# APPENDIX B: DRAFT ECONOMIC ANALYSIS REPORT

# Aleknagik to Koliganek Road Feasibility Study

## Economic Analysis- DRAFT

Prepared for Bristol Bay Native Association

DRAFT





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# Introduction

The Aleknagik to Koliganek Road Feasibility Study is an early-stage planning project to evaluate the potential for developing roads connecting the communities of Aleknagik, Portage Creek, Ekwok, New Stuyahok, and Koliganek. The study will evaluate possible routes between the communities, collect feedback from stakeholders on the potential social, cultural and environmental impacts and examine possible economic benefits. This study does not propose the construction of a road system but instead focuses on better understanding if communities desire road connections and if a future road project is feasible.

## What This Study Does

- Considers the possibility of road connections between Aleknagik, Portage Creek, Ekwok, New Stuyahok, and Koliganek.
- Evaluates both pros and cons of the potential roads including economic, environmental, social, and cultural considerations.
- Identifies if communities want road connections or not.
- Helps communities make informed decisions about road connection planning.
- Identifies potential road corridors based on community input and traditional local knowledge.

## What This Study Does NOT Do

- Make decisions for communities.
- Build roads.
- Solicit input from outside interests.
- Promote the Nuyakuk Hydroelectric Project.
- Promote mining or resource development.

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## Study Team

**Owner / Sponsor**
Bristol Bay Native Association

**Funding Agencies**
USDOT (RAISE Grant Program) and the Denali Commission

**Project Lead / Civil Engineering / Planning**
Bristol Engineering Services Company, LLC

**Planning / Public Engagement / Economic Analysis**
Agnew::Beck Consulting

**Surveying / Land Status Research**
Bristol Infrastructure Design Services, LLC

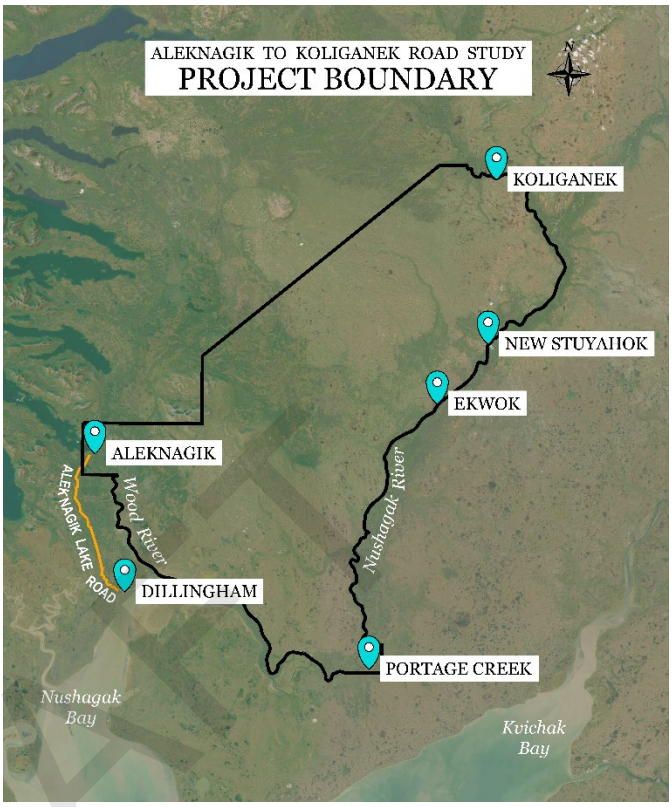
**Environmental**
Midnight Sun Environmental, LLC

**Cultural Resources**
True North Sustainable Development Solutions, LLC

**Geotechnical Engineering**
Shannon & Wilson, Inc.

# Background

Figure 1. Aleknagik to Koliganek Road Study Project Boundary




Baseline regional and community conditions are critical inputs to early-stage corridor studies and benefit–cost evaluations. The regional and community profiles documented in this chapter provide existing demographic, economic, and transportation system characteristics that influence regional mobility, freight logistics, access to essential services, and infrastructure performance. Understanding these conditions clarifies the current limitations of the system, particularly dependence on air and seasonal river travel, and established the analytical framework for assessing how an overland connection may improve reliability and economic opportunities for the Nushagak River communities. These profiles also form the basis for the benefit–cost analysis to determine the project's expected long-term benefits to its total construction and maintenance costs.

# Regional Profile

Communities along the Nushagak and Wood Rivers are linear, riverine settlements historically connected by boat, later by air, and now partially by local roads. Each community is spaced about 10–25 miles apart, forming a corridor. The river acts as the historical transportation backbone, especially for subsistence activities. Dillingham serves as the region's service center – all upland communities depend on Dillingham for goods, travel, fuel, and healthcare services. Currently, Aleknagik is the only upland community connected to Dillingham via road. All other communities rely on air or seasonal river and snowmachine travel.

## Regional Travel Patterns

Regional travel patterns in the study area reflect limited local mobility and a strong dependence on connections to Dillingham for goods, services, and regional access. As shown in Figure 2, Aleknagik is the only community with year-round road access to Dillingham, while Koliganek, New Stuyahok, Ekwok, and Portage Creek rely primarily on air travel, seasonal riverboat service, and winter trails. Travel modes and travel times vary substantially by season, weather conditions, and water or ice conditions, resulting in irregular and sometimes constrained access between communities and the regional hub. Travel between communities is infrequent and typically planned around specific needs such as medical appointments, supply runs, or seasonal activities rather than routine daily trips. As a result, regional travel demand is episodic and uneven, with periods of concentrated movement followed by long intervals of limited intercommunity travel.

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Figure 2. Table of Transportation Characteristics

| Community | Runway | Dock | Float-plane | Barge Service | Fuel Delivery | Est. Travel Time to Dillingham (hours) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Air | Boat | Snow-machine | Road |
| **Dillingham** | ✓ | ✓ | ✓ | ✓ | Barge to Dock | | | | |
| **Aleknagik** | ✓ | ✓ | ✓ | ✓ | Road via DLG | 0.25 | | -- | 0.75 |
| **Koliganek** | ✓ | -- | -- | -- | Barge via DLG | 0.5 | 3-5 | 6-8 | -- |
| **New Stuyahok** | ✓ | -- | -- | ✓ | Barge via DLG | 0.5 | | 4-6 | -- |
| **Ekwok** | ✓ | -- | ✓ | ✓ | Barge via DLG | 0.25 | | 4-6 | -- |
| **Portage Creek** | ✓ | -- | ✓ | ✓ | Barge via DLG | 0.25 | | 2-3 | -- |

Sources: Transportation infrastructure data (runway, dock, barge service, floatplane, and fuel delivery) is from the State of Alaska Department of Commerce, Community and Economic Development, Division of Community and Regional Affairs (DCRA) Community Database Online 2023. Estimated travel times for Air are from Grant Aviation flight schedules, 2025. Data retrieved December 2025. Estimated travel times for snowmachine were derived from the State of Alaska Department of Transportation and Public Facilities Community Winter Trails Map, 2023, and assuming a 20-mph average speed in good weather conditions. https://dot.alaska.gov/nreg/wintertrails/.

The table above illustrates the range of transportation modes available to communities in the study area and highlights the central role of Dillingham as the regional access point. Aleknagik is the only community with year-round road access, while Koliganek, New Stuyahok, Ekwok, and Portage Creek depend on air travel and seasonal river or winter trail connections. This pattern reflects a regional transportation system structured around episodic access rather than continuous intercommunity connectivity. Travel times and costs vary widely by mode and season. Seasonal river and winter travel options can offer lower-cost alternatives but are limited by environmental conditions and reliability, while air travel provides consistent access at significantly higher cost.

Figure 3. Transportation Costs from Dillingham (One Way)

| | Ekwok | New Stuyahok | Koliganek | Portage Creek |
|---|---|---|---|---|
| **Air Transportation: Passenger Seat Fare** | $90 | $105 | $110 | $100* |
| **Barge Transportation: Freight Cost ($/lb)** | $0.90 - $2.50 | $1.00 - $3.25 | $1.25 - $4.50 | $0.80 - $2.25 |

Sources: Grant Aviation Published Rates (as of February 2026); BBNA Nushagak Regional Ferry/Barge Planning Study (2022)
*Note: Regular year-round service to Portage Creek is not available. Flights can be chartered at a significantly higher cost

The Essential Air Service (EAS) program was put into place in 1978 following the passage of the Airline Deregulation Act to ensure that smaller communities retain a link to the nation air transportation system. There are currently 67 communities in Alaska that receive subsidized air service under the EAS program, 56 of which are completely isolated from a road system and rely on air travel as their primary means of transportation. Koliganek, New Stuyahok and Ekwok all receive subsidies through the EAS program which guarantees regular passenger air service to the regional hub of Dillingham and makes air transportation more affordable for passengers.

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Figure 4. Essential Air Service in Study Area

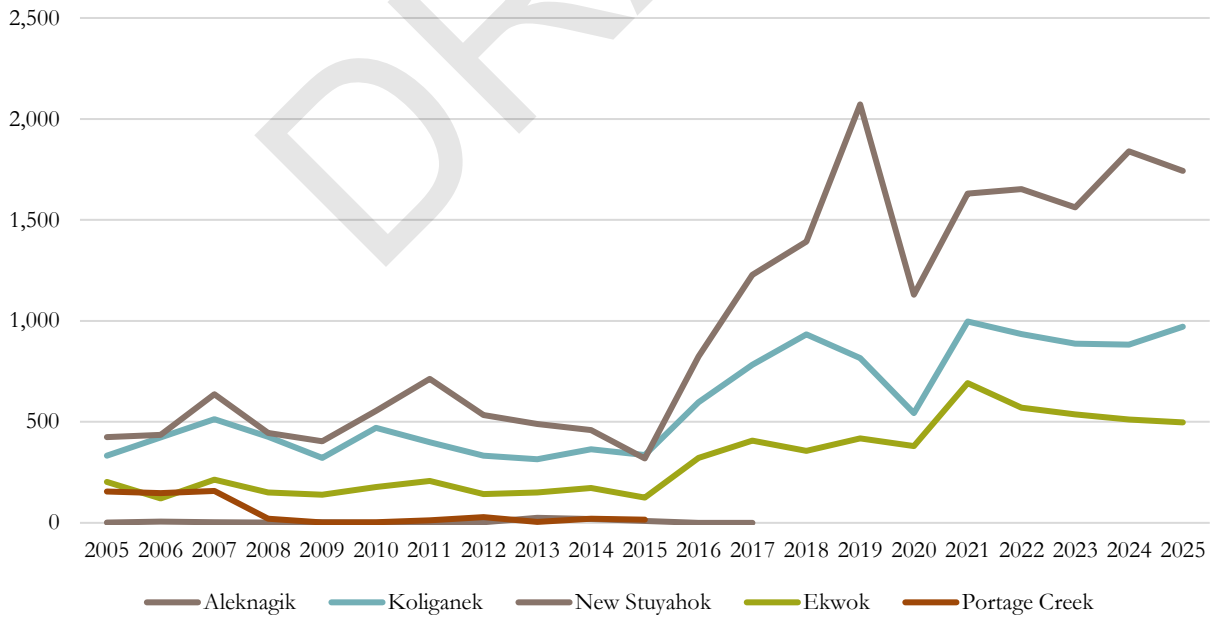
| Community | EAS Program? | Carrier | Route | Annual Subsidy* |
|---|---|---|---|---|
| **Dillingham** | No | | | |
| **Aleknagik** | No | | | |
| **Koliganek** | Yes | Grant Aviation | 7 weekly round-trips to Dillingham | $960,206 |
| **New Stuyahok** | Yes | Grant Aviation | 8 weekly round-trips to Dillingham | $576,780 |
| **Ekwok** | Yes | Grant Aviation | 6 weekly round-trips to Dillingham | $252,517 |
| **Portage Creek** | No | | | |

Source: U.S. Department of Transportation, Subsidized Essential Air Service in Alaska, October 2025.

Communities in the study are area also eligible to participate in the Alaska Bypass Mail Program, which is a United States Postal Service (USPS) initiative designed to transport large volumes of goods, particularly food and supplies, to rural Alaskan communities at significantly reduced rates. The Bypass Mail Program allows authorized shippers to transport items (minimum of 1,000 lbs.) directly to air carriers, bypassing USPS sorting facilities at roughly half the cost of commercial freight.

