%
Aniak	18,086	20,660	23,210	26,041	23,803	18,498	20,178	22,151	24,500	26,849	2.1%
Anvik	903	1,322	1,114	1,124	1,380	881	890	906	910	914	0.2%
Atmautluak	1,829	2,027	2,204	2,018	2,613	2,228	2,430	2,668	2,951	3,234	2.1%
Bethel	136,184	140,923	143,587	137,266	143,141	139,995	152,711	167,638	185,416	203,193	2.1%
Chefornak	2,837	3,178	3,519	3,570	3,391	3,228	3,521	3,865	4,275	4,685	2.1%
Chevak	4,991	5,340	5,021	4,791	4,641	4,741	5,204	6,019	7,014	8,008	3.1%
Chuathbaluk	709	792	961	510	549	383	418	459	508	556	2.1%
Crooked Creek	896	1,007	896	822	867	701	765	839	928	1,017	2.0%
Eek	2,579	2,870	3,083	3,241	3,759	3,283	3,581	3,931	4,348	4,765	2.1%
Emmonak	5,955	7,727	11,271	10,648	12,638	9,097	9,985	11,550	13,458	15,366	3.1%
Flat	8	3	21	3	15	2	2	2	2	2	0.0%
Goodnews Bay	848	1,213	1,325	1,286	1,567	1,510	1,647	1,808	2,000	2,192	2.1%
Grayling	1,191	1,632	1,366	1,555	1,363	1,106	1,117	1,137	1,142	1,147	0.2%
Holy Cross	2,002	2,271	2,038	2,042	2,244	1,551	1,566	1,594	1,601	1,608	0.2%
Hooper Bay	5,697	6,242	6,380	6,327	6,321	6,002	6,588	7,620	8,879	10,138	3.1%
Kalskag	4,568	4,691	4,099	4,852	4,420	3,147	3,433	3,768	4,168	4,568	2.1%
Kasigluk	2,845	2,927	3,502	4,218	4,001	3,848	4,198	4,608	5,097	5,585	2.1%
Kipnuk	5,596	6,149	6,100	5,893	5,189	4,890	5,334	5,856	6,477	7,098	2.1%
Kongiganak	3,025	3,640	3,636	4,008	3,716	3,826	4,174	4,581	5,067	5,553	2.1%
Kotlik	4,039	4,102	4,030	3,654	4,117	4,237	4,651	5,379	6,268	7,157	3.1%
Kwethluk	2,342	2,541	2,796	2,329	2,923	2,579	2,813	3,088	3,416	3,743	2.1%
Kwigillingok	2,822	3,404	3,708	3,859	3,476	3,065	3,343	3,670	4,060	4,449	2.1%
Lime Village	73	50	121	55	54	17	19	20	23	25	2.1%
Marshall	3,090	3,318	2,749	2,636	3,077	2,892	3,174	3,672	4,279	4,885	3.1%
McGrath	4,522	5,172	5,120	5,001	5,186	5,279	5,331	5,426	5,450	5,474	0.2%

Airport	2003	2004	2005	2006	2007	2008	2015 Estimate	2020 Estimate	2025 Estimate	2030 Estimate	Projected Annual Growth Rate (2008-2030)
Mekoryuk	2,131	2,098	1,860	1,614	1,736	1,718	1,874	2,057	2,276	2,494	2.1%
Mountain Village	5,568	5,668	5,599	5,013	5,528	5,100	5,598	6,475	7,545	8,614	3.1%
Napakiak	1,378	1,631	1,454	1,246	1,828	1,810	1,974	2,167	2,397	2,627	2.1%
Napaskiak	1,112	1,030	1,386	914	1,858	1,308	1,427	1,566	1,732	1,898	2.1%
Newtok	2,552	2,169	2,136	2,103	2,348	2,187	2,401	2,777	3,236	3,694	3.1%
Nightmute	1,291	1,656	1,664	1,642	1,659	1,791	1,954	2,145	2,373	2,600	2.1%
Nikolai	320	488	555	461	459	364	368	374	376	377	0.2%
Nunam Iqua	2,380	2,559	2,777	2,821	3,152	2,821	3,077	3,378	3,736	4,094	2.1%
Nunapitchuk	4,284	4,034	3,582	3,693	4,239	3,563	3,911	4,524	5,271	6,018	3.1%
Pilot Station	433	527	483	361	634	999	1,090	1,196	1,323	1,450	2.1%
Platinum	4,772	6,002	7,249	7,246	7,373	6,901	7,528	8,264	9,140	10,016	2.1%
Quinhagak	264	293	450	354	340	307	335	368	407	446	2.1%
Red Devil	2,999	2,889	2,701	2,727	3,090	2,708	2,954	3,243	3,587	3,930	2.1%
Russian Mission	3,695	3,838	4,149	4,131	4,309	3,861	4,238	4,902	5,712	6,522	3.1%
Scammon Bay	1,234	1,408	1,426	1,461	1,462	901	910	926	930	934	0.2%
Shageluk	1,486	1,386	1,212	1,391	1,628	2,103	2,308	2,670	3,111	3,552	3.1%
Sleetmute	672	842	875	641	575	452	493	541	599	656	2.1%
St. Mary's	9,276	9,948	8,279	13,744	14,258	9,808	10,765	12,452	14,509	16,566	3.1%
Stony River	353	408	373	341	343	198	216	237	262	287	2.0%
Takotna	120	149	195	159	243	206	208	212	213	214	0.2%
Toksook Bay	4,548	5,185	4,952	4,583	4,875	4,085	4,456	4,892	5,411	5,929	2.1%
Tuluksak	2,760	2,954	3,061	2,168	2,883	2,622	2,860	3,140	3,473	3,806	2.1%
Tuntutuliak	3,927	3,818	3,684	3,687	3,763	3,335	3,638	3,994	4,418	4,841	2.1%
Tununak	1,565	2,095	2,066	1,759	2,001	1,809	1,973	2,166	2,396	2,626	2.1%
Total	**282,376**	**302,244**	**309,743**	**307,002**	**320,545**	**293,570**	**319,794**	**353,948**	**394,736**	**435,524**	**2.2%**

Source: Alaska Aviation System Plan Forecast Report, prepared for Alaska Department of Transportation and Public Facilities by HNTB Corporation, 2011.

Note: Airports in the study area but not included in this analysis are Akiachak, Akiachak SPB, Bethel SPB, Hangar Lake SPB, and Newtok SPB.

Table 7
AASP Historical and Forecast Cargo Tonnage (in and outbound), Yukon Kuskokwim Delta

Airport	2003	2004	2005	2006	2007	2008	2015 Estimate	2020 Estimate	2025 Estimate	2030 Estimate	Projected Annual Growth Rate (2008-2030)
Akiak	70	125	187	70	92	93	102	114	130	146	2.6%
Alakanuk	628	577	551	514	544	583	679	813	999	1,184	4.7%
Aniak	5,376	5,255	5,400	5,357	4,876	4,846	5,337	5,937	6,768	7,599	2.6%
Anvik	146	136	163	163	214	124	123	127	132	136	0.4%
Atmautluak	157	167	167	153	262	205	226	251	286	321	2.6%
Bethel	36,371	36,399	36,305	34,129	34,866	35,611	39,220	43,630	49,736	55,842	2.6%
Chefornak	510	483	495	546	514	572	630	701	799	897	2.6%
Chevak	1,230	1,058	943	904	945	977	1,138	1,363	1,674	1,985	4.7%
Chuathbaluk	138	102	141	93	73	72	79	88	101	113	2.6%
Crooked Creek	177	129	136	127	118	123	135	151	172	193	2.6%
Eek	283	276	359	221	309	286	315	350	399	448	2.6%
Emmonak	3,819	3,763	4,169	5,669	4,386	4,840	5,640	6,753	8,293	9,832	4.7%
Flat	25	-	-	7	21	3	3	3	3	3	0.0%
Goodnews Bay	252	275	272	232	280	304	335	372	425	477	2.6%
Grayling	216	187	189	200	178	172	171	176	182	188	0.4%
Holy Cross	251	258	275	258	250	274	273	281	290	299	0.4%
Hooper Bay	1,209	1,286	1,157	1,512	1,335	1,372	1,599	1,914	2,351	2,787	4.7%
Kalskag	500	526	533	462	413	445	490	545	622	698	2.6%
Kasigluk	164	108	175	303	153	223	246	273	312	350	2.6%
Kipnuk	556	589	603	631	585	581	640	712	812	911	2.6%
Kongiganak	341	353	328	341	318	435	479	533	608	682	2.6%
Kotlik	737	626	694	657	694	624	727	871	1,070	1,268	4.7%
Kwethluk	117	87	66	85	123	93	102	114	130	146	2.6%
Kwigillingok	552	404	367	333	346	310	341	380	433	486	2.6%
Lime Village	29	55	40	8	2	-	-	-	0	-	.
Marshall	502	479	466	441	609	464	541	647	795	943	4.7%
McGrath	1,464	1,549	1,669	1,744	1,609	1,926	1,916	1,976	2,041	2,105	0.4%

Airport	2003	2004	2005	2006	2007	2008	2015 Estimate	2020 Estimate	2025 Estimate	2030 Estimate	Projected Annual Growth Rate (2008-2030)
Mekoryuk	355	366	386	344	381	425	468	521	594	666	2.6%
Mountain Village	815	804	774	647	734	818	953	1,141	1,402	1,662	4.7%
Napakiak	53	49	43	34	75	67	74	82	94	105	2.6%
Napaskiak	67	64	140	33	56	68	75	83	95	107	2.6%
Newtok	293	260	305	273	303	298	347	416	511	605	4.7%
Nightmute	174	196	219	212	240	221	243	271	309	347	2.6%
Nikolai	149	85	133	102	84	78	78	80	83	85	0.4%
Nunam Iqua	112	82	74	78	117	153	169	187	214	240	2.6%
Nunapitchuk	524	487	455	434	478	478	557	667	819	971	4.7%
Pilot Station	59	55	33	58	147	265	292	325	371	416	2.6%
Platinum	961	1,098	982	851	986	989	1,089	1,212	1,382	1,551	2.6%
Quinhagak	69	137	161	147	25	27	30	33	38	42	2.5%
Red Devil	364	314	325	288	345	391	431	479	546	613	2.6%
Russian Mission	502	532	688	541	574	542	632	756	929	1,101	4.7%
Scammon Bay	149	133	153	154	140	120	119	123	127	131	0.4%
Shageluk	130	143	134	170	232	257	299	359	441	522	4.7%
Sleetmute	104	137	171	155	99	124	137	152	173	194	2.6%
St. Mary's	4,020	3,976	3,645	3,887	4,266	4,196	4,889	5,855	7,190	8,524	4.7%
Stony River	43	47	50	76	25	11	12	13	15	17	2.5%
Takotna	49	57	61	61	51	53	53	54	56	58	0.4%
Toksook Bay	627	726	749	746	816	756	833	926	1,056	1,185	2.6%
Tuluksak	171	176	94	60	94	58	64	71	81	91	2.6%
Tuntutuliak	292	325	347	321	394	399	439	489	558	626	2.6%
Tununak	296	329	354	368	376	364	401	446	509	571	2.6%
Total	**66,198**	**65,830**	**66,326**	**65,200**	**65,153**	**66,716**	**74,171**	**83,816**	**97,143**	**110,469**	**3.0%**

Source: Alaska Aviation System Plan Forecast Report, prepared for Alaska Department of Transportation and Public Facilities by HNTB Corporation, 2011.

Note: Airports in the study area but not included in this analysis are Akiachak, Akiachak SPB, Bethel SPB, Hangar Lake SPB, and Newtok SPB.

Table 8
AASP Historical and Forecast Commercial Operations, Yukon Kuskokwim Delta

Airport	2003	2004	2005	2006	2007	2008	2015 Estimate	2020 Estimate	2025 Estimate	2030 Estimate	Projected Annual Growth Rate (2008-2030)
Akiak	2,969	3,651	5,002	2,437	2,928	2,998	2,866	3,027	3,205	3,382	0.6%
Alakanuk	7,530	7,206	6,162	6,238	6,473	6,160	5,926	6,595	7,341	8,087	1.4%
Aniak	20,428	19,976	19,370	18,243	16,910	14,819	14,168	14,965	15,841	16,717	0.6%
Anvik	2,797	3,131	2,597	2,479	2,495	1,827	1,617	1,584	1,528	1,472	-0.9%
Atmautluak	4,500	3,967	4,700	3,989	4,596	3,937	3,764	3,976	4,209	4,441	0.6%
Bethel	88,042	78,640	81,028	71,596	76,861	76,159	84,263	89,000	94,209	99,418	1.4%
Chefornak	6,472	5,132	5,386	5,450	5,512	5,126	4,901	5,176	5,479	5,782	0.6%
Chevak	8,727	6,900	5,880	5,507	5,262	5,104	4,910	5,465	6,083	6,700	1.4%
Chuathbaluk	2,609	2,604	2,753	1,861	1,732	1,247	1,192	1,259	1,333	1,407	0.6%
Crooked Creek	2,620	2,687	2,414	2,154	1,976	1,461	1,397	1,475	1,562	1,648	0.6%
Eek	5,168	5,711	6,513	5,888	6,657	5,843	5,586	5,900	6,246	6,591	0.6%
Emmonak	14,089	13,920	13,127	12,729	14,120	12,279	11,815	13,149	14,634	16,119	1.4%
Flat	17	6	5	14	30	8	7	7	7	6	-1.1%
Goodnews Bay	2,491	2,283	2,255	2,012	2,574	2,571	2,458	2,596	2,748	2,900	0.6%
Grayling	3,015	3,294	2,798	2,802	2,576	2,086	1,846	1,808	1,745	1,681	-0.9%
Holy Cross	4,583	4,675	3,890	3,643	3,716	3,037	2,688	2,632	2,540	2,448	-0.9%
Hooper Bay	9,654	7,815	6,969	6,911	6,356	6,103	5,871	6,534	7,273	8,012	1.4%
Kalskag	7,571	7,272	6,665	6,550	6,039	4,975	4,757	5,024	5,318	5,612	0.6%
Kasigluk	3,724	3,559	4,894	5,583	5,153	4,864	4,650	4,912	5,200	5,487	0.6%
Kipnuk	7,469	6,766	6,604	6,592	6,134	5,918	5,658	5,976	6,326	6,676	0.6%
Kongiganak	6,774	6,183	6,184	6,223	5,821	5,899	5,640	5,957	6,306	6,654	0.6%
Kotlik	7,506	6,792	6,316	5,838	6,227	6,104	5,872	6,535	7,274	8,013	1.4%
Kwethluk	4,268	4,065	4,576	2,965	3,632	3,851	3,682	3,889	4,117	4,344	0.6%
Kwigillingok	6,774	5,819	6,029	5,818	5,650	5,297	5,064	5,349	5,662	5,975	0.6%
Lime Village	204	242	297	146	143	58	55	59	62	65	0.5%
Marshall	5,269	4,719	4,200	3,925	4,414	3,981	3,830	4,262	4,744	5,226	1.4%
McGrath	3,737	3,959	4,013	3,651	4,144	3,346	7,967	7,801	7,527	7,253	5.3%

Airport	2003	2004	2005	2006	2007	2008	2015 Estimate	2020 Estimate	2025 Estimate	2030 Estimate	Projected Annual Growth Rate (2008-2030)
Mekoryuk	2,494	2,429	2,313	1,945	2,531	2,442	2,335	2,466	2,611	2,755	0.6%
Mountain Village	9,084	8,507	8,004	7,168	7,743	7,108	6,838	7,610	8,471	9,331	1.4%
Napakiak	2,577	2,900	3,179	2,621	3,288	3,290	3,146	3,322	3,517	3,711	0.6%
Napaskiak	2,436	2,431	3,032	1,956	2,986	2,830	2,706	2,858	3,025	3,192	0.6%
Newtok	4,368	3,307	3,382	3,194	3,767	3,431	3,301	3,673	4,089	4,504	1.4%
Nightmute	3,882	3,158	3,130	3,054	3,547	3,472	3,320	3,506	3,712	3,917	0.6%
Nikolai	1,030	1,181	1,207	992	1,011	884	782	766	739	712	-0.9%
Nunam Iqua	3,678	3,196	2,941	3,260	3,496	3,623	3,485	3,879	4,318	4,756	1.4%
Nunapitchuk	3,287	3,288	4,350	4,045	4,495	4,516	4,318	4,560	4,827	5,094	0.6%
Pilot Station	6,178	5,298	4,726	4,777	5,241	4,813	4,630	5,153	5,736	6,318	1.4%
Platinum	1,670	1,472	1,490	1,337	1,833	2,156	2,061	2,177	2,305	2,432	0.6%
Quinhagak	6,974	7,095	8,471	8,093	8,533	8,063	7,709	8,142	8,619	9,095	0.6%
Red Devil	1,574	1,689	1,686	1,372	1,259	903	863	912	966	1,019	0.6%
Russian Mission	5,487	4,812	4,381	4,188	4,618	4,246	4,060	4,288	4,539	4,790	0.6%
Scammon Bay	6,605	5,555	5,237	4,827	4,988	4,447	4,278	4,761	5,300	5,838	1.4%
Shageluk	2,973	3,032	2,649	2,625	2,665	1,829	1,619	1,585	1,530	1,474	-0.9%
Sleetmute	2,059	2,184	2,195	1,779	1,503	1,152	1,101	1,163	1,232	1,300	0.6%
St. Mary's	14,565	13,566	11,843	13,842	14,826	11,696	11,252	12,523	13,939	15,354	1.4%
Stony River	1,226	1,351	1,251	1,141	996	591	565	597	632	667	0.6%
Takotna	569	679	734	634	766	716	634	621	599	577	-0.9%
Toksook Bay	6,962	6,000	5,827	5,763	6,535	5,873	5,615	5,931	6,278	6,625	0.6%
Tuluksak	3,677	3,655	4,175	2,337	2,963	3,245	3,103	3,277	3,469	3,661	0.6%
Tuntutuliak	6,919	6,539	6,688	6,320	6,734	5,953	5,692	6,012	6,364	6,715	0.6%
Tununak	5,032	3,721	3,463	3,174	3,914	3,388	3,239	3,421	3,622	3,822	0.6%
Total	**344,313**	**318,019**	**316,981**	**291,688**	**308,369**	**285,725**	**289,102**	**308,115**	**328,945**	**349,775**	**1.0%**

Source: Alaska Aviation System Plan Forecast Report, prepared for Alaska Department of Transportation and Public Facilities by HNTB Corporation, 2011.

Note: Airports in the study area but not included in this analysis are Akiachak, Akiachak SPB, Bethel SPB, Hangar Lake SPB, and Newtok SPB.

Appendix E

Proposed USACE Barge Landing Projects

Table 9.1: Proposed Barge Landing Facility Improvements, Priority Sites

Region	Community	Dwg. No.*	Brief Description of Recommended Barge Landing Facility Improvements
Lower Yukon River and Delta	Alakanuk	E4	Provide a gravel cause way/ramp and 2 mooring points at a new barge landing site, plus mooring points at 3 other landing sites. Two optional locations for the gravel causeway are show. Option A utilizes the existing landing near already developed upland and staging areas; however, it is at a highly erodible location. Option B shows an alternate location, with a new staging area.
	Emmonak	E5	Provide a sheet pile dock with a downstream ramp. Provide improvements to expand the existing staging area in the adjacent uplands. Also provide 2 mooring points both at this site as well as at the downstream fuel landing for the Store.
	Kotlik	E6	Provide a sheet pile dock with a downriver loading ramp. Extend dock out 20-ft min. from shoreline and provide 50-ft min. width ramp. Provide gravel pad at the existing upland staging area and consider expansion of the staging area to the south.
	Mountain Village	E7	Improve the existing gravel causeway/ramp at the City landing site and provide an upland staging area. Install 3 mooring points each at the Native Corporation landing and the City landing and provide 2 mooring points at the fuel barge landing for the School/AVEC tanks.
	Anvik	E8	Provide a gravel or concrete ramp and 3 mooring points at the existing barge landing located adjacent to the fuel header.
	Grayling	E9	Install 2 new mooring points at the downriver landing site, located just south of the access road. In addition, replace the cable with chain at the three existing cable/deadman mooring points located in the trees at the upriver fuel barge landing.