Study area communities saw a significant increase in air service, both in terms of the number of flights and the number of passengers starting in 2015 and peaking in 2019. After a dip in 2020, likely due to the COVID-19 Pandemic travel restrictions, passenger and flight volumes have leveled off, showing more consistent service over the past five years. The number of flights shown in Figure 4 is greater than the total number of passengers shown in Figure 5 because it includes both passenger and cargo flights, highlighting the import role the air transportation plays in the movement of goods throughout the study area.

Figure 5. Number of Flights by Origin in the Study Area, 2005-2025




Source: Bureau of Transportation Statistics T-100 Segment data, 2025. Note: Passenger and flight totals for Portage Creek and Aleknagik are not available for the years after 2016.

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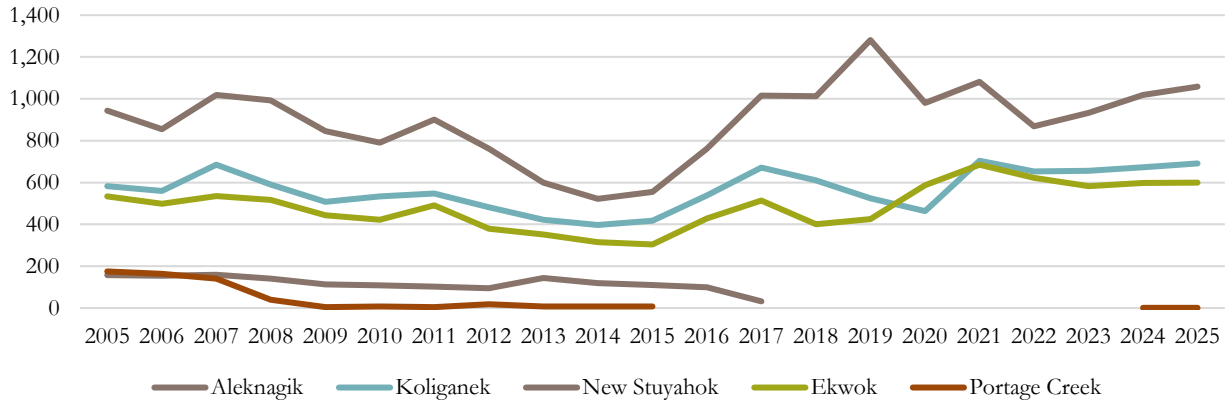
Figure 6. Number of Passengers by Origin in the Study Area, 2005-2025




Source: Bureau of Transportation Statistics T-100 Segment data, 2025. Note: Passenger and flight totals for Portage Creek and Aleknagik are not available for the years after 2016.

## Climate + Conditions

The study area lies in a subarctic climate with strong maritime influence from Bristol Bay, characterized by cool summers, long cold winters, and frequent precipitation that can produce extended snow cover and repeated freeze–thaw conditions. These seasonal conditions shape river and ice dynamics and can create variable exposure to flooding, erosion, and ground instability. The table below summarizes relative flood, erosion, and permafrost concern categories for communities in the study area based on the Alaska Department of Commerce, Community, and Economic Development Statewide Threat Assessment.[1] The categories shown represent generalized levels of relative concern, not measured risk, probability, or expected impacts. Concern categories are expressed on a three-level scale, with Category 1 indicating lower relative concern, Category 2 indicating moderate relative concern, and Category 3 indicating higher relative concern when compared to other Alaska communities statewide.

Figure 7. Table of Environmental Hazard Concern by Community

| | Rank of Relative Environmental Concern Category | | |
|---|---|---|---|
| **Community** | **Erosion** | **Flood** | **Permafrost** |
| Dillingham | 1 | 3 | 3 |
| Aleknagik | 2 | 3 | 3 |
| Koliganek | 3 | 2 | 3 |
| New Stuyahok | 3 | 2 | 1 |
| Ekwok | 3 | 2 | 3 |
| Portage Creek | *No data* | | |

Source: Dept. of Commerce, Community, & Economic Development, Threat Assessment Rankings, 2025.

The communities along the Nushagak River (Koliganek, New Stuyahok and Ekwok) have an elevated concern of erosion and moderate concern of flooding, whereas the communities along the Wood River (Aleknagik and Dillingham) are showing the opposite with moderate concern of erosion but high concern of flood. These relative concern categories help frame key environmental constraints that may influence road

[1] Alaska Department of Commerce, Community, and Economic Development Statewide Threat Assessment available at https://alaska-economic-data-dcced.hub.arcgis.com/apps/DCCED::statewide-threat-assessment-dashboard/explore

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feasibility, including route selection, design considerations, long-term maintenance needs, and lifecycle costs. In the context of this study, the table is used to identify areas where environmental conditions may warrant additional geotechnical investigation, adaptive design approaches, or enhanced monitoring, rather than to predict specific hazard events.

The communities in the study area experience similar climate due to their proximity characterized by sub-freezing temperature between the months of November and April ranging from -1 to -11 degrees Celsius (30 to 12 degrees Fahrenheit) and mild summer temperatures between May and October ranging from 5 and 14 degrees Celsius (41 to 58 degrees Fahrenheit). August and September are the rainiest months on average with communities reporting between 79 and 122 millimeters of precipitation (roughly 3 to 5 inches) during those months.

Figure 8. Average Monthly Temperature and Precipitation

| Community | Average | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Aleknagik** | Temperature (C) | -10.8 | -8.8 | -7.8 | -1.5 | 5.6 | 11.2 | 13.8 | 12.6 | 9.2 | 1.1 | -5.2 | -10.6 |
| | Precipitation (mm) | 49 | 44 | 40 | 59 | 68 | 52 | 67 | 115 | 98 | 75 | 54 | 48 |
| **Dillingham** | Temperature (C) | -9.4 | -9.2 | -5.9 | -1.3 | 5.3 | 10 | 12.6 | 12.1 | 8.5 | 0.6 | -5.2 | -9.2 |
| | Precipitation (mm) | 40 | 32 | 36 | 30 | 39 | 42 | 64 | 97 | 79 | 58 | 48 | 44 |
| **Koliganek** | Temperature (C) | -10.8 | -9.9 | -7 | -1.4 | 5.6 | 11 | 13.6 | 12.6 | 8.9 | 1 | -5.2 | -10.6 |
| | Precipitation (mm) | 60 | 49 | 49 | 50 | 69 | 58 | 80 | 122 | 107 | 88 | 72 | 51 |
| **New Stuyahok** | Temperature (C) | -10.5 | -9.2 | -7.2 | -1.4 | 5.8 | 11 | 13.7 | 12.6 | 9.1 | 1 | -5.1 | -10.2 |
| | Precipitation (mm) | 44 | 41 | 39 | 43 | 55 | 51 | 69 | 105 | 94 | 69 | 54 | 47 |
| **Ekwok** | Temperature (C) | -10.8 | -9.6 | -7.1 | -1.3 | 5.6 | 11.2 | 13.8 | 12.8 | 9.2 | 1 | -5 | -10.8 |
| | Precipitation (mm) | 41 | 38 | 37 | 40 | 50 | 49 | 67 | 100 | 89 | 64 | 51 | 46 |
| **Portage Creek** | Temperature (C) | -9.8 | -9.2 | -6.2 | -1.3 | 5.4 | 10.2 | 12.8 | 12.1 | 8.6 | 0.6 | -5.2 | -9.4 |
| | Precipitation (mm) | 37 | 31 | 34 | 32 | 40 | 44 | 63 | 94 | 81 | 59 | 46 | 44 |

Source: University of Alaska Fairbanks, Alaska Climate Research Center (https://akclimate.org/data/)

Note: Temperature reported in Celsius (C) and precipitation reported in millimeters (mm)

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## Population + Demographics

The population of the study area communities has remained relatively stable over the past 20 years but in more recent years has shown slight decline. New Stuyahok is the only community within the study area that has consistently reported population growth over the past 20 years. Dillingham, the regional hub, is home to the largest population in the study area and has experienced slight population decline over the past decade.

This decline in population is primarily driven by negative net migration (more people moving out than moving in) which has outpaced the natural increase (births minus deaths) in the study area. This negative net migration is a consistent trend throughout the Dillingham Census Area, but people moving out of smaller communities are more likely to stay within the same Census Area, whereas people moving out of Dillingham are more likely to move to a different region of the state (e.g. Anchorage, Fairbanks or Kenai). Younger populations make up a disproportionately large portion of the total out-migration in the study area, with the

population ages 15 to 34 accounting for 37 percent of the out-migration but only 25 percent of the total population.[2]

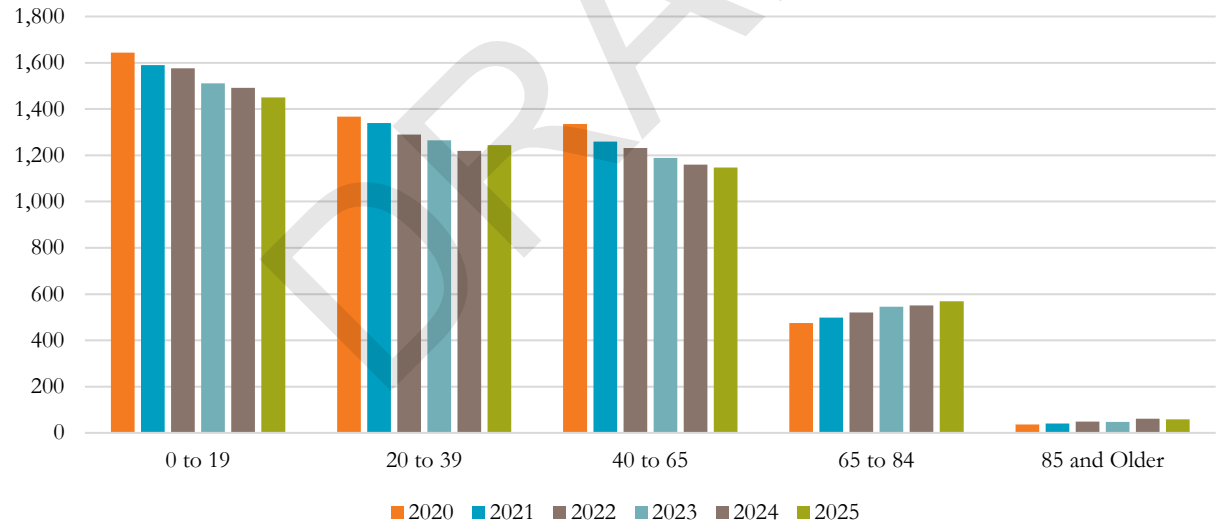
Figure 9. Study Area Population Estimates (2005-2025)

| | Population Estimates | | | | | Population Change 2005-2025 | | Population Change 2015-2025 | |
|---|---|---|---|---|---|---|---|---|---|
| Community | 2005 | 2010 | 2015 | 2020 | 2025 | Number | Percent | Number | Percent |
| **Dillingham** | 2,364 | 2,329 | 2,400 | 2,249 | 2,185 | -179 | -7.6% | -215 | -9% |
| **Aleknagik** | 233 | 219 | 223 | 211 | 210 | -23 | -9.9% | -13 | -6% |
| **Koliganek** | 170 | 209 | 221 | 183 | 192 | 22 | 12.9% | -29 | -13% |
| **New Stuyahok** | 458 | 510 | 514 | 512 | 528 | 70 | 15.3% | 14 | 3% |
| **Ekwok** | 123 | 115 | 112 | 111 | 104 | -19 | -15.4% | -8 | -7% |
| **Portage Creek** | 23 | 2 | 2 | 4 | 4 | -19 | -82.6% | 2 | 100% |

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section Population Estimates and Projections, 2025.

Like many regions across Alaska, the population in the Dillingham Census Area is aging, and the population over the age of 65 was the fastest growing age cohort over the past five years. In 2025 the population over 65 accounted for 14 percent of the population, an increase from only 8 percent in 2010 and the median age in the Dillingham Census Area has increased from 29.1 to 33.1 during the same period.

Figure 10. Population by Age, Dillingham Census Area (2020-2025)




Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section Population Estimates and Projections, 2025.