Table 9.1: Proposed Barge Landing Facility Improvements, Priority Sites

Region	Community	Dwg. No.*	Brief Description of Recommended Barge Landing Facility Improvements
Kuskokwim River Delta	Goodnews Bay	E15	Provide dedicated upland staging areas and 5 mooring points at the existing beach landing areas. Additionally, conduct a study to determine the feasibility of deepening the existing channel from Platinum to allow passage of vessels drawing 6-ft or more.
	Quinhagak (Kwinhagak)	E16	A feasibility study is a priority to analyze alternatives for long-term access to this site. Some alternatives suggested include: – Option A: Dredge an access channel to the existing City dock. This is the user groups' preference, at least for short term. Periodic maintenance dredging would likely be required. – Option B: For a long-term solution, consider providing a new dock at a landing site that is not experiencing problems with sediment accretion. One alternative for a new dock landing site is depicted on the Site Plan. A residential house is nearby, and property ownership issues would need to be resolved. Another option, not shown on the Site Plan (shown on figure in report), is to study whether Arolik Creek is accessible by barge and constructing a new landing facility at the end of Arolik Road.
	Kongiganak	E17	Provide a sheet pile dock and staging area. A 500 to 1000-ft long access road to the staging area may be required to reach uplands area. (Another project is possibly underway to accomplish some of this work as part of airport work). Also, provide mooring points at two upriver fuel barge landing sites.
	Kwigillingok	E18	Provide a co-located fuel/freight landing at the downriver fuel landing area by installing an upland staging area using a thick layer of crushed rock and gravel to create dry ground. Install mooring points at this landing area as well as at the downriver fuel landing, located near the Native Corporation building.
	Kipnuk	E19	Provide 3 mooring points at the fuel header/landing site. Provide a sheet pile dock and ramp, and a gravel pad at the existing upland staging area at the freight landing site.
	Chefornak	E20	Improve and widen existing gravel causeway with new armor rock and smaller 6" minus rock at landing end. Dredge boulders from shallow area (<6ft) around causeway.
	Toksook Bay	E21	Provide gravel ramp to extend 100-ft or more to reach deeper water and improve existing road with gravel. At a minimum, consider dredging out large rocks in shallows near the landing.
	Chevak	E22	Provide three mooring points at the existing beach landing site.

Table 9.1: Proposed Barge Landing Facility Improvements, Priority Sites

Region	Community	Dwg. No.*	Brief Description of Recommended Barge Landing Facility Improvements
Lower Kuskokwim River	Eek	E23	Provide a causeway/ramp to reach deeper water and provide stable surface for offloading. Also provide 2 mooring points at the landing and expand the upland staging area.
	Nunapitchuk	E24	Option A in Drawing D28-A presents one possible co-located fuel/freight ramp landing located on the same side of the river as the main part of the community. Requires a site investigation to determine whether sufficient depth available for freight barge access in this area. Alternatively, Option B in Drawing D28-B presents an option for development of the existing landing site at the fuel barge landing area located north of the airport landing area, across the river from the community. For this option, provide a co-located fuel/freight barge ramp landing and staging area. This is low elevation and likely susceptible to flooding and would require more fill for a day staging area.
	Napaskiak	E25	A feasibility study is a priority to determine the best solution for long-term access to this site. Some options suggested include: – Option A: Improvements to existing landing area. Provide a gravel ramp with erosion protection and expand and elevate the existing upland staging area. Dredge the washout area on the opposite bank and shallow area in front of the landing. A study may be required to determine the feasibility of maintaining dredging prior to proceeding with this option. – Option B: A new landing site could be developed in an area of less sediment accretion. Provide a new concrete ramp and a new upland staging area. Three mooring points would be needed at this landing due to the swifter currents along the main branch of the Kuskokwim River.
	Akiachak	E26	Install 2 mooring points at the fuel/freight barge landing site.
Middle Kuskokwim River	Upper Kalskag	E27	Install 2 mooring points at both the fuel and the freight barge landing sites.
	Aniak	E28	Provide a dock and upland staging area for freight, near the existing freight barge landing area. Although somewhat steep, a ramp could be provided on the downstream end of the dock. 25,000 to 30,000 sq. ft. of staging area is recommended for this small hub community. Also, provide 2 mooring points at the fuel barge landing area.
Upper Kuskokwim	McGrath	E29	Provide a gravel ramp and 3 mooring points to facilitate offloading cargo from the fuel barge/lighter vessel.
Aleutians	Pilot Point	E34	Provide two mooring points at the fuel/freight barge landing sites.

Appendix F

Rural Dust Frequently Asked Questions

Reducing Dust in Rural Alaska

February 2015

The Alaska Department of Environmental Conservation (DEC) recognizes that dust causes health and visibility problems in many rural villages. Dust often comes from roads or runways where it is kicked up by vehicles, but it can also be picked up by the wind from barren areas.

Unfortunately, there is no simple solution. Palliatives can be effective in on roads and runways, but require planning, coordination, and funding to get in place. In addition, palliatives must be reapplied to maintain their effectiveness. The frequency of reapplication depends on the local conditions and palliative used. Researchers are continuing to study palliatives to develop better solutions for rural Alaska.

In the meantime, there are other actions you can take to immediately reduce road dust in your community.

Reduce Traffic – Walk or Bike

For short trips, walk or bike instead of driving. Not only does this reduce dust, it provides exercise and saves money on fuel.

Slow down

Slowing down from 40 miles per hour (mph) to 20 mph can reduce dust by up to 30%. Some villages have passed ordinances establishing speed limits requiring residents to slow down. This is especially effective for ATVs; their knobby tires kick up more dust than car or truck tires.

Alaska Department of Environmental Conservation

Division of Air Quality

Juneau Office
410 Willoughby St.
Suite 303
Juneau, AK 99811
(907) 465-5128

Anchorage Office
619 E Ship Creek Ave.
Suite 249
Anchorage, AK 99501
(907) 269-7577

Fairbanks Office
610 University Ave
Fairbanks, AK 99709
(907) 451-2139

Improve Road Surface

Make sure roads are well graded and draining properly. Good drainage reduces puddles. Because water floats fine particles to the surface, when puddles dry up, they are filled with the fine particles that become dust.

Apply Gravel to the Road

A properly graveled road has a hard surface that protects the fine soils from vehicle wheels. Getting the right mix of gravel is important; the road needs just the right portion of fine materials to hold the road surface together. Your local road maintenance specialists or Department of Transportation contacts can provide more information on effective gravelling.

Water the Road

Watering roads is a very simple way to reduce dust. Depending on the weather and your soils, a single watering may last for hours or days. Regular, light watering is better than less frequent, heavy watering. This technique requires the village to have a water sprayer and someone to operate it as needed.

Reduce Exposed Ground

Wind can pick up dust anywhere the ground is open. Every dirt parking area, footpath, shortcut, or eroding bluff can produce dust. Maintaining the native vegetation, replanting barren areas, planting gardens, and limiting driving to designated roads or trails can help control dust. Living plants not only cover the ground, but their roots hold soil together as well.

Slow the Wind

In some situations, windbreaks may be an effective solution. Windbreaks are barriers designed to slow and redirect the flow of wind. Windbreak materials may include picket and board fences (with gaps between pickets), berms, snow fences, and rows or hedges of plants. Windbreaks are most useful when designed for specific wind directions. To be effective, windbreaks need to be carefully designed and appropriately sized.

Long-term Commitment

DEC continues to work with the Alaska Department of Transportation and Public Facilities, the Environmental Protection Agency, the Alaska Native Tribal Health Consortium, the University of Alaska Fairbanks, the Bureau of Indian Affairs, and others to develop practical solutions for controlling dust in rural Alaska and simplify the coordination needed to implement solutions.

What if I have more questions?

If you have questions, please contact us:

- Karin Landsberg, 907-269-4913, Karin.landsberg@alaska.gov

Appendix G

City of Bethel Memo for Projects

City of Bethel

P.O. Box 1388 • Bethel, Alaska 99559-1388
907-543-1386
Fax # 543-1388
Website: www.cityofbethel.org

To: **Bethel City Council Members**

From: **Peter Williams, City Manager**

Subject: **YK Transportation Plan Road Development**

Date: **May 12, 2017**

I have been working with The Department of Transportation and Public Facilities (DOT&PF) as a planning team member to finalize the Yukon Kuskokwim Delta Transportation Plan, which is a 20-year multi-modal transportation plan that prioritizes and recommends regionally significant projects. DOT&PF considers Bethel to be a hub community that supports the YK-Delta Region. They also consider the principal transportation facilities in Bethel to be regionally significant given the amount of residents that visit Bethel for doctors' appointments, job opportunities, and access to public facilities and other modes of transportation. Secondary transportation facilities that improve the operation of principal facilities are also important.

The impending Yukon Kuskokwim Health Corporation (YKHC) hospital expansion and construction of the Primary Care Center will contribute to Bethel's population growth. I feel that it is important that the City work with DOT&PF and YKHC to help make driving, walking and biking more safe and accessible for our residents and the residents of Bethel's surround villages.

The Bethel Comprehensive Plan 2035 (Comp Plan), published in 2011, identified goals and strategies to help enhance our transportation system as the population grows. The projects listed below are considered critical transportation needs to support future development and growth in our community and are in line with the goals, strategies, and projects identified in the Comp Plan.

1. Chief Eddie Hoffman Highway Rehabilitation Project

This project will involve resurfacing, restoration, and rehabilitation (3R) of the existing paved Chief Eddie Hoffman Highway. The improvements will be short of full-depth replacement. and target safety improvements for active transportation use. This project will consider 3 roundabouts with all-way stops. Roundabouts and/or all-way stops would be considered at major intersections, such as at or near the hospital and at Watsons Corner. It would also examine the widening of three lanes for left turns relative to through traffic in the commercially developed area from south of the Post Office to Watsons Corner on Ridgecrest Drive. It will also improve the bike/pedestrian pathway, signage, lighting, and traffic devices for pedestrians and non-motorized transportation users.

Status

DOT&PF completed review of a Traffic Impact Assessment (TIA) by YKHC for the Hospital Expansion and Clinic Project. The TIA provided information regarding average daily traffic in the area which is approaching >10,000 VPD. DOT&PF and YKHC are currently working on an interim solution along the hospital frontage to help with safety and congestion concerns.

Planning Estimate

$36 million ($12 million per mile)

2. Bethel Tundra Ridge Road

This project entails the resurfacing of Tundra Ridge Road with asphalt. The 1.04 mile road runs from Chief Eddie Hoffman Highway to Ptarmigan Street. This project has appeared in the last three Statewide Transportation Improvement Plans (2008-2011, 2012-2015, 2016-2019). This paving project would require ROW, environmental, permitting, design, and construction activities.

Status

DOT&PF has been working to obtain ROWs needed for the project and has not been successful in this endeavor.

Planning Estimate

$3,900,000

3. Bethel Ridgecrest Drive Project

This project involves the rehabilitation of Ridgecrest Drive between Akakeek and Ptarmigan Street. The project will raise and widen the road, improve drainage and provide middle lane turnouts to reduce congestion and provide marked and lighted pedestrian crossings at school intersections. This project will be coordinated by Highway Safety Improvement Program.

Status

This engineering work, including ROW, environmental, permitting, and design for this project are completed. As managers of the project, DOT&PF expects hire a contractor through the bidding process that results in the project being completed in summer 2018.

Planning Estimate

$3,900,000

4. Other Road Improvement Projects/Future Complete Streets/Alternative Routes

In light of the anticipated growth in Bethel, the interim YKHC Hospital Expansion Project, and a rehabilitation of Chief Eddie Hoffman Highway, the City of Bethel and other transportation stakeholders agree that alternative routes could help distribute traffic volumes, provide safer access and

connectivity within the community, and minimize residential conflict. Currently, the only way to access the residential area located near Ptarmigan St. is by traveling on Chief Eddie Hoffman Highway and Ridgecrest Drive, which are seeing > 10,000 VPD.

The City of Bethel intends to accomplish Goal 2 for Roads and its three objectives listed in the Comp Plan:

Goal 2: Develop a safe and efficient road system
- Objective A: Ensure adequate funding for road improvements.
- Objective B: Provide a safe and efficient street network to meet current needs and future development.
- Objective C: Design and build roads to reduce the number, length, and cost of business and personal trips.

The City's priority after the 3R work on Chief Eddie Hoffman Highway is to develop one or more roads through the "Donut Hole," the undeveloped tundra area lying between Ptarmigan Street as the east-west northern border and the Chief Eddie Hoffman Highway as the east-west southern border. The following alternatives identified by the State of Alaska Department of Transportation & Public Facilities and shown in the attached map, will be evaluated for development:

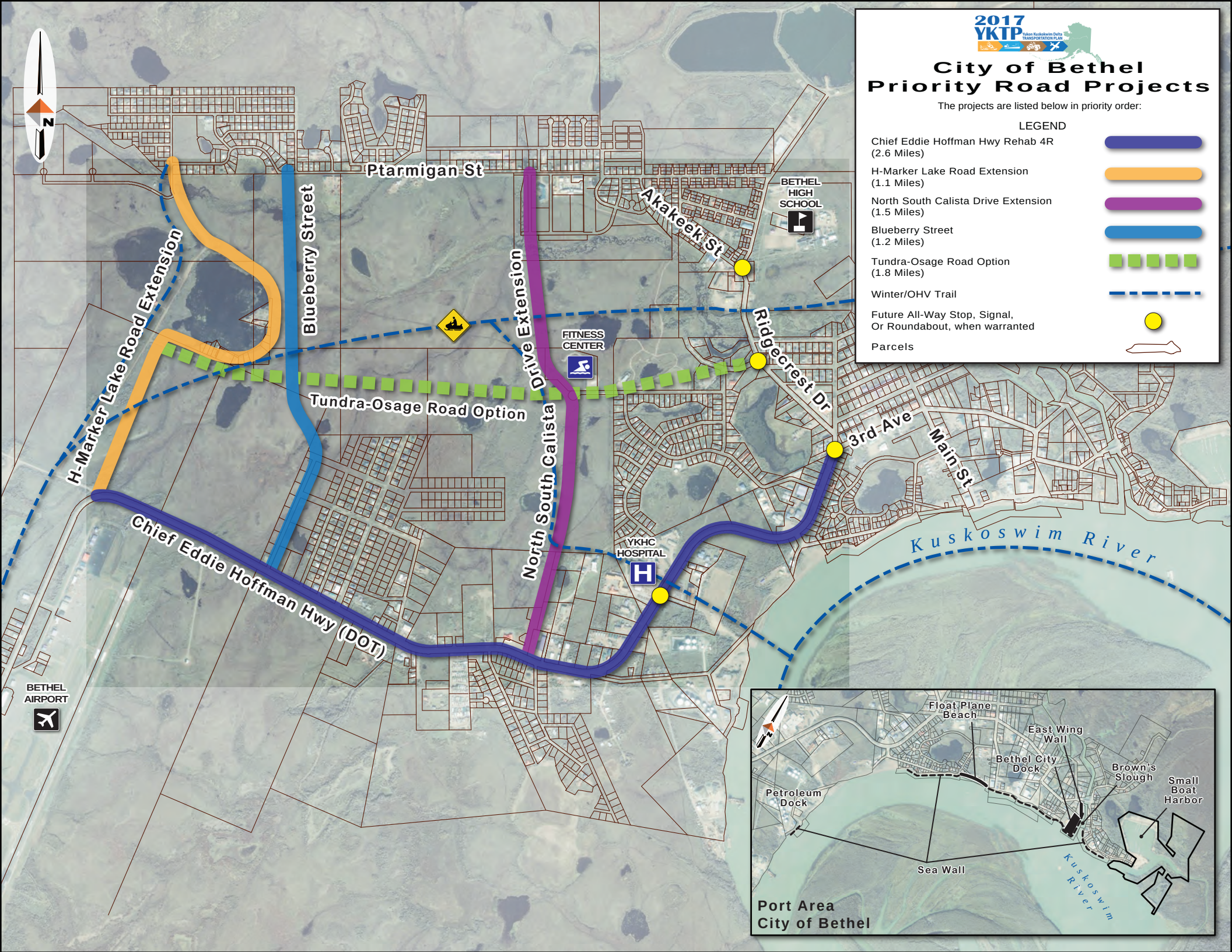
1) **Blueberry Street** – New Construction. This project would provide a south-north access between the Chief Eddie Hoffman Highway and Ptarmigan Street starting on the highway west of Blueberry Subdivision, but east of the Q2 lift station. This road could be also be built half way to Ptarmigan and connect with the east-west Tundra Osage Road. This road would help alleviate congestion at or near the hospital and YK Administration building. It is intended as a low speed collector roadway, with compatibility for other modes of travel (transit, non-motorized). It would serve local trips while avoiding immediate residential access conflicts. This new construction project would require ROW, environmental, permitting, design and construction activities.

2) **Donut Hole Road** – New Construction. This project is a new south to north road extension of Calista Drive. Calista is a short road that currently borders the east side of the Post Office. This road would be on the east side of the proposed ONC Subdivision to be located north of the Post Office. It is intended as a low speed collector roadway, with compatibility for other modes of travel (transit, non-motorized). It would serve local trips and be easier to implement if it is completed at the same time or before the new ONC subdivision. The new construction project would require ROW, environmental, permitting, design and construction activities.

3) **Tundra Osage Road** – New Construction. This project is a new east-west road extension of Osage that would bisect the donut hole and connect with Tundra Ridge Road south of H-Marker Lake Road. It is intended as a medium speed thoroughfare to alleviate pressure on Ptarmigan Street and Chief Eddie Hoffman Highway and allow for adjacent subdivision

development. This new construction project would require ROW, environmental, permitting, design and construction activities.

4) **Old Spruce Hollow Extension –** New Construction. This project would be an extension of Old Spruce Hollow Road heading northeast from Blueberry Subdivision. This road could be built half way to Ptarmigan and connect with the east-west Tundra Osage Road or it could be extended to Ptarmigan Street. This road would help alleviate congestion at or near the hospital and YK Administration building. It is intended as a low speed collector roadway, with compatibility for other modes of travel (transit, non-motorized). It would serve local trips while avoiding immediate residential access conflicts. This new construction project would require ROW, environmental, permitting, design and construction activities.


2017 YKTP
Yukon Kuskokwim Delta TRANSPORTATION PLAN
City of Bethel
Priority Road Projects
The projects are listed below in priority order:
LEGEND
Chief Eddie Hoffman Hwy Rehab 4R (2.6 Miles)
H-Marker Lake Road Extension (1.1 Miles)
North South Calista Drive Extension (1.5 Miles)
Blueberry Street (1.2 Miles)
Tundra-Osage Road Option (1.8 Miles)
Winter/OHV Trail
Future All-Way Stop, Signal, Or Roundabout, when warranted
Parcels
N
Ptarmigan St
Blueberry Street
H-Marker Lake Road Extension
Akakeek St
BETHEL HIGH SCHOOL
North South Calista Drive Extension
FITNESS CENTER
Ridgecrest Dr
Tundra-Osage Road Option
3rd Ave
Main St
Chief Eddie Hoffman Hwy (DOT)
YKHC HOSPITAL
Kuskoswim River
BETHEL AIRPORT
Float Plane Beach
East Wing Wall
Bethel City Dock
Brown's Slough
Small Boat Harbor
Petroleum Dock
Sea Wall
Kuskoswim River
Port Area
City of Bethel

City of Bethel Action Memorandum

Action memorandum No.	AM 17-36		
Date action introduced:	5-23-2017	Introduced by:	Peter Williams, City Manager
Date action taken:	5-23-2017	X Approved	Denied
Confirmed by:	LS ☐	☐	

Action Title

Direct Administration to pursue development of one or more roads through or around the donut hole to facilitate the movement of goods and people in Bethel.