Looking forward, the population in the Dillingham Census Area is forecast to continue on the trend of slight decline, with the Alaska Department of Labor forecasting average annual growth rates between -0.4 and -0.6 percent through 2050. This would result in a total population decrease of just over 500 people distributed

[2] Alaska Department of Labor and Workforce Development, PFD-Based Migration by Age and Sex (https://live.laborstats.alaska.gov/article/alaska-migration-data)

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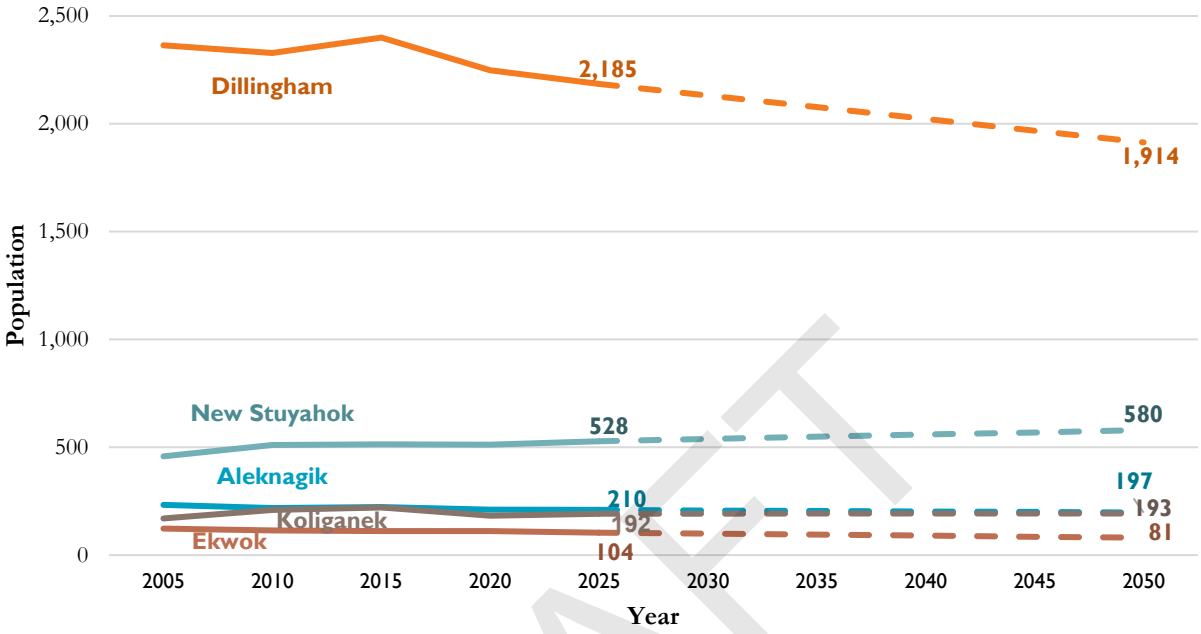
across the Dillingham Census Area over the next 25 years. There are a number of economic catalyst that could reverse this trend and change the population forecast for this region, but they are still speculative in nature at the time this study was conducted.

Figure 11. Study Area Population Projections (2025-2050)




Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section Population Estimates and Projections, 2025-2050.

Collectively, these patterns may indicate that future transportation demand is unlikely to be driven by population growth and that the primary value of a road connection could be improved safety, reliability, access to services, and travel efficiency for existing residents. These trends could also suggest that roadway design be scaled to current and projected use, emphasizing durability, resilience, and year-round reliability rather than increased capacity. Stable or declining population levels may have other implications for long-term operations and maintenance, as limited growth can constrain local resources, which may require minimal lifecycle costs and infrastructure designed for available regional maintenance capabilities.

## Economy + Employment

The regional economy of the study area is fundamentally shaped by commercial fishing, seafood processing, and subsistence activities, all which are highly seasonal and difficult to captured through traditional employment data, like the Quarterly Census of Employment and Wages (QCEW). The QCEW presented in the table below reports employment by place of work, which includes jobs held by commuters or non-residents and excludes business owners, self-employed and unpaid volunteers. This methodology tends to undercount seasonal and self-employed jobs and wages which are common in the commercial fishing industry. The public sector, which supports federal, state and local governments, is the largest overall employer in the region, accounting for 38 percent of the total employment and 27 percent of the total wages. Public sector employment has remained relatively stable over the past decade and consist mostly of year-round, full-time positions. Education and health services also employ a significant proportion of the regional workforce, accounting for 29 percent of the total employment and 43 percent of the total wages in the

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Dillingham Census Area. As the regional hub, Dillingham is home to many of the education and health services that serve this region.

Figure 12. Annual Employment and Wages in the Dillingham Census Area (2025)

| | Number of Establishments | Average Annual Employment | Total Wages | Average Monthly Wages |
|---|---|---|---|---|
| **Total Industries** | 159 | 2,067 | $144,141,397 | $5,811 |
| **Total Government *(Federal, State and Local)*** | 59 | 778 | $38,683,957 | $4,144 |
| **Total Private** | 100 | 1,289 | $105,457,440 | $6,818 |
| **Natural Resources & Mining** | 1 | | | |
| **Construction** | 10 | 16 | $1,018,982 | $11,144 |
| **Manufacturing** | 7 | 187 | $15,702,568 | $6,998 |
| **Trade, Transportation & Utilities** | 31 | 240 | $9,713,431 | $3,373 |
| **Information** | 2 | | | |
| **Financial Activities** | 4 | 18 | $972,408 | $4,502 |
| **Professional and Business Services** | 12 | 55 | $4,000,556 | $6,061 |
| **Education & Health Services** | 7 | 601 | $61,721,768 | $8,558 |
| **Leisure & Hospitality** | 21 | 94 | $5,707,785 | $5,060 |
| **Other Services** | 4 | 37 | $2,548,075 | $5,739 |
| **Unclassified** | 1 | | | |

Source: Alaska Department of Labor and Workforce Development, Quarterly Census of Employment and Wages (January to December 2025).

Since seafood harvesting and processing are an integral part of the economy, The Alaska Department of Labor and Workforce Development collects and reports seafood harvesting industry data to supplement the traditional employment statistics and the Commercial Fisheries Entry Commission (CFEC) reports the number of permit holders, fishermen who fished, total pounds landed and estimated gross earnings. Combined, these two sources can help illustrate the importance that commercial plays in the regional economy.

In 2023, the Department of Labor reported 1,317 processing workers based in the Dillingham Census Area, but the majority (92 percent) of those workers were considered "non-residents" whose primary residence was somewhere outside of the Dillingham Census Area. Seafood processing was responsible for a total of $16.5 million in wages in 2023, but only an estimated 9 percent ($1.5 million) of those wages were earned by residents of the Dillingham Census Area.

Figure 13. Seafood Processing Workforce in the Dillingham Census Area, 2013-2023

| Year | Processing Workers | Percent Nonresident | Processing Wages | Percent Wages Nonresident |
|---|---|---|---|---|
| **2013** | 1,043 | 82% | $7,241,784 | 80% |
| **2014** | 1,148 | 85% | $9,439,974 | 86% |
| **2015** | 1,126 | 84% | $8,343,438 | 87% |
| **2016** | 1,096 | 85% | $10,691,309 | 90% |
| **2017** | 1,096 | 85% | $10,691,309 | 90% |
| **2018** | 1,413 | 84% | $14,662,416 | 88% |
| **2019** | 1,574 | 87% | $13,481,612 | 86% |
| **2020** | 929 | 84% | $10,543,391 | 86% |
| **2021** | 1,073 | 87% | $13,275,164 | 89% |
| **2022** | 1,477 | 88% | $18,452,920 | 91% |
| **2023** | 1,317 | 92% | $16,555,483 | 91% |

Source: Alaska Department of Labor and Workforce Development: Local Seafood Processing Workforce, 2013-2023.

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Fishermen in the Dillingham Census area participate in the halibut, herring, and salmon commercial fisheries across the state, but the majority of the local commercial fishing activity that takes place in the region occurs in the Bristol Bay set and drift gillnet salmon fisheries (S04T and S03T fishery codes).[3] These two fisheries consistently account for 93 to 99 percent of the total gross earnings from commercial fishing in the Dillingham Census area. Over the past decade, the number of permits issued to residents of the Dillingham Census Area has decreased by 14 percent (102 permits) and the number of fishermen who fished has decreased by 25 percent (104 fishermen). The declining participation in the commercial fisheries also translates into fewer pounds landed and a 14 percent drop in estimated gross earnings from commercial fishing between 2014 and 2024.

Figure 14. Permit and Fishing Activity in the Dillingham Census Area (2014-2024)

| Year | Number of Permit Holders | Number of Permits Issued | Number of Fishermen Who Fished | Number of Permits Fished | Total Pounds Landed | Estimated Gross Earnings |
|---|---|---|---|---|---|---|
| **2014** | 609 | 752 | 419 | 427 | 19,777,053 | 20,271,546 |
| **2015*** | 595 | 727 | 411 | 419 | *18,387,988* | *10,884,767* |
| **2016*** | 600 | 742 | 407 | 416 | *24,365,376* | *20,107,023* |
| **2017** | 598 | 729 | 415 | 426 | 26,713,099 | 28,953,366 |
| **2018*** | 604 | 734 | 417 | 432 | *28,382,584* | *40,869,529* |
| **2019** | 597 | 737 | 419 | 436 | 27,851,960 | 34,118,815 |
| **2020*** | 581 | 697 | 374 | 382 | *15,497,544* | *15,645,007* |
| **2021** | 565 | 682 | 364 | 370 | 19,493,952 | 31,304,588 |
| **2022*** | 569 | 680 | 369 | 366 | *23,219,777* | *30,246,926* |
| **2023** | 564 | 658 | 331 | 328 | 17,378,920 | 12,448,256 |
| **2024** | 561 | 650 | 315 | 312 | 15,284,156 | 17,451,758 |

Source: Commercial Fisheries Entry Commission: Permit and Fishing Activity by Year and Census Area (https://www.cfec.state.ak.us/fishery_statistics/earnings.htm)

*Note: Does not include total pounds landed and estimated earning for all fisheries due to sample size limitations (less than four people or permit represented) and should be viewed as a partial estimate

For the purposes of road feasibility, these indicators suggest that transportation needs are driven less by long-term employment growth and more by pronounced seasonal surges in labor, freight, and service demand. As a result, transportation investments are more likely to support reliability, access, and operational efficiency for existing economic systems and communities.

## Cost of Living

Residents in the Dillingham Census Area face a high cost of living, primarily driven by consistently high costs for food/household goods, fuel and basic services, all driven largely by a heavy reliance on air freight, barge schedules and seasonal transportation constraints. This is a critical factor in evaluating the potential benefits of improved surface transportation within the study area. For communities without road access, the cost of goods and services reflects a combination of freight premiums, fuel costs, and limited competition, resulting in higher prices and reduced consumer choice. As a result, the potential economic benefits of a road connection may extend beyond direct freight savings and include reductions in travel costs, increased

[3] Commercial Fishing Entry Commission (CFEC) Fishery Codes and Permits (https://www.cfec.state.ak.us/misc/FshyDesC.htm)

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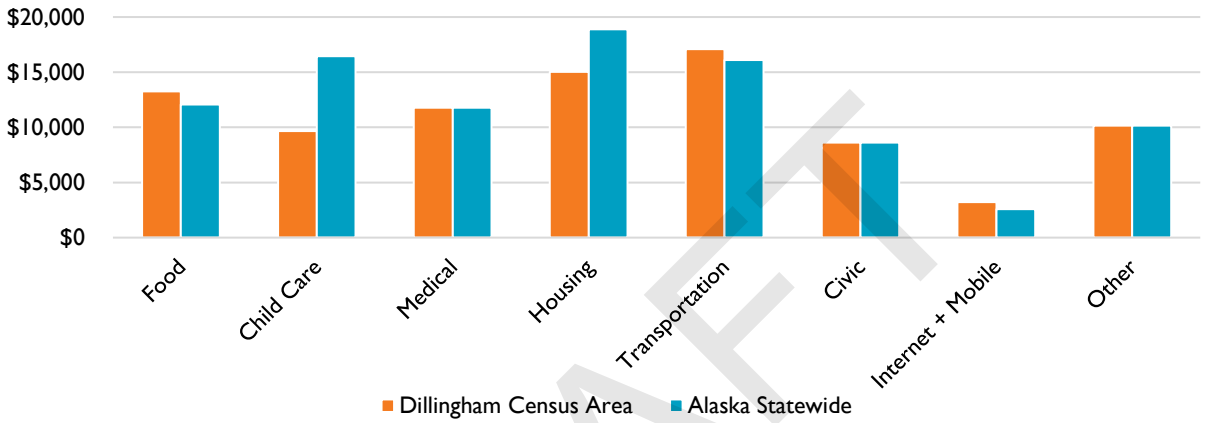
flexibility in timing and mode choice, and indirect quality-of-life improvements. This context also emphasizes the importance of engaging key stakeholders, including the City of Dillingham and the Curyung Tribe, whose residents, institutions, and service providers would experience both direct and indirect effects of changes in regional access.