Route to:	Department/Individual:	Initials:	Remarks:
✔	Administration		Recommend
✔	Finance		
✔	Public Works		Not available

Attachment(s): Memo from City Manager to Bethel City Council Concerning YK Transportation Plan Road Development; Map of Proposed Roads by DOT&PF Edited by City.

Amount of fiscal impact:		Account information:
X	No fiscal impact	NA
	Funds are budgeted for.	
	Funds are not budgeted.	

Summary Statement

The City of Bethel was asked by DOWL to revise a prepared letter from the City Manager to the Bethel City Council in support of road development proposals to appear in the Yukon Kuskokwim Regional Transportation Plan. City Administration turned the letter into a memorandum, added the two existing road projects that appear in the 2016-2019 STIP, but are not yet completed, and added four road alternatives conceived by the Alaska Department of Transportation and Public Facilities and edited by City Administration. While these roads are described in brief and appear on the map, City Administration would consider and investigate any and all road possibilities through the donut hole.

City Administration will bring new road ideas back to City Council once the information surrounding development of the roads prove that they are feasible.

Appendix H

Identified Needs, Y-K Delta Identified Projects, Goals, and Evaluation Criteria

YKTP REGIONALLY SIGNIFICANT PROJECTS – AVIATION
DESCRIPTION & SCORE (HIGHEST TO LOWEST)

AVIATION	SCORE
Aniak Runway *This project will relocate the runway approximately 260 feet south of its current location. It will construct a paved and lighted runway with safety areas, relocate navigational aids and utilities, clear trees and buildings from design surfaces and airspace, construct/realign taxiways and access roads, improve drainage and fencing, repave the existing apron, and rehabilitate or replace existing maintenance buildings. The new runway will be approximately 5400' by 100', but may increase take-off runs to 6000' by paving portions of the safety areas and declaring distances. The existing runway is 6,000'x150'. Aniak is a Regional Class Airport. Approximate cost: $54,000,000. This project is identified in the spending plan and is planned for construction. After the projects were reviewed and evaluated, DOT&PF requested that this project be removed from the recommendations list.*	69
McGrath Airport Repaving & Erosion Control *Rehabilitate and repave the runway, taxiways and apron pavement. Correct/mitigate the erosion problems at the south end of Runway 16/34; expand or replace existing Snow Removal Equipment Building. Approximate cost: $15,612,000.*	68
Saint Mary's Airport Improvements *Rehabilitate gravel aviation operating surfaces; upgrade airport lighting, electrical, and signage; remove a fuel tank; clear vegetation; apply dust palliative; update the Airport Layout Plan; and construct full parallel taxiway.*	64
Emmonak Airport Improvements *Culvert replacement; brush cutting; replace secondary wind cone; replace culvert; apply dust palliative; repair segmented circle; purchase loader; purchase dozer; purchase u-blade loader; construct Snow Removal Equipment building; relocate beacon; rehabilitate runway; perform aeronautical survey; install Instrument Landing System; update Airport Layout Plan; provide passenger shelter and toilet; construct full parallel taxiway; install High Intensity Runway Lights.*	64
Kwigillingok Airport Reconstruction *This project will reconstruct existing 2,510' runway to 3,300'x 60' plus taxiway, construct a new apron, install an airport lighting system, navigation aids, and construct two single bay snow removal equipment buildings. The project will also install erosion protection for the runway embankment along the tidal slough and may include some stream realignment. Out of all the runways in the region, this is stated to be the worst and needing the most urgent improvements. Approximate cost: $36,000,000.*	64
Bethel Level/Reinforce 1L-19R RSA *Fill and compact safety area near the Bethel Runway Bump. Install Precision Approach Path Indicator's. Bethel is a Regional Class Airport. Approximate cost: $4,380,000.*	63

YKTP REGIONALLY SIGNIFICANT PROJECTS – AVIATION
DESCRIPTION & SCORE (HIGHEST TO LOWEST)

AVIATION	SCORE
Crooked Creek Airport Improvements *The project implements the 0-5-year recommendations of the Crooked Creek Airport Master Plan. It will bring the existing sub-standard airport up to standards. The existing 1997' x 60' runway will be expanded to 3,300' x 75' and a 250' x 300' aircraft apron will be constructed. The Runway Safety Area will be expanded to 3,900' x 150' and terrain penetrations will be removed. A new taxiway will be constructed. Medium Intensity Runway Lighting will be installed along with Precision Approach Path Indicators, Runway End Identifier Lights and an Automated Weather Observation System. A new, two-bay heated Snow Removal Equipment Building will be constructed. Property acquisition will occur to accommodate the improvements. Approximate cost: $19,500,000.*	63
Bethel Mitigate Wildlife Hazard from Pond *Drain/fill pond near the end of Runway. Bethel is a Regional Class Airport. Approximate cost: $190,000.*	57
Bethel Airport Approach Control Analysis *FAA should perform an airspace analysis and business case assessment to identify approach control technology most appropriate to resolve delays currently experienced at the airport. Potential solution technologies include Automatic Dependent Surveillance Broadcast, RADAR (Air Traffic Control Beacon Interrogator 6), and Wide Area Multilateration (WAM). Bethel is a Regional Class Airport.*	57
Newtok Airport Relocation *Relocate the Newtok Airport to the new village of Mertarvik. Construct a 3,300' X 75' runway with taxiway and apron, lighting with on-site power generation, visual navigational aids, 1 heated Snow Removal Equipment Building, 1 unheated Snow Removal Equipment Building, new maintenance equipment, and a 1.5-mile airport access road. Approximate cost: $26,500,000.*	54
Anvik Airport Improvements *Remove vertical curve in runway; clear vegetation around wind cone; apply dust palliative; purchase loader; renovate/repair Snow Removal Equipment Building; install tank; remove airspace obstructions (trees); resurface runway, apron, and taxiway; improve drainage; install new Medium Intensity Runway Lights; install Precision Approach Path Indicators and Runway End Identifier Lights; construct passenger shelter and toilet.*	47
Quinhagak Airport Improvements *Repair holes in runway; certify existing Automated Weather Observing System*	45
Bethel Shift and Extend Runway 12-30 Phase 1 *Acquire crosswind extension property and relocate rifle range. Extend crosswind runway and runway safety area. 200 feet. Complete Environmental Assessment. Bethel is a Regional Class Airport. Approximate cost: $1,690,000.*	43
Bethel Partial Parallel Taxiway/Extend Taxiway J *Extend Taxiway J to Taxiway C. Construct a Taxiway Design Group II parallel Taxiway from the North Air Taxi Apron to Taxiway J. Replace culvert under Taxiway C. Bethel is a Regional Class Airport. Approximate cost: $2,810,000.*	42
Nunam Iqua (Sheldon Point) Airport Improvements *Clear vegetation; update Airport Improvement Plan; install Precision Approach Path Indicators or Visual Approach Slope Indicator; construct passenger shelter and toilet; rehabilitate runway; repair/reconstruct access road; purchase brush cutter.*	42

YKTP REGIONALLY SIGNIFICANT PROJECTS – AVIATION
DESCRIPTION & SCORE (HIGHEST TO LOWEST)

AVIATION	SCORE
Scammon Bay Airport Improvements *Runway reconstruction to address soft surface.*	42
Bethel Air Carrier Apron Roads and Parking Phase 1 *Designate road as part of Federal Highway System as terminus of Chief Eddie Hoffman Highway and nominate for funding in Statewide Transportation Improvement Program; relocate/demolish unused and portable buildings/equipment; reorganize, expand, and pave parking lot. Bethel is a Regional Class Airport. Approximate cost: $2,060,000.*	41
Toksook Bay Apt & Access Rd Reconstruction *Rehabilitate the runway, taxiway, apron and airport access road sinking areas and resurface; apply dust palliative; construct 1-bay Snow Removal Equipment Building. Approximate cost: $5,850,000.*	41
Grayling Airport Improvements *Repair / stabilize eroded areas; apply dust palliative; repair runway threshold markers; clear vegetation; purchase grader/dozer crawler; repair/replace Snow Removal Equipment Building; install Precision Approach Path Indicators, Runway End Identifier Lights; update Airport Layout Plan; construct passenger shelter and toilet.*	41
Bethel North Air Taxi Apron Reconstruction and Expansion *Reconstruct existing apron in accordance with Pavement Management Plan and expand apron to the south to serve all lease areas up to the Air Carrier Apron. Bethel is a Regional Class Airport. Approximate cost: $7,970,000.*	40
Shageluk Airport Improvements *Repair access road; repair Snow Removal Equipment Building; resurface runway; raise runway embankment; perform aeronautical survey; install Ultra Low Sulfur Diesel tank; relocate beacon; replace cones; replace segmented circle; clear vegetation; apply dust palliative; purchase dozer, grader, loader; replace Snow Removal Equipment Building; update Airport Layout Plan; construct passenger shelter and toilet.*	39
Kotlik Airport Resurfacing and Electrical System Replacement *Apply 6" of new crushed aggregate surface course and replace the existing lighting system. Existing light cans are jacking out of the embankment making routine snow removal operations difficult. Approximate cost: $1,000,000.*	39
Holy Cross Airport Rehabilitation *Resurface existing runway, taxiway and apron. Approximate cost: $9,000,000.*	38
All YK Delta Communities - Airport Drainage Improvements *Replace deteriorated culverts; re-grade and resurface operating areas at selected airports to include Alakanuk, Kasigluk, Kwethluk, Sleetmute. Approximate cost: $800,000.*	37
Russian Mission Airport Improvements *Repair Snow Removal Equipment Building; apply dust palliative; repair/replace Precision Approach Path Indicator; remove airspace obstructions; replace windsock tower; replace Ultra Low Sulfur Diesel tanks; purchase dozer, grader and loader; perform aeronautical survey; update Airport Layout Plan; construct passenger shelter and toilet.*	36

YKTP REGIONALLY SIGNIFICANT PROJECTS – AVIATION
DESCRIPTION & SCORE (HIGHEST TO LOWEST)

AVIATION	SCORE
Select YK Delta Communities - Implement LP/LPV Approaches: Automated Weather Observation Systems (AWOS) *Install Automated Airport Observation System to facilitate Localizer Performance/Localizer Performance with Vertical Guidance approaches: Atmautluak, Crooked Creek, Goodnews Bay, Eek, Grayling, Kasigluk, Kotlik, Nunapitchuk, Pilot Station, Platinum, and Nunam Iqua (Sheldon Point). Note: Crooked Creek, Goodnews, and Platinum also need runway lights for Localizer Performance/Localizer night ops. Association of Village Council Presidents (AVCP) just received a $250,000 for an Automated Weather Observation System for one of these communities. AVCP is going to look at the current prioritization and work with the local airlines to determine which communities will receive it.*	36
Select YK Delta Communities - Implement Localizer Performance/Localizer Performance with Vertical Guidance Approaches: Aeronautical Surveys & Automated Weather Observation Systems *Prepare aeronautical surveys and install Automated Weather Observation System to facilitate Localizer Performance/Localizer Performance with Vertical Guidance Approaches: Akiak, Akiachak, Kongiganek, Kwigillingok, Napaskiak, Newtok, Nightmute, Takotna, Tuluksak, and Tuntutuliak. The following airports also need runway lights for LP/LPV night ops: Akiachak, Kwigillingok, Newtok, Nightmute, Takotna, Tuluksak.*	35
Bethel Airport Improvements *Extend electrical power for South Ramp tie downs; remove bumps from Taxiway C; replace Snow Removal Equipment Building roofing and siding. Bethel is a Regional Class Airport.*	34
Bethel North Air Taxi Roads and Parking Phase 1 *Prepare grading plan to use ditch area as disposal site for waste materials. Construct new connector road between Chief Eddie Hoffman Highway and the North Air Taxi Road. Bethel is a Regional Class Airport. Approximate cost: $220,000.*	33
Bethel Airport Crosswind Runway (12-30) Paving *After the existing crosswind runway is extended to support operations by small commercial and General Aviation aircraft, pave the crosswind to facilitate medevac operations by the (medevac) Lear 35. Note: If this runway is paved, tundra tire-equipped aircraft may need to operate elsewhere on the airport. Bethel is a Regional Class Airport.*	32
Select YK Delta Communities - Weather Cameras *Provide weather cameras at the following airports: Akiachak, Akiak, Alakanuk, Atmautluak, Chuathbaluk, Crooked Creek, Flat, Kongiganek, Napaskiak, Nightmute, Nunam Iqua (Sheldon Point), Pilot Station, Platinum, Quinhagak, Russian Mission, Stony River, Tununak.*	30
Bethel South General Aviation Apron Rehab *Resurface existing apron; install tie downs. Bethel is a Regional Class Airport. Approximate cost: $3,000,000.*	30
McGrath Airport Tie Downs and Toilets *Install tie downs and public toilets.*	6
Select YK Delta Communities - Construct/Replace 1-Bay Snow Removal Equipment Buildings *Construct or replace 1-Bay Snow Removal Equipment Building at Atmautluak, Kasigluk, Kwethluk, Mountain Village, Mekoryuk, and Napaskiak.*	5

YKTP REGIONALLY SIGNIFICANT PROJECTS – AVIATION
DESCRIPTION & SCORE (HIGHEST TO LOWEST)

AVIATION	SCORE
Marshall Airport Improvements *Update Airport Layout Plan; install Precision Approach Path Indicator or Visual Approach Slope Indicator.*	2
All YK Delta Communities - Electrical Power Source *Install electrical power to apron at all community-class airports.*	2
Bethel Hanger Lake Seaplane Base *Bethel needs to designate a place for float planes, such as Hangar Lake. Currently float planes land on the beach next to barges in Bethel, which can cause added wear and tear to the coast and dock area. The City of Bethel is maintaining the area where they land which is an expense that is not in its budget. DOT&PF mentioned the U.S. Fish and Wildlife Service used to maintain a fuel tank in the area. The seaplane base is being maintained by private users. The existing conditions of the road need to be documented as well. The 2013 Bethel Master Plan Update did not identify this as a priority for DOT&PF.*	2
Tuluksak Airport Improvements *Construct fence to stop cars from entering the runway.*	2
Select YK Delta Communities - Passenger Shelters *Provide passenger shelters and public toilets at the following airports: Akiachak, Akiak, Alakanuk, Anvik, Atmautluak, Chefornak, Chevak, Chuathbaluk, Crooked Creek, Eek, Emmonak, Flat, Goodnews Bay, Grayling, Holy Cross, Hooper Bay, Kalskag, Kasigluk, Kipnuk, Kongiganak, Kotlik, Kwethluk, Kwigillingok, Lime Village, Marshall, Mekoryuk, Mountain Village, Napakiak, Napaskiak, Newtok, Nightmute, Nikolai, Nunam Iqua (Sheldon Point), Nunapitchuk, Pilot Station, Platinum, Red Devil, Russian Mission, Scammon Bay, Shageluk, Sleetmute, Takotna, Toksook Bay, Tuluksak, Tununak.*	1

YKTP REGIONALLY SIGNIFICANT PROJECTS – SURFACE DESCRIPTION & SCORE (HIGHEST TO LOWEST)

SURFACE	SCORE
All Y-K Delta Communities – Trail Marking *Trail markings to help residents navigate in-between communities during travel. Solution: Install permanent trail markers along primary routes. Markers include tripods with reflective tape.: DOT&PF and the Association of Village Council Presidents (AVCP) have already begun a program of funding permanent markers in the YK Delta. AVCP is working on a winter trail marking project the 15 consortium tribes' safe access from village to village across federal lands. Design will be complete May 2015. The plan includes marking approximately 3000 miles of routes between our consortium villages that will include safety shelters in between*	64
Bethel Transit System *Transit to and from town and the airport. Additional education to the public about the transit system. Provide additional funding to allow the operations to go to and from town and the airport. Status: There is a transit system, but it is not widely known about. It does not go to the airport.*	59
All Coastal Communities - Erosion Control *Erosion control considerations for all communities. Every village in the YK Delta is experiencing erosion issues. Napakiak and Newtok are the two communities experiencing the worst impacts from erosion. Provide erosion protection measures for the transportation system in the communities experiencing worst impacts.*	54
McGrath Connector Road from Parks Highway to McGrath *Access to public facilities and services, cheaper fuel and freight, and other modes of transportation. In FY16 - Barge companies are not going to be able to make it to McGrath. All their fuel and freight will have to be flown in. Build a 180-mile road to connect McGrath to the Parks Highway near Talkeetna. This project is the community of McGrath's vision for the future. This project has not been planned or prioritized yet. It wasn't until this planning effort that the McGrath Public Works Department began to speak about such a big project. The discussion was about looking 20 years into the future. This connector road is a top priority for McGrath.*	53
All Y-K Delta Communities - Dust Control (per community) *Asthma and lung issues are directly related to dust and other airborne particles. Some of the villages are using trucks to distribute water. A dust control application for communities in the YK Delta will help improve resident's health. The AVCP is helping Chevak and Alakanuk and Scammon with dust palliative solution.*	49
Kalskag Yukon-Kuskokwim Freight Corridor *The project will develop a 44-mile transportation corridor between the Yukon and Kuskokwim Rivers to transfer products to and within the region. The proposed project will also provide opportunities for markets. The corridor would begin at Kalskag and end in Paimiut. The State of Alaska appropriated $450,000 to the AVCP for taking the project the next step in development - an engineering, economic and environmental evaluation of the road corridor and the regions it would serve. In 2012 The State of Alaska appropriated $3.0 million for corridor planning and development. The project is slowly moving forward and is currently in stage III of the planning phase.*	47

YKTP REGIONALLY SIGNIFICANT PROJECTS – SURFACE DESCRIPTION & SCORE (HIGHEST TO LOWEST)

SURFACE	SCORE
Emmonak - Alakanuk Road New Construction *This project will construct 6.3-mile connector road between Alakanuk and Emmonak. The road would run along the power line easement constructed by the Alaska Village Electric Cooperative in 2011. This project could start as a winter trail and be developed over time as a gravel road. This project will need to be developed in coordination with the Alakanuk community.*	47
Atmautluak Connector Road *This project will construct a 20-mile road between Atmautluak and Bethel. This project would be developed along the energy infrastructure. Nu-Vista is working on an energy plan that would require connector roads.*	43
Ice Road Connecting Akiachak, Akiak, and Bethel *This project would provide maintenance and trail marking between Bethel, Akichak, and Akiak, a 38 mile stretch between the three communities. There are 4-5 communities along the river that would be impacted by these improvements. This linkage would enhance emergency response services between Bethel and Akiak. The road will increase economic development opportunities for Akiak as well as provide access to major subsistence areas.*	42
McGrath Connector Road to Takotna *This project would construct a 15-20-mile connector road between Takotna and McGrath. Surrounding communities access public services and the main airport in McGrath. This route will also develop a section of the proposed road to Ruby by connecting McGrath to the north side of the Kuskokwim River and thru Takotna and on to Ruby. This project was identified in the 2002 YK Trans Plan as a high priority. It was also identified as a priority when the YKTP Planning Team traveled to McGrath and held a public meeting.*	42
Yukon and Kuskokwim Rivers - Tramway *The Y -K Portage consists of nine water bodies and four land portages; the State applied for the lands underlying water bodies. The State divided these nine water bodies into five separate applications, described in a northwesterly direction from the Kuskokwim River as follows: Mud Creek and Unnamed Lake #1; Crooked Creek and Johnson River; Unnamed Lake #2 and Kulik Lake; Unnamed Lake #3 and Unnamed Lake #4; and the Talbiksok River to the confluence with Portage Slough of the Yukon River. The Y -K Portage is in western Alaska about 350 miles due west from Anchorage and about 65 miles northeast of Bethel. The Y -K Portage serves as the shortest practical "link" between two major river systems: the Kuskokwim and Yukon Rivers. The Y -K Portage follows a general land and water route northwesterly about 72 miles, starting at Mud Creek (located near Lower Kalskag village on the Kuskokwim River) to Unnamed Lake #1, downstream on Crooked Creek to the confluence with Johnson River, upstream on Johnson River to Unnamed Lake #2, across Unnamed Lake #2, Kulik Lake, Unnamed Lake #3, Unnamed Lake #4, then crossing overland to connect with Talbiksok River, and continuing downstream ultimately ending at its confluence with the Portage Slough of the Yukon River, near Russian Mission. This is the original route of the YK Freight Corridor. There's an existing tramway in between. Crosses fish and wildlife land.*	36