Compared to the statewide average, households in the Dillingham Census area face higher cost on average for both food and transportation, while the other common household costs are similar to what can be found in other portions of the state. The cost of both food and transportation have the potential to be impacted by expanded surface transportation options within the study area.

Figure 15. Typical Annual Household Expenses, Two Adult Income Earners, One Child Households (2025)




Source: Glasmeier, Amy K. Living Wage Calculator. 2025. Massachusetts Institute of Technology. Retrieved on December 13, 2025 from https://livingwage.mit.edu.

The Alaska Department of Commerce, Community and Economic Development (DCCED) maintains a database of gasoline and heating oil prices in over 100 surveyed communities across Alaska. Two of the study area communities, Dillingham and New Stuyahok are included in this sample (see table below). Since 2020, heating fuel prices have increased by just over $1/gal in Dillingham in Dillingham during the summer and by over $4.30/gal during that same time in New Stuyahok. Gas prices have also seen a precipitous increase since 2020 in both communities, further contributing to the high cost of living in this region.

Figure 16. Table of Retail Fuel Prices for Dillingham and New Stuyahok, 2020-2025

| **Heating Fuel Price Summer** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** |
|---|---|---|---|---|---|---|
| Dillingham | $4.76 | $4.67 | $6.79 | $6.23 | $7.16 | 5.86 |
| New Stuyahok | $5.94 | $5.96 | $7.94 | $8.51 | $8.01 | $10.25 |
| **Heating Fuel Price Winter** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** |
| Dillingham | $3.98 | $3.52 | $5.06 | $5.64 | $6.22 | $6.75 |
| New Stuyahok | $7.10 | $5.96 | $4.51 | $9.00 | $7.86 | $9.59 |
| **Gas Price Summer** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** |
| Dillingham | $4.97 | $5.17 | $6.48 | $6.76 | $7.13 | $6.19 |
| New Stuyahok | $6.22 | $5.85 | $7.65 | $8.83 | $8.38 | $10.00 |
| **Gas Price Winter** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** |
| Dillingham | $5.00 | $4.57 | $5.06 | $6.44 | 6.76 | 7.18 |
| New Stuyahok | $6.80 | $5.85 | $5.00 | $7.65 | $8.08 | $10.00 |

Source: Alaska Department of Commerce, Community, and Economic Development, 2025. Retail Fuel in Alaska [Dataset]. Alaska Economic Data (ArcGIS Hub). Retrieved on December 13, 2025 from https://alaska-economic-data-dcced.hub.arcgis.com/pages/retail-fuel-alaska

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The Power Cost Equalization Program (PCE), established in 1984, provides economic assistance to rural Alaskans to help offset the high cost of electricity in remote communities. The PCE program reduces rates for eligible rural customers to levels comparable to those paid in more urban communities (Anchorage, Fairbanks and Juneau). Residential customers may receive PCE credit for up to 750-kilowatt hours (kWhs) per month and community facilities receive credit for up to 70 kWhs per month multiplied by the community population. Alaska Village Electric Cooperative (Ekwok and New Stuyahok, New Koliganek Village Council ( Koliganek), and Nushagak Electric Cooperative (Aleknagik and Dillingham) all participate in the PCE program. The table below shows the average PCE payment per eligible customer, the unadjusted rate per kWh and the effective rate per kWh after adjusted through the PCE program. New Stuyahok and Ekwok have the highest effect rates for electricity within the study area.

Figure 17. Power Cost Equalization Program by Community (FY2025)

| Place | Average Annual PCE Payment per Eligible Customer | Residential Rate Charged (per kWh) | Effective Residential Rate (per kWh) |
|---|---|---|---|
| **Dillingham/Aleknagik** | $1,283 | $0.49 | $0.23 |
| **Koliganek** | $1,127 | $0.50 | $0.20 |
| **New Stuyahok** | $2,933 | $0.78 | $0.28 |
| **Ekwok** | $2,323 | $0.78 | $0.28 |

Source: Alaska Energy Authority: FY2025 PCE Statistical Report by Community

# Community Profiles

The following community profiles summarize key demographic, economic, and access characteristics for each community to provide localized context for evaluating transportation needs and feasibility within the study area.

## Aleknagik

Aleknagik is a second-class city located at the head of the Wood River on the southeast coast of Lake Aleknagik. In 1959 the state constructed a seasonal 25-mile road between the south shore of Lake Aleknagik and Dillingham that was only passable during the summer months. In the late 1980's that road was upgraded and maintained year-round and in 2015 the Wood River bridge was built, connecting the existing road to the community of Aleknagik. The Wood River bridge has improved safety by reducing the need for dangerous river crossings and made it easier for residents in Aleknagik to access essential services in Dillingham.




| Population | Median Age | Households | Median Income | Employed | Power Cost (kWh) |
|---|---|---|---|---|---|
| 209 | 55 | 44 | $88,750 | 78% | $0.54 |

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## Koliganek




Koliganek is an unincorporated community located on the west bank of the Nushagak River, approximately 65 miles northeast of Dillingham and 25 miles southeast of New Stuyahok. Koliganek relies on aviation for passenger transport and mail year-round, and bulk good and fuel are transported via barge along the Nushagak River during the ice-free summer months. In winter, travel between communities occurs primarily by snow machine over established overland and river trails and during summer months ATVs and boats are the primary means for localized travel. There are no existing road connections to Koliganek, though the community serves as an important upriver hub for residents traveling between nearby villages and the lower river region.

| Population | Median Age | Households | Median Income | Employed | Power Cost (kWh) |
|---|---|---|---|---|---|
| 169 | 21 | 58 | $56,250 | 73% | $0.50 |

## New Stuyahok




New Stuyahok is a second class city located on the west bank of the Nushagak River, about 50 miles northeast of Dillingham and 12 miles upriver from Ekwok. The community is part of the Bristol Bay region and lies within the Nushagak River watershed. New Stuyahok was originally established upriver from its current site but relocated in the late 1940s due to severe flooding. Today, the community remains accessible primarily by air, with regular scheduled flights from Dillingham, and seasonally by boat along the Nushagak River. In recent years, low water levels have limited barge access which affects the delivery of critical supplies such as fuel. In winter, residents travel by snow machine over frozen river routes and overland trails that connect nearby villages. Air travel continues to serve as the primary means of passenger and freight transportation.

| Population | Median Age | Households | Median Income | Employed | Power Cost (kWh) |
|---|---|---|---|---|---|
| 451 | 30 | 96 | $54,167 | 81% | $0.81 |

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## Ekwok




Ekwok is a second class city located on the west bank of the Nushagak River, about 43 air miles northeast of Dillingham and roughly 12 miles downriver from New Stuyahok. It is one of the oldest continuously occupied settlements along the Nushagak River, with roots in traditional Yup'ik fish camps that took advantage of the area's rich salmon resources. Ekwok is accessible primarily by air and river, with regular scheduled flights from Dillingham and boat travel during the ice-free months. In winter, residents travel locally by snow machine on river and overland trails. There are no existing road connections to Ekwok, and most freight and mail are delivered by air (year round) or barge during the ice-free summer months. Riverbank erosion and low river levels often delay vital spring and fall barge access and can increase logistical costs to deliver bulk goods, including heating fuel to this community.

| Population | Median Age | Households | Median Income | Employed | Power Cost (kWh) |
|---|---|---|---|---|---|
| 116 | 53 | 14 | $50,833 | 100% | $0.81 |

## Portage Creek




Portage Creek is an unincorporated area within the Dillingham Census Area, located at the mouth of Portage Creek, a tributary of the Nushagak River. Portage Creek is roughly 35 air miles northeast of Dillingham and 15 miles south of Ekwok. The settlement developed as a seasonal fish camp and later as a small year-round community associated with subsistence and commercial fishing along the lower Nushagak River. Portage Creek has a very small year-round population that increases seasonally when families return for fishing and subsistence activities. The community is accessible primarily by air from Dillingham or by boat during the ice-free summer months. In winter, travel occurs by snow machine along the river corridor. There are no existing road connections to Portage Creek, and freight and supplies are delivered mainly by air or barge during the summer season.

| Population | Median Age | Households | Employed | Power Cost (kWh) |
|---|---|---|---|---|
| 4 | 61 | 3 | 100% | -- |

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## Dillingham

Dillingham is a first-class city, located at the confluence of the Wood and Nushagak Rivers on Nushagak Bay. It serves as the regional hub for the Bristol Bay area, providing transportation, healthcare, education, and commercial services for surrounding communities. The community is known for its Bristol Bay salmon fishery and supports a strong subsistence culture among residents. Dillingham is accessible year-round by air and seasonally by boat; it is not connected to the statewide road system. The community maintains a local road network linking the airport, port facilities, and nearby Aleknagik. Most freight and goods are shipped to Dillingham by barge during the summer months or by air throughout the year.




| Population | Median Age | Households | Median Income | Employed | Power Cost (kWh) |
|---|---|---|---|---|---|
| 2,086 | 31 | 691 | $99,097 | 95% | $0.54 |

# Community Survey Results

Starting in the fall of 2025, members of the study team hosted a series of community meetings to gather the public's feedback and opinions and help planners identify potential routing options based on local knowledge. A community survey was also conducted in conjunction with these community meetings, collecting a total of 46 responses. The goal of the survey was to collect feedback around the potential impacts on the cost of living, quality of life, regional travel patterns and subsistence activities from community members what could potentially be affected by future road connections. The survey also aimed to help gauge community interest and document community concerns around future road projects. The following chapter summarizes the survey responses received.

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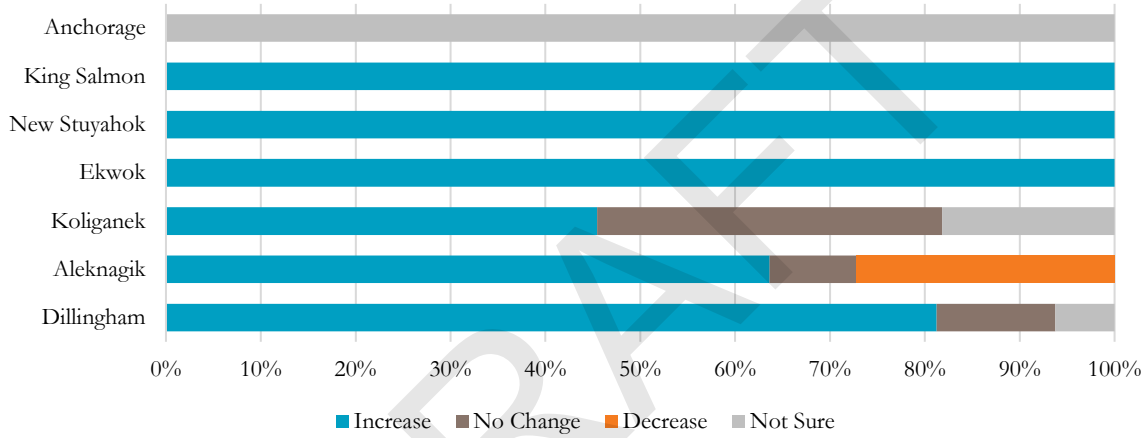
# Question Summaries

*Where do you live?*

| Community | Count | Percent |
|---|---|---|
| **Dillingham** | 16 | 35% |
| **Aleknagik** | 11 | 24% |
| **Koliganek** | 11 | 24% |
| **Ekwok** | 5 | 11% |
| **New Stuyahok** | 1 | 2% |
| **King Salmon** | 1 | 2% |
| **Anchorage** | 1 | 2% |
| **Total** | **46** | **100%** |

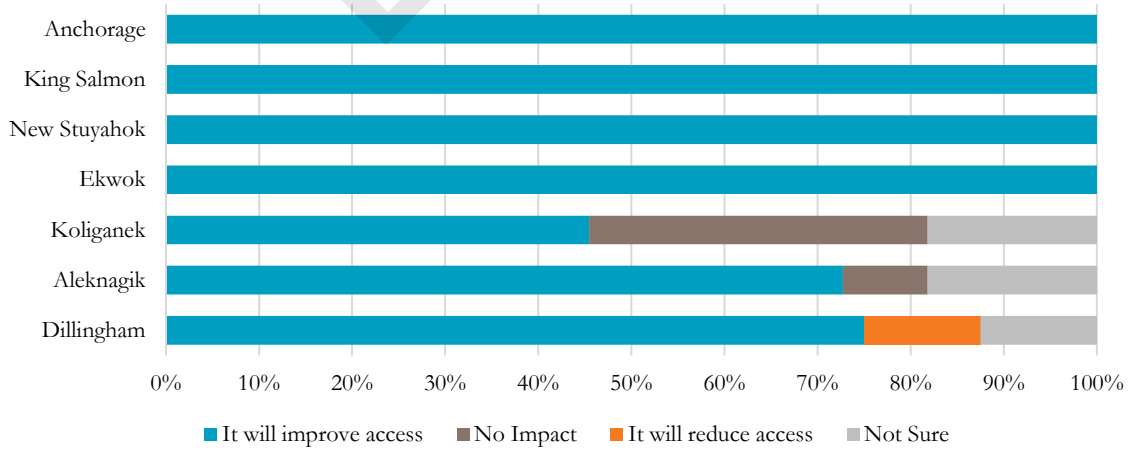
N=46

*Do you think additional road connections will increase or decrease your social interactions with people in the surrounding communities?*




N=46

*How do you think additional road connections will affect access to essential services like healthcare, schools and markets?*




N=46

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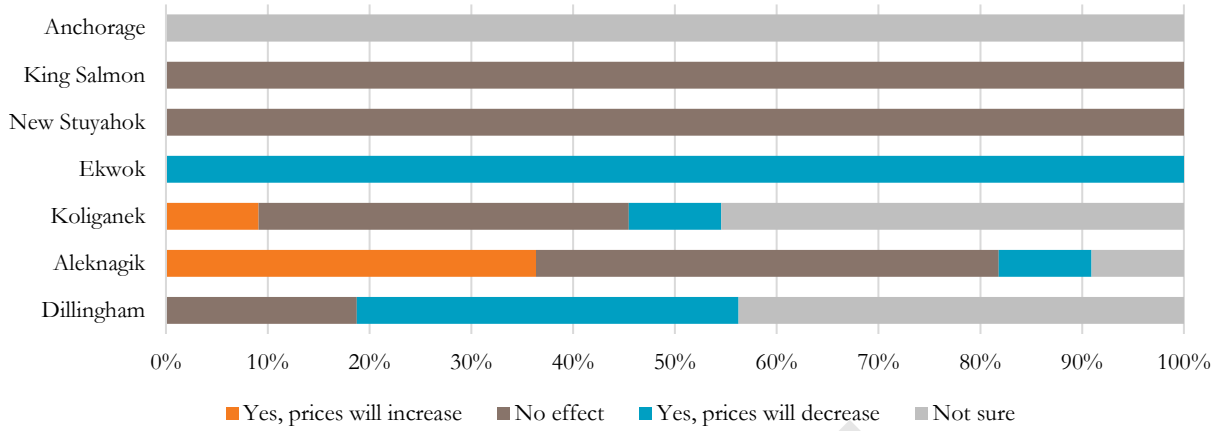
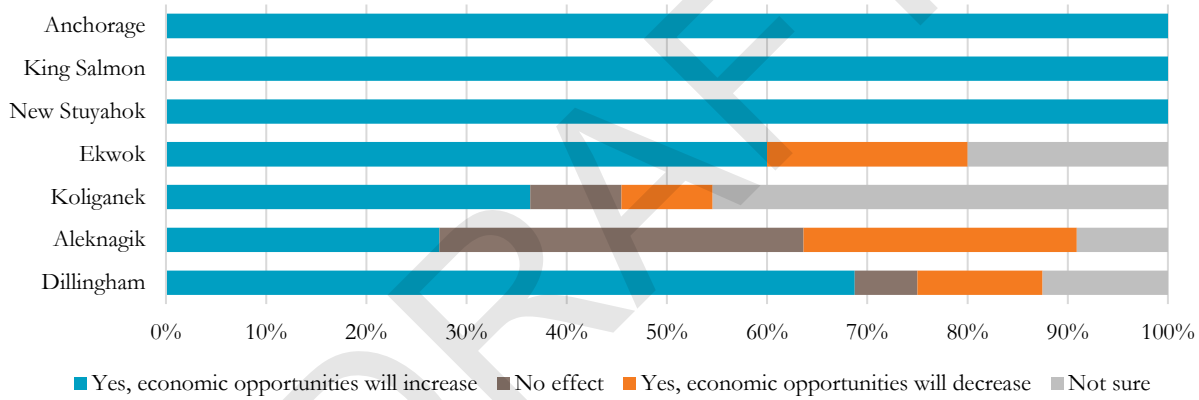
*Do you think additional road connections will affect the cost of goods and services in your area?*



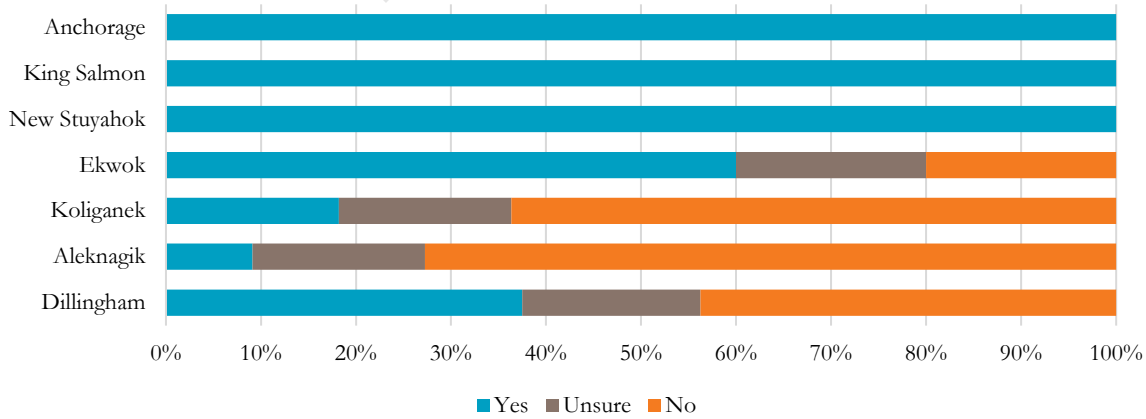

N=46

*Do you think additional road connections will impact the economic opportunities in your area?*




N=46

*Do you think additional road connections will make your community a safer place?*




N=46

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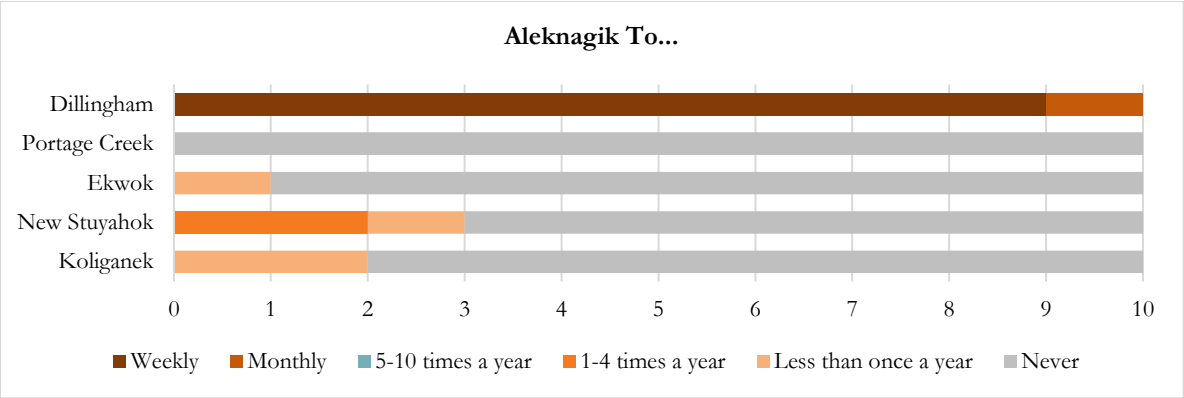
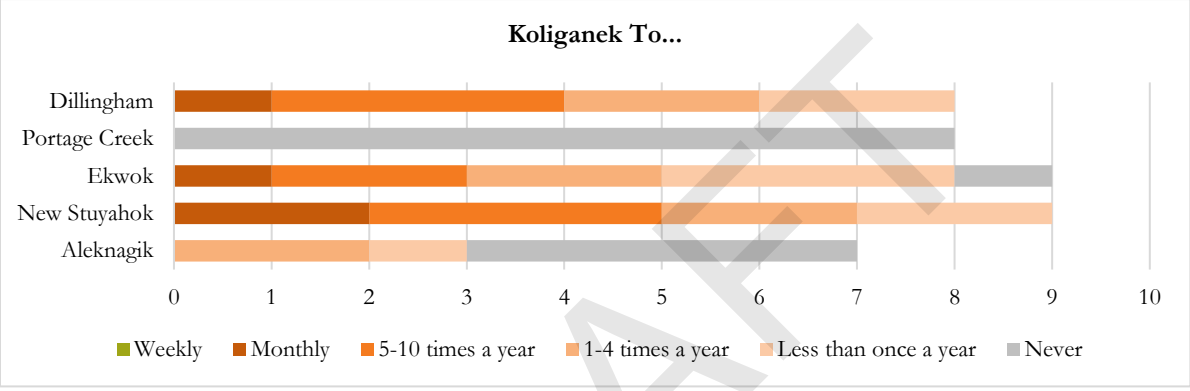
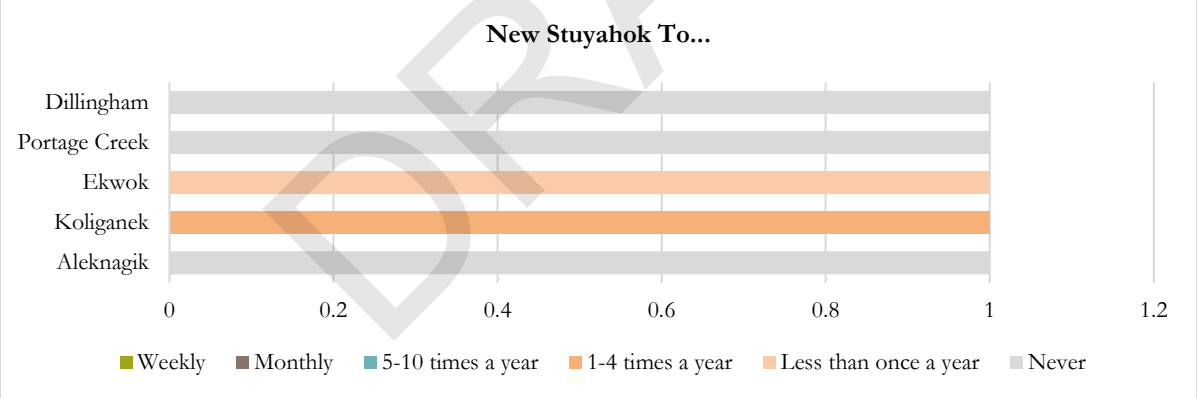
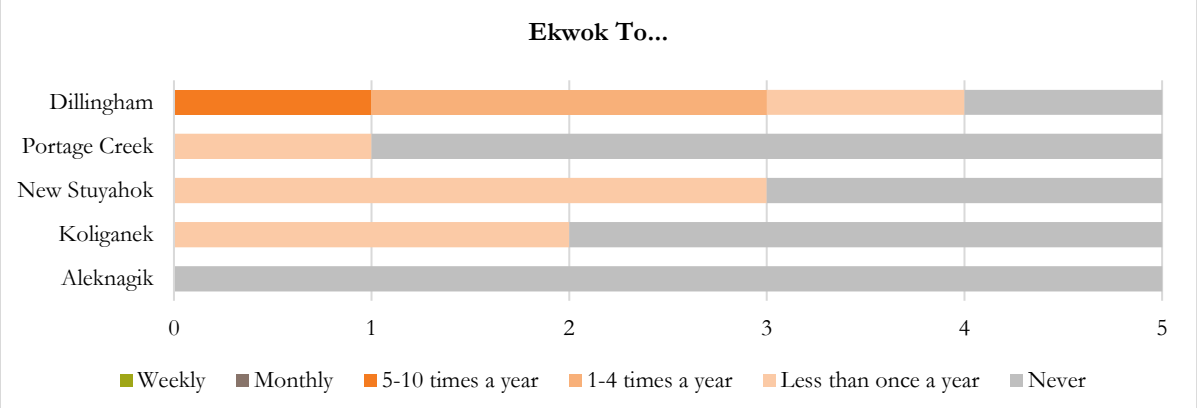
*How frequently do you travel to the following communities:*

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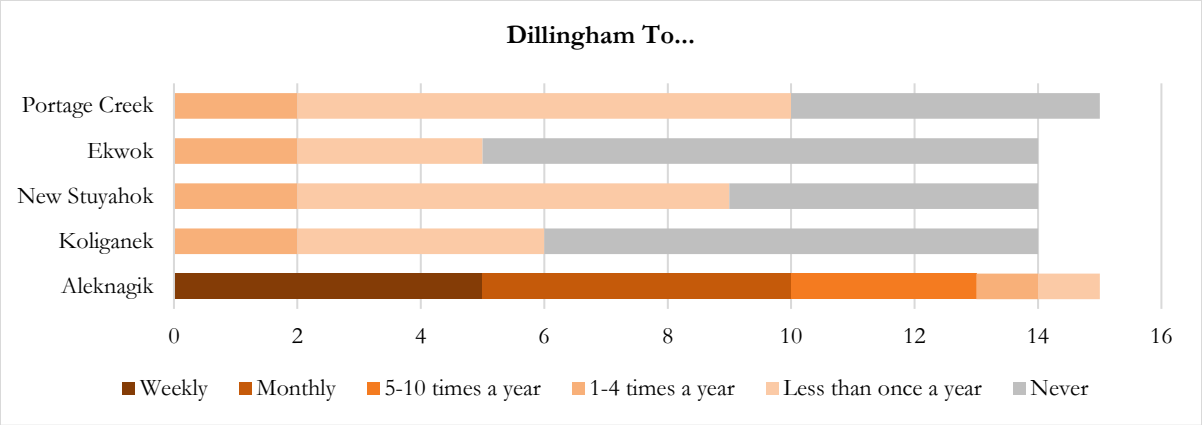
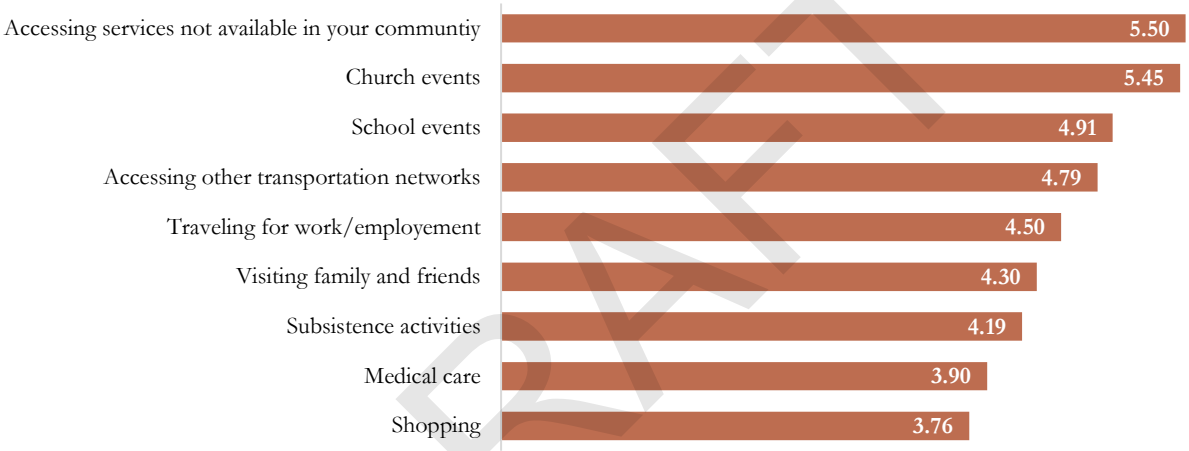
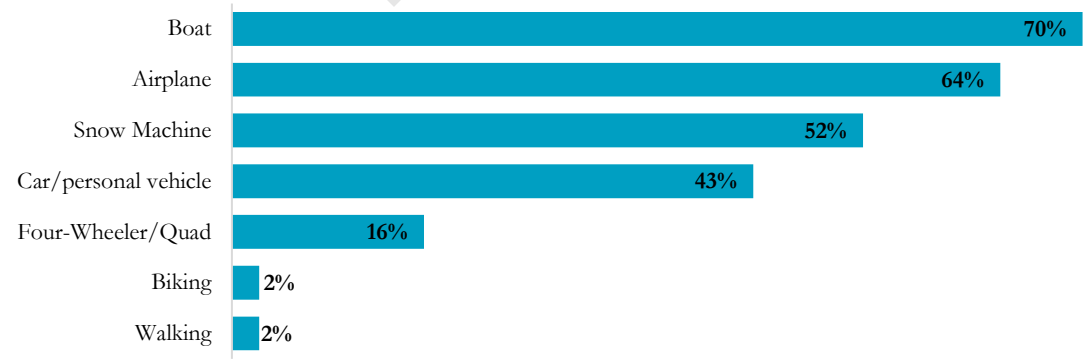



*What are your most common reasons for travel between communities in the study area? (Please rank from Most Common-1 to Least Common- 9)*




N=42

*What type of transportation do you currently use for travel between communities within the study area? (select all that apply)*




N=44

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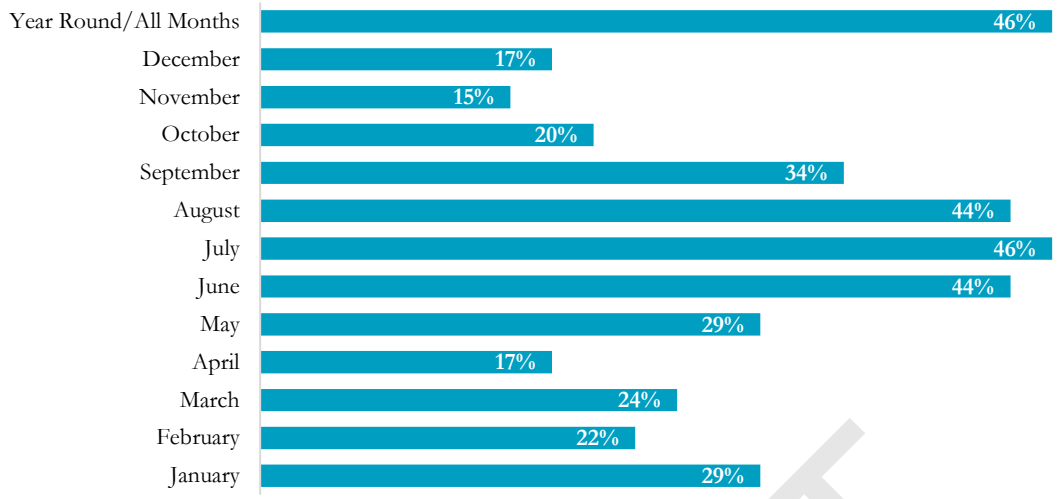
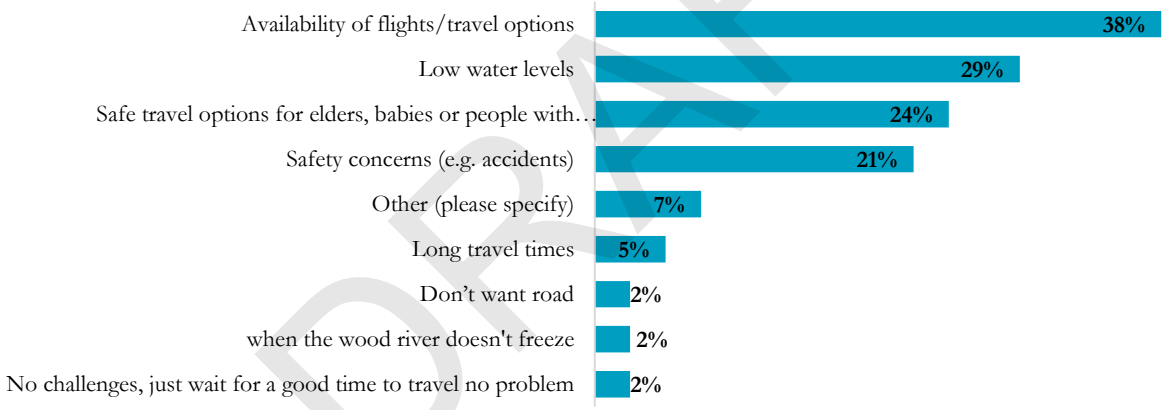
*What times of year do you travel between the communities in the study area? (select all that apply)*



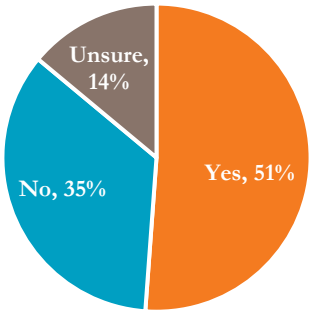

N=41

*What are the most common challenges you face when traveling in the study area? (select all that apply)*




N=42

*Have there been any instances where you or a family member could not travel for an emergency due to unsafe conditions or lack of transportation options?*




N=43

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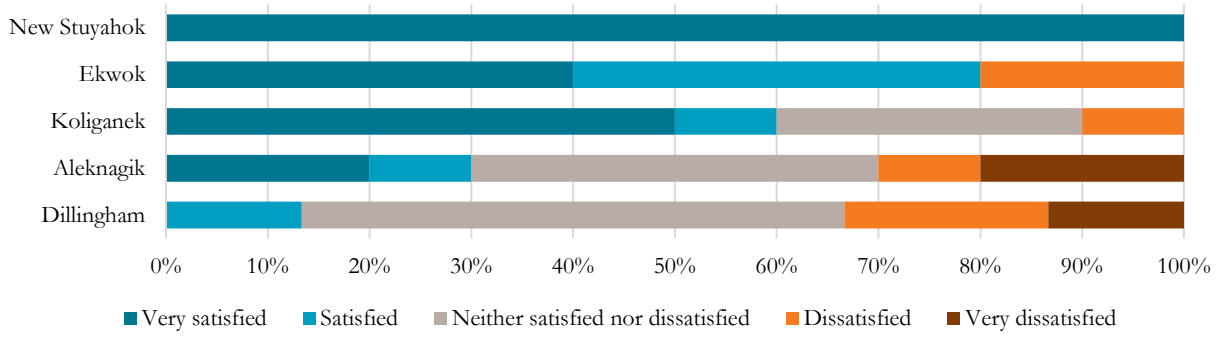
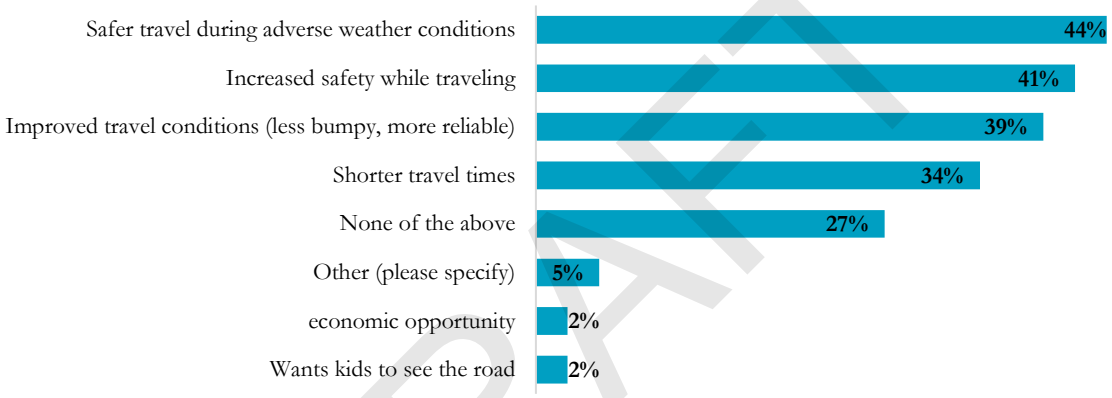
*How do you feel about the current transportation options available in the study area?*



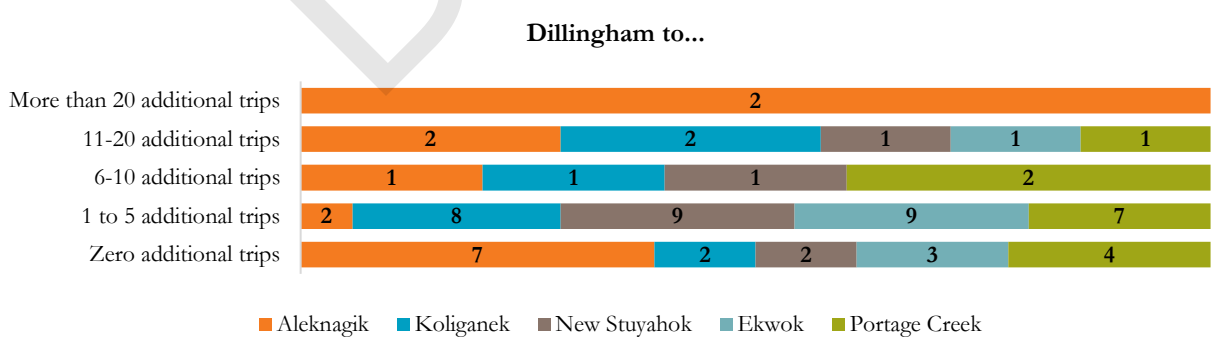

N=43

*What improvements would you expect from potential road connections in the study area? (select all that apply)*




N=41

*If there were a road connection, how many additional trips would you make to the following communities per year?*

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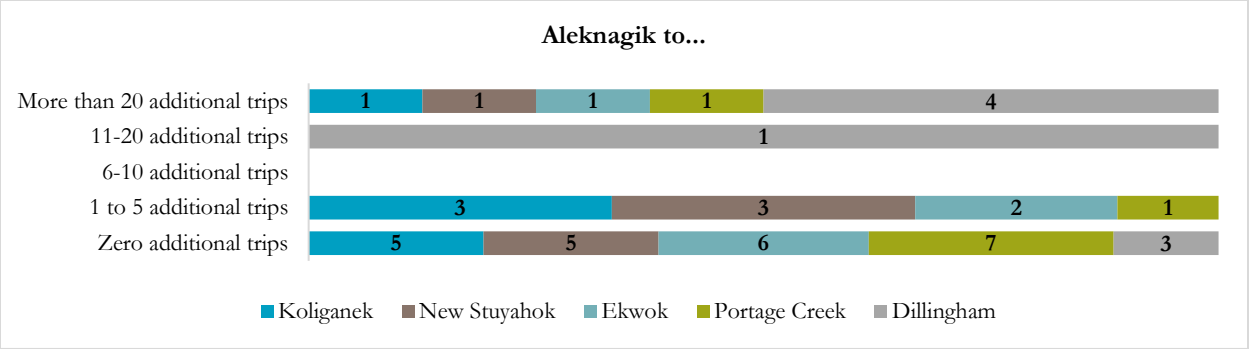
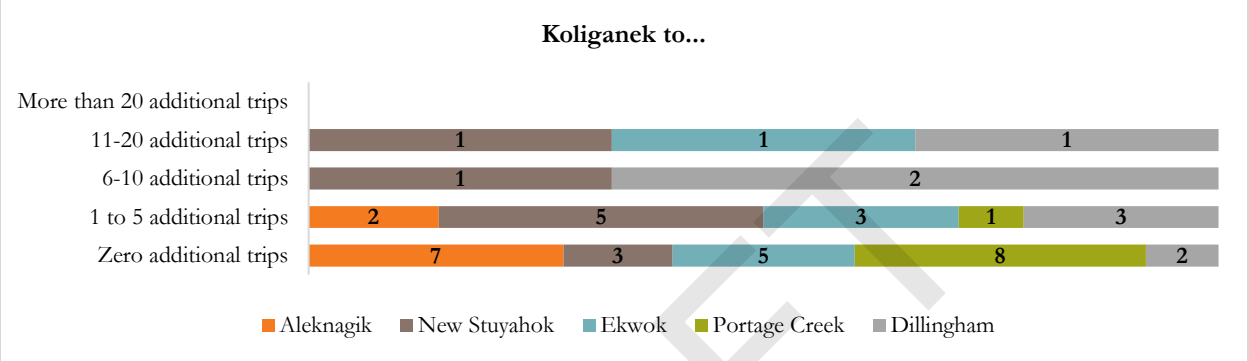
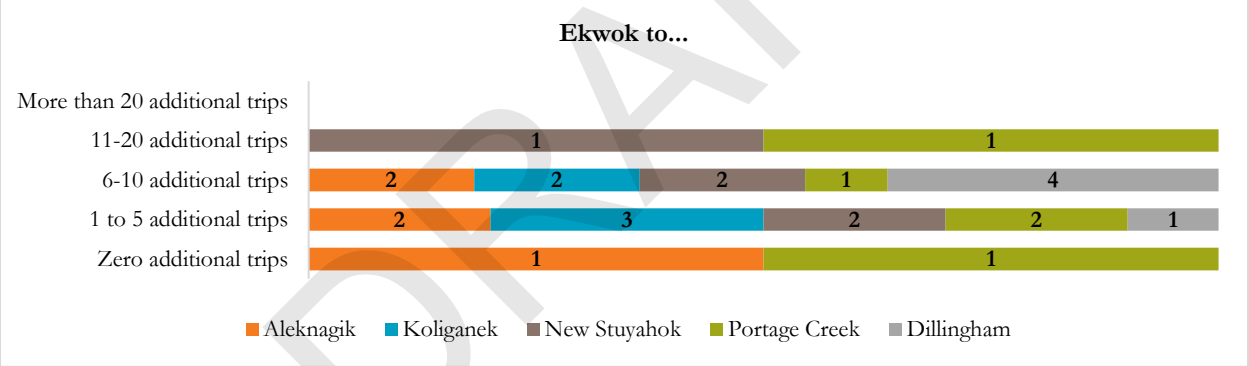
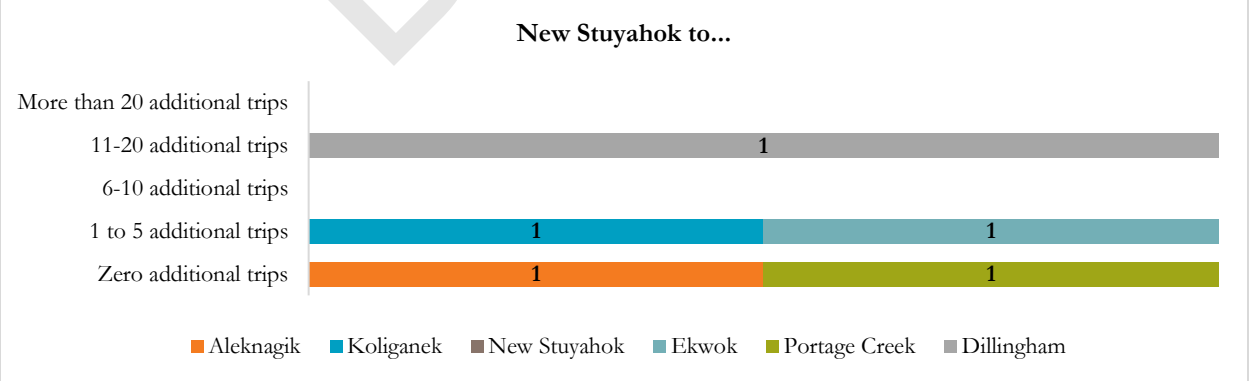

Aleknagik to...
More than 20 additional trips
11-20 additional trips
6-10 additional trips
1 to 5 additional trips
Zero additional trips
1 1 1 1 4
1
3 3 2 1
5 5 6 7 3
Koliganek
New Stuyahok
Ekwok
Portage Creek
Dillingham


Koliganek to...
More than 20 additional trips
11-20 additional trips
6-10 additional trips
1 to 5 additional trips
Zero additional trips
1 1 1
1 2
2 5 3 1 3
7 3 5 8 2
Aleknagik
New Stuyahok
Ekwok
Portage Creek
Dillingham


Ekwok to...
More than 20 additional trips
11-20 additional trips
6-10 additional trips
1 to 5 additional trips
Zero additional trips
1 1
2 2 2 1 4
2 3 2 2 1
1 1
Aleknagik
Koliganek
New Stuyahok
Portage Creek
Dillingham


New Stuyahok to...
More than 20 additional trips
11-20 additional trips
6-10 additional trips
1 to 5 additional trips
Zero additional trips
1
1 1
1 1
Aleknagik
Koliganek
New Stuyahok
Ekwok
Portage Creek
Dillingham

N=41

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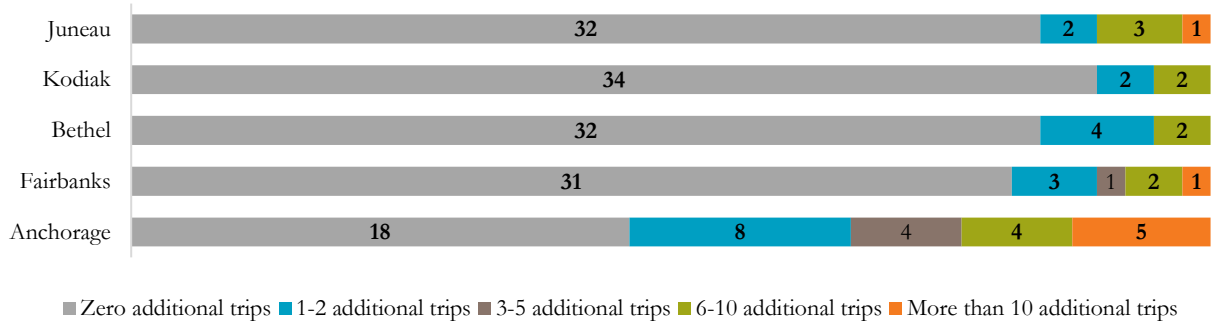
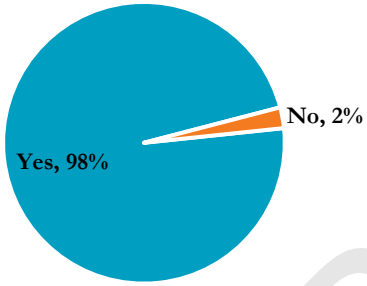
*If there were a road connecting Aleknagik, Portage Creek, Ekwok, New Stuyahok and/or Koliganek, how many additional trips would you make to the following communities outside of the region per year?*



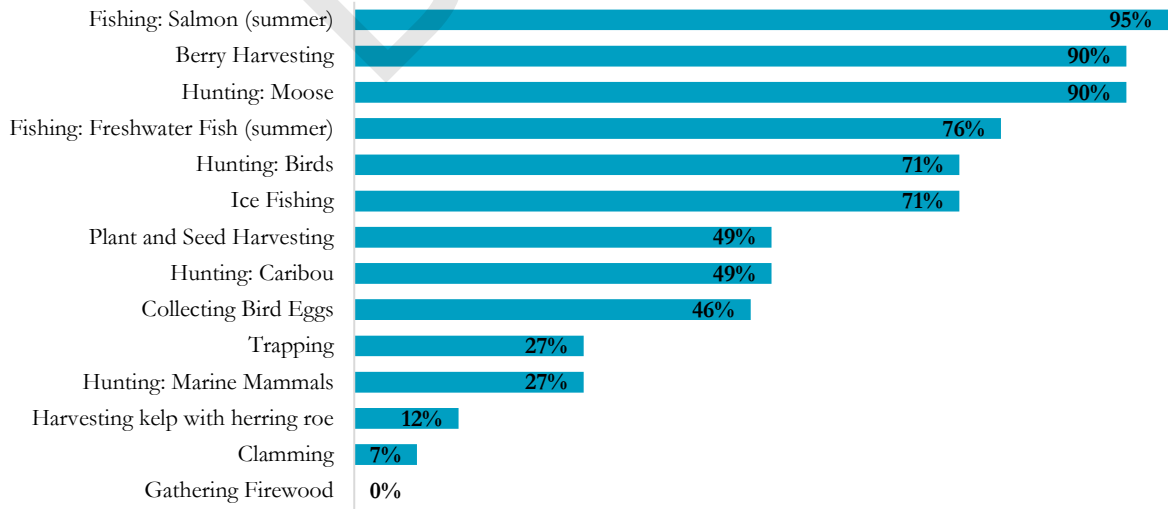

N=39

*Are you or members of your household involved in subsistence activities?*




N=42

*Which of the following subsistence activities do you or your household regularly participate in? (Select all that apply)*




N=41

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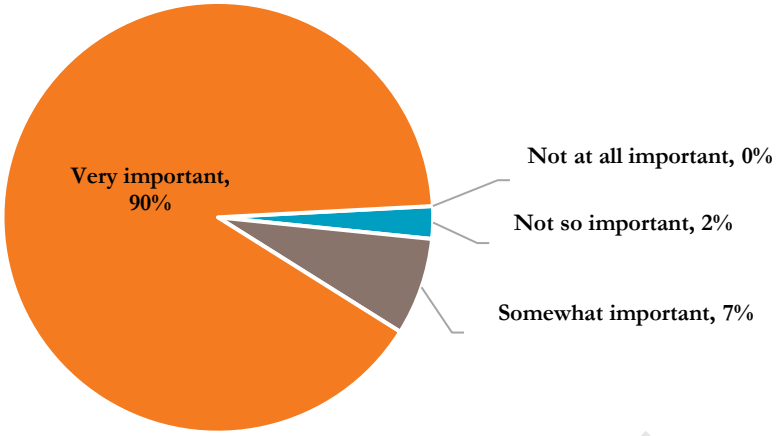
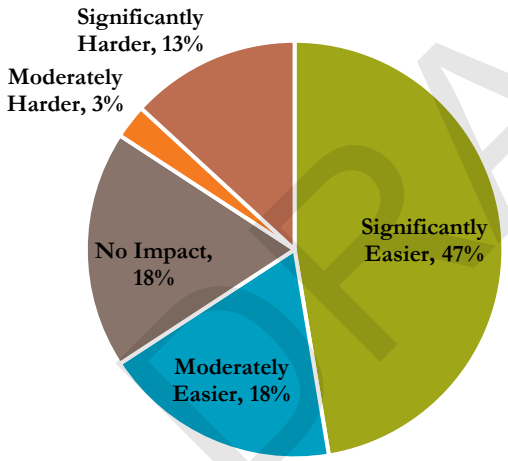
*How important are subsistence activities to your household's livelihood?*



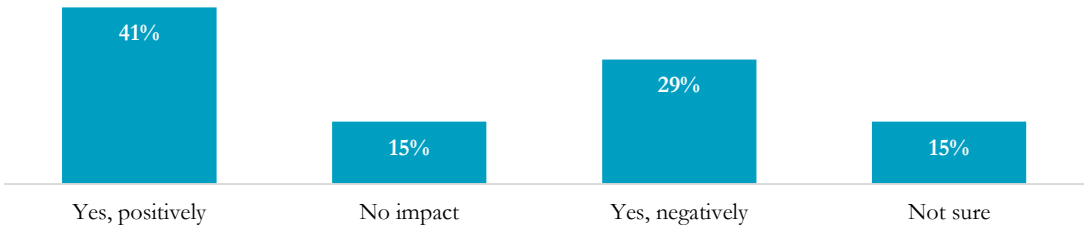

N=41

*How do you think a potential road connection will affect your access to subsistence areas? A road connection will make accessing subsistence resources...*




N=38

*Do you think a potential road connection will affect the availability of subsistence resources?*




N=41

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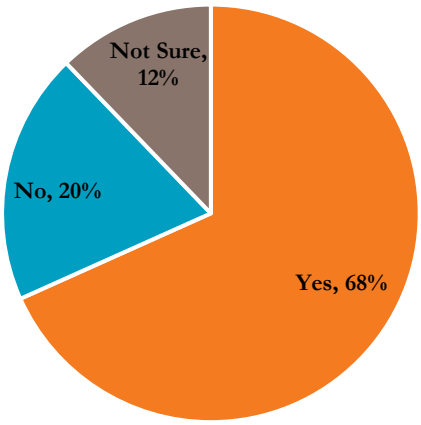
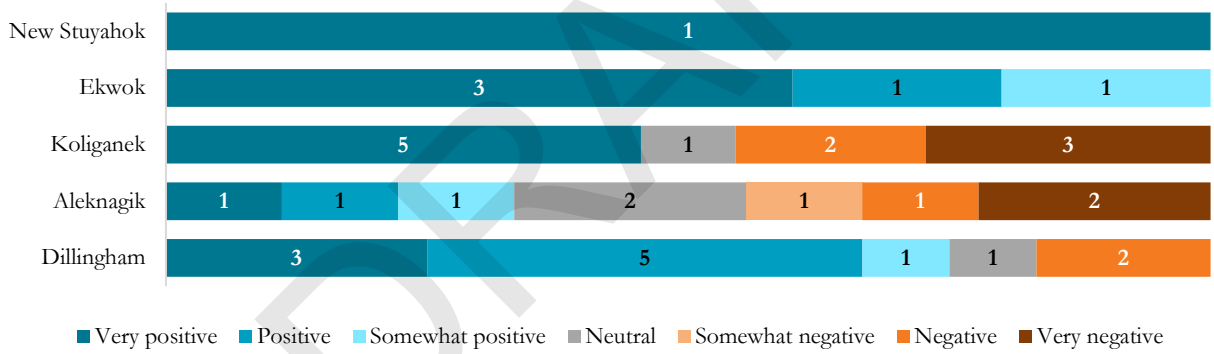
*Do you think increased access by outsiders due to road connections could affect your ability to gather or access resources?*



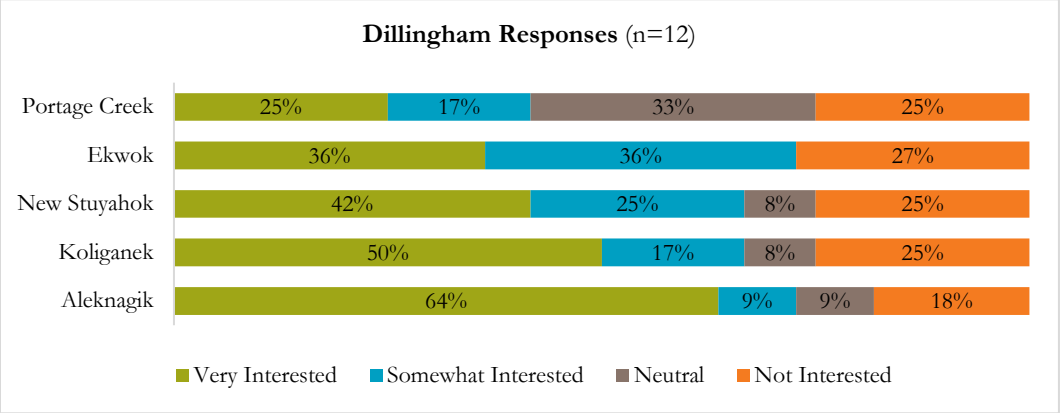

N=41

*Overall, do you think a potential road connection will have a positive or negative impact on your community?*




N=40

*How interested are you in road connections between the following communities?*

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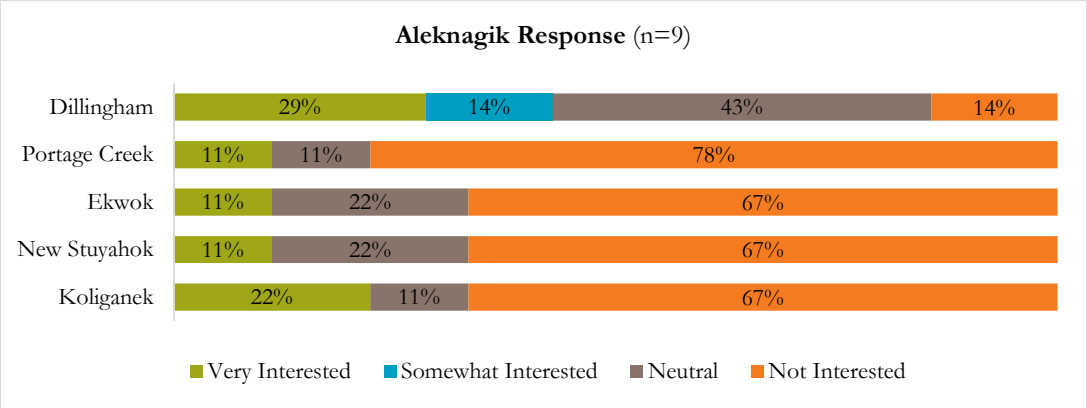
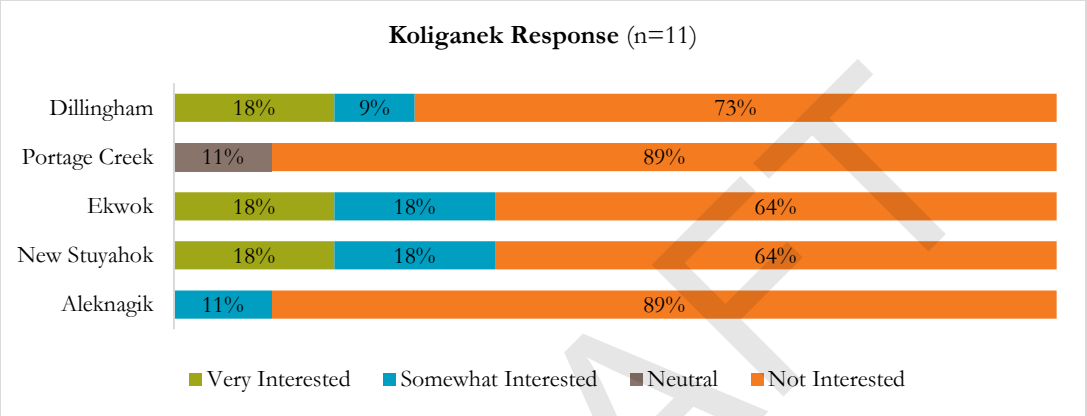
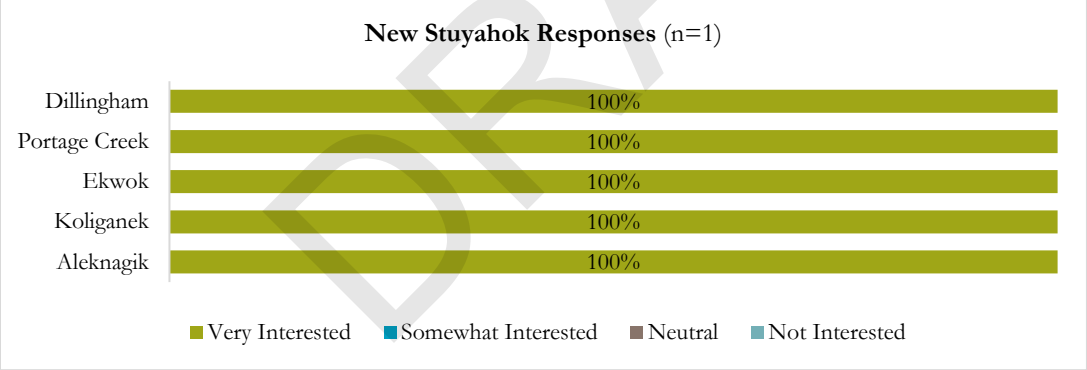