YKTP REGIONALLY SIGNIFICANT PROJECTS – SURFACE DESCRIPTION & SCORE (HIGHEST TO LOWEST)

SURFACE	SCORE
Crooked Creek Winter Trail Marking *This project will construct trail markings to help residents navigate in-between communities during travel. The project will provide route staking and navigational upgrades for inventory routes to improve safety during winter travel, prevent disorientation, and aid in rescue operations. The project is identified in the Crooked Creek Long Range Transportation Plan.*	35
Bethel Boardwalks/Pedestrian Pathways *This project will construct boardwalk Improvements for the City of Bethel. The City of Bethel has indicated that boardwalk and pedestrian improvements are a priority and that they are working with the Congressional Delegation and DOT&PF staff to identify funding for these types of projects. There are several boardwalks that are shut down and unusable. The main highway in Bethel has a separated pathway for pedestrians, but it is used by motorist and is not a safe place for bicyclists or pedestrian.*	33
McGrath Connector Road to Ruby *This project will construct a 150-mile road between McGrath and Ruby. The road will provide residents in Ruby and McGrath with access to economic opportunities, such as mining operations (Donlin and Reef Ridge), goods and supplies, and major modes of transportation such as the McGrath airport. Not only will this road provide connectivity between McGrath, Taktona, Ophir, Poorman and Ruby, it will provide access to a mining district with known mineral deposits (Tintina Gold Belt District). This project was identified in the 2002 YK Trans Plan as a high priority. It was also identified as a priority when the YKTP Planning Team traveled to McGrath and held a public meeting.*	33
Stony River - Sleetmute Road *This project will construct a rural local road. This route serves areas around the village for administration of forests, mining, oil, recreation, subsistence, or other purposes.*	33
Tununak - Toksook Bay Connector Road *This project will construct an 8-mile road connecting the residents with access to operating airport. Land owned by two village corporations. Airports are in both communities. This project was requested in the 2002 plan. A portion of this connector is built using geo-grid material.*	32
Nunivak Island Connector Road *This project will construct a 50-mile road on Nunivak Island with access to major fishing grounds on southeast side of the island. This project was requested in the 2002 plan.*	24
Bethel Connector Road *This project will construct a 12-mile road between Bethel and Napakiak. The road will provide residents with access to public facilities and services in Bethel. The project was requested in the 2002 plan. A reconnaissance study has been complete. This project would be developed in coordination with energy infrastructure. Nu-Vista is working on an energy plan that would require connector roads.*	22

YKTP REGIONALLY SIGNIFICANT PROJECTS – SURFACE DESCRIPTION & SCORE (HIGHEST TO LOWEST)

SURFACE	SCORE
Chevak Barge Access Road *This project will construct a barge access road. This is an official route in Chevak's inventory that will provide access to the proposed barge site. The existing barge site is causing sever river erosion and a new site that is more suitable for barging operations. Construction includes structurally engineered and properly aligned roads with appropriate surface material, drainage provisions, and a dust control additive.*	0
Bethel Tundra Ridge Road *This project entails the resurfacing of Tundra Ridge Road with asphalt. The 1.04-mile road runs from Chief Eddie Hoffman Highway to Ptarmigan Street. This project has appeared in the last three Statewide Transportation Improvement Plans (2008-2011, 2012-2015, 2016-2019). This paving project would require ROW, environmental, permitting, design, and construction activities. Planning Estimate $3,900,000.*	0
Bethel Chief Eddie Hoffman Highway Rehabilitation Project *This project will involve resurfacing, restoration, and rehabilitation (3R) of the existing paved Chief Eddie Hoffman Highway. The improvements will be short of full-depth replacement. and target safety improvements for active transportation use. This project will consider 3 roundabouts with all-way stops. Roundabouts and/or all-way stops would be considered at major intersections, such as at or near the hospital and at Watsons Corner. It would also examine the widening of three lanes for left turns relative to through traffic in the commercially developed area from south of the Post Office to Watsons Corner on Ridgecrest Drive. It will also improve the bike/pedestrian pathway, signage, lighting, and traffic devices for pedestrians and non-motorized transportation users. The project was evaluated and recommended in this plan. It was not scored due to it being recommended for consideration towards the end of the planning process.*	0
Bethel Ridgecrest Drive Project *This project involves the rehabilitation of Ridgecrest Drive between Akakeek and Ptarmigan Street. The project will raise and widen the road, improve drainage and provide middle lane turnouts to reduce congestion and provide marked and lighted pedestrian crossings at school intersections. This project will be coordinated by Highway Safety Improvement Program.*	0
Bethel Other Road Improvement Projects/Future Complete Streets/Alternative Routes 1. *Blueberry Street* 2. *Donut Hole Road* 3. *Tundra Osage Road* 4. *Old Spruce Hallow Extension* *Further descriptions on these projects and Bethel needs can be found in Appendix I.*	
Akiak Airport Access Road *This project will construct an airport access road in Akiak. The project is identified in the Akiak LRTP and was recommended during the YKTP planning process.*	0
Anvik Airport Access Road *This project will construct a new airport road ~ 0.5 miles long. It serves the entire community for access to the Airport. The Tribe has identified this route as a low priority route that has been recently upgraded when the airport was finished. It starts at its intersection with Charlie Wolf Road and ends where it meets the Airport. The route is owned by the Tribe and has been in use since the 50's with upgrades in 2002.*	0

YKTP REGIONALLY SIGNIFICANT PROJECTS – SURFACE DESCRIPTION & SCORE (HIGHEST TO LOWEST)

SURFACE	SCORE
Chuathbaluk Airport Access Road *This project will construct an airport access road in Chuathbaluk. The project is identified in the Chuathbaluk LRTP and was recommended during the YKTP planning process.*	0
Chefornak Airport Access Road *This project will construct an airport access road in Chefornak. The project is identified in the Chefornak LRTP and was recommended during the YKTP planning process.*	0
Hooper Bay Local Streets Improvement *This project will reconstruct local streets in Hooper Bay. This project is identified in Hooper Bay's LRTP and was recommended during the YKTP planning process.*	0
Akiak Boat Harbor Access Road *This planned road is approximately one mile in length and traverses south of the village, along the Kuskokwim River. This project provides economic development opportunities to the village by providing land access to a proposed boat harbor. The boat harbor will provide boat access to other villages along the Kuskokwim River, and the city of Bethel. The harbor will benefit local commercial fisherman, as well as tourism activities. The harbor is located in a blocked stream channel which will provide a safer moorage for boats.*	0
Kasigluk Airport Access Road *This project will construct an airport access road in Kasigluk. The project is identified in the Kasigluk LRTP and was recommended during the YKTP planning process.*	0
Nunapitchuk Tramway Ice Road *This project will construct an Ice Road between Nunpitchuk and Bethel, serving communities along the river.*	0
Tununak Airport Access Road *This project will construct an airport access road in Tununak. The project is identified in the Tununak LRTP and was recommended during the YKTP planning process.*	0
McGrath Bike and Pedestrian Path *This project would design and combine and pedestrian path along the community streets. A community streets project was completed in 2012 but did not include a bike and pedestrian path. It is important for the residents of McGrath to seek ways to incorporate a bike and pedestrian plan into existing road projects.*	0
Stony River Airport Access Road *This project will construct an airport access road in Stony River. The project is identified in the Stony River LRTP and was recommended during the YKTP planning process.*	0
Nunapitchuk Airport Access Road *This project will construct an airport access road in Nunapitchuk. The project is identified in the Nunapitchuk LRTP and was recommended during the YKTP planning process.*	0
Nunapitchuk West Airport Access Bridge *This project will construct a 50-foot-long wood bridge with a surface width of 12 feet. The project is identified in Nunapitchuk's LRTP and was recommended during the LRTP planning process.*	0
Nunapitchuk Johnson River Crossing - 860 miles *This project will construct an 860-mile trail that crosses the Johnson River.*	0

YKTP REGIONALLY SIGNIFICANT PROJECTS – SURFACE DESCRIPTION & SCORE (HIGHEST TO LOWEST)

SURFACE	SCORE
Grayling Airport Access Road *This project will construct an airport access road in Grayling. The project is identified in the Grayling LRTP and was recommended during the YKTP planning process.*	0
Napakiak Local Streets Improvement *This project will reconstruct local streets in Napakiak. This project is identified in Napakiak's LRTP and was recommended during the YKTP planning process.*	0
Crooked Creek Road to Donlin Mine *This project will construct a road from Crooked Creek to Donlin Mine. See section 4.3 in the report for a full description of the Donlin Mine Project and associated infrastructure to support the mine project.*	0
Chevak Tramway Connector and Subsistence Access *This project will develop a Tramway system from the headwaters of the Ninglikfak River to the river on the North side of Chevak. This tramway will provide a route for subsistence gathering and harvesting. Areas that were traditionally portaged across by existing walkways have deteriorated and the increasing weight of boats and motors require the assistance of a pathway. The construction of several over-ground tramways and surface reinforcing material would allow residents to travel to each body of water without following the meandering path of waterways and impassable tundra sections.*	0
McGrath Noir Hill Landing Road Improvement *This project will construct a 1.8-mile road that will provide access to the rock and timber for construction projects. This is also a subsistence project. Residents of McGrath use this road for berry picking and hunting.*	0
Oscarville & Napakiak Road to Bethel *This project will construct an eight to ten-mile gravel haul road between Oscarville, Napakiak and Bethel. The project is currently in design.*	

YKTP REGIONALLY SIGNIFICANT PROJECTS – MARINE
DESCRIPTION & SCORE (HIGHEST TO LOWEST)

MARINE	SCORE
Emmonak Dock Expansion/Deep Water Port *The Port of Emmonak is used for trans-shipment of heavy and bulk items to other Y-K Delta coastal and Yukon river communities. The AVCP and Calista Corporation are supporting the City of Emmonak and Yukon Delta Fisheries Development Association (YDFDA) in their efforts to see the Lower Yukon Region Port and Dock constructed in Emmonak. This project will expand the dock and develop a deep-water port. The banks of the Yukon river currently serve as the dock, and need constant reinforcement. Design is complete. Emmonak is seeking construction funding. This project is recommended in this plan.*	70
Bethel City Dock West Extension *This project will construct Dock improvements to ensure safe and efficient fuel and freight delivery. This extension would fill in the beach area and is not compatible with the third component, Beach Replenishment. The project is identified in the City of Bethel's 2035 Comprehensive Plan and the City is working hard to secure funding from the State. If funding is not secured for this project, the existing infrastructure will continue to deteriorate and could cause issues for fuel and freight delivery to communities along the Kuskokwim River that receive fuel and freight from transshipments at Bethel Port.*	51
Bethel East Harbor Expansion *This project will dredge the basin for the small boat harbor and add additional uplands storage space to the northeast of the existing basin. This component would also include dredging of the entry channel and a turning basin, as well as the addition of timber floats and two launch ramps. The uplands storage area would prove an alternative location of vessels to be pulled from the river during the winter, allowing the beach area near the City Dock to be filled in for more dock face. The project is identified in the City of Bethel's 2035 Comprehensive Plan and the City is working hard to secure funding from the State. If funding is not secured for this project, the existing infrastructure will continue to deteriorate and could cause issues for fuel and freight delivery to communities along the Kuskokwim River that receive fuel and freight from transshipments at Bethel Port.*	50
Bethel Port Expansion *This project adds a 721-foot sheet pile dock adjacent to the existing petroleum dock, extending from the existing seawall to the existing boat launch area. See full project description in the report for more information.*	49
Kongiganek Deep Sea Port and Access Road *This project will provide a new port to allow for safe and efficient fuel and freight delivery to Kongiganak and surrounding villages. It will develop a new barge site on the river, as the existing barge site is becoming too shallow due to silting. The project could potentially provide a safe harbor for hunters and travelers.*	47

YKTP REGIONALLY SIGNIFICANT PROJECTS – MARINE
DESCRIPTION & SCORE (HIGHEST TO LOWEST)

MARINE	SCORE
Bethel Beach Replenishment *This project would consist of adding gravel to the beach immediately west of the existing City Dock to replenish the portion that has eroded, match the existing beach slope of 8:1, and add a 25-foot beach extension to the west. This component would not be compatible with the first component, the Bethel City Dock West Extension, since the extension would fill in the beach area to create a dock. This component is not a recommended improvement (in the existing location), but is discussed here since it was one of the original concepts developed. Development of the East Harbor Expansion would include development of a beach and uplands that could be used to haul vessels and floatplanes.*	45
Saint Mary's Dock Improvements *This project will provide dock improvements to allow better access to barges that deliver cargo and fuel to Yukon river villages. It will increase the size of the dock by approximately 66,000 square feet, creating additional cargo and equipment storage space, construct additional mooring posts for more convenient vessel moorage, provide a haul-out ramp for vessels requiring on-shore hull and power train repairs, allow multiple cargo vessels to tie-up to the port and transfer/consolidate loads, allow simultaneous gravel loading or fish processing during periods of high cargo vessel activity, and increase the revenue generation and self-sufficiency of the port.*	39
Bethel City Dock East Repair *This project will replace the failing east timber wing wall of the city dock, to the south of the bridge over Brown's Slough. The timber wall would be replaced with a sheet pile design, to tie into the existing sheet pile wall.*	37
All Coastal Communities - River Ferry System Feasibility Study *This project is a feasibility study that will determine if a river ferry for the Yukon and Kuskokwim Rivers would be cost effective and beneficial for users. Solution: Develop a feasibility study for both rivers. A river ferry system could reduce the cost of travel and transportation, enable large items such as equipment and vehicles to be freighted between villages, increase and improve inter and intra-village travel and attract tourists. A request has been made to undertake a feasibility study for the Kuskokwim River - Eek to Bethel, and Tuluksak and Bethel.*	36
Mekoryuk Sub Regional Port *This project will improve access to barge delivery services, and develop to enable barges to serve coastal villages more efficiently. The project was requested in the 2002 plan. AVCP and the State of Alaska are currently working on a Regional Port Study*	29
Hooper Bay Barge Landing Improvements and Breakwater *This project will construct upgrades to the barge-landing site on the beach by the airport. Improvements would also include a breakwater port to ensure deep-water access.*	0
McGrath Boat Launch *This project is a facility that will provide floatplane and boat launch users with a safe place to dock and offload.*	0
Mountain Village Dock Improvements *This project will construct a new dock or barge landing/dock based on feasibility study. Project was requested in the 2002 plan.*	0

YKTP REGIONALLY SIGNIFICANT PROJECTS – MARINE
DESCRIPTION & SCORE (HIGHEST TO LOWEST)

MARINE	SCORE
Nightmute Navigational Improvements *This project will remove obstacles in the Toksook River for navigation purposes in the Project was requested in the 2002 plan.*	0
Kotlik Channel Markers *This project will construct navigable trail markers located on state lands outside the general town site of Kotlik. Channel Markers will be placed along the navigable trail to help navigate during the summer. This navigable trail is used to access subsistence areas during the summer months.*	0
Napaskiak Dredging and Dock Improvements *Fishers and barge must wait for high tides in order to dock at Napaskiak. Dock construction was suggested as an option to build road access to a deeper site facing the Kuskokwim River across an island immediately in front of town at the mouth of Napaskiak Slough. The project would consist of a bridge, new road, and a sheet pile dock. The dredging option would have potential federal interest if economic feasibility could be determined. Project was requested in the 2002 plan.*	0
Kotlik Dock Improvements *This project will construct an 8-foot-wide dock in Kotlik. This dock will provide safer and easier disembarking for boats for Kotlik residents.*	0
Kongiganek Dredging *This project will dredge the Kongiganek River in two locations. Barge traffic can only resume during high tides. This was requested in the 2002 plan.*	0
Chefornak Barge Improvements *This project will provide the residents of Chefornak and surrounding villages access to fuel and freight delivery. This was requested in the 2002 plan.*	0
Atmautluak Boat Dock *This project will construct an 8-foot-wide dock in Atmautluak. This dock will provide safer and easier disembarking for boats for Atmautluak residents.*	0
Eek Boat Ramp *This project will construct boat landing sites with ramps for residential use. The existing boat ramps and dock site becomes congested especially when barges arrive with fuel and supplies.*	0
Crooked Creek Marine Improvements *This project will construct a barge facility site for supplies and fuel at Jungjuk Creek. Donlin. More information regarding the Donlin Mine project can be found in section 4.3 of the report.*	0
Eek Barge Landing Improvements *This project will upgrade the current barge-landing site in town, including installing mooring points, a gravel ramp, and developing a larger staging area.*	0
All YK Delta/Coastal River Communities - Barge Delivery and Navigational Plan *Need: Address subsistence issues and safety concerns with barge delivery/navigation. Solution: Prepare a Statewide Barge Delivery and Navigational Planning Document. This project would help enforce policy for the barge operators so that they have rules to follow, such as delivery times and locations. This would need to be a large planning/outreach effort. Cost: $400,000- 500,000.*	0

YKTP REGIONALLY SIGNIFICANT PROJECTS – MARINE
DESCRIPTION & SCORE (HIGHEST TO LOWEST)

MARINE	SCORE
Alakanuk Barge Landing Improvements *Upgrade barge-landing sites by installing mooring points at both the school and Native Corporation fuel landing sites for barge to tie offs. Improve freight landing areas by installing gravel ramps and rock protection. The site next to the City offices will require a new staging area to be developed if it is used as the main barging site.*	0
Aniak Dock Improvements *This project will improve the existing dock and harbor facility. This project was requested in the 2002 plan. A feasibility study has been completed.*	0

YKTP Project Review Goals and Criteria

Connectivity

4 Critical need with immediate health or safety consequences if not pursued. Project improves access to multiple communities or other modes of transportation. Project connects users with major intermodal transportation hubs.

3 Rationalizes existing intermodal facilities, or addresses a shortcoming in an existing transportation corridor. Project enhances rural transportation and provides access to other modes, public facilities, and jobs in the region.

2 Adds new infrastructure to feed other systems. Project improves bike and pedestrian facilities that access other modes of transportation.

1 Minimal impact on connectivity. Project is in a hub community.

0 Not applicable to this project.

System Preservation

4 Critical need for rehabilitation, will need reconstruction if delayed. Project maintains existing system that provides access to multiple communities and modes of transportation.

3 Improves or rehabilitates existing facilities. Project is sustainable for the entity responsible for maintenance and operations of the facility.

2 Reconstruction. Project provides preventive maintenance on the existing transportation system.

1 Adds additional infrastructure to be maintained.

0 Not applicable to this project

Economic Development

4 Critical need for access to economic opportunities. Project was identified in a planning study, such as the Alaska Aviation System Plan, United States Army Corps of Engineers (USACE), and Statewide Transportation Improvement Program etc.

3 Supports improved access for regional commerce, including workforce access and reduced cost of living. Project supports communities that operate small businesses, exporting items such as fish, groceries, supplies, fuel, Alaska Native art work and other goods. Project supports tourism by providing access to recreational activity, shopping, events and community.

2 Provides access for new economic activity.

1 Minimal impact on economic advancement.

0 Not applicable to this project

Safety and Security

4 Critical need with immediate health or safety consequences if not pursued. Project provides services for access to Yukon Kuskokwim Health Corporation Services. Meets a critical safety need or FAA standard at a Regional Class airport

3 Addresses a health and safety hazard. Meets a critical safety need or FAA standard at a Community or Local Class airport

2 Improves health and safety through improved conditions. Project marks trails on rivers or channels. Addresses a non-critical safety hazard noted by airport owner or airport users

1 Minimal impact on health and safety.

0 Not applicable to this project

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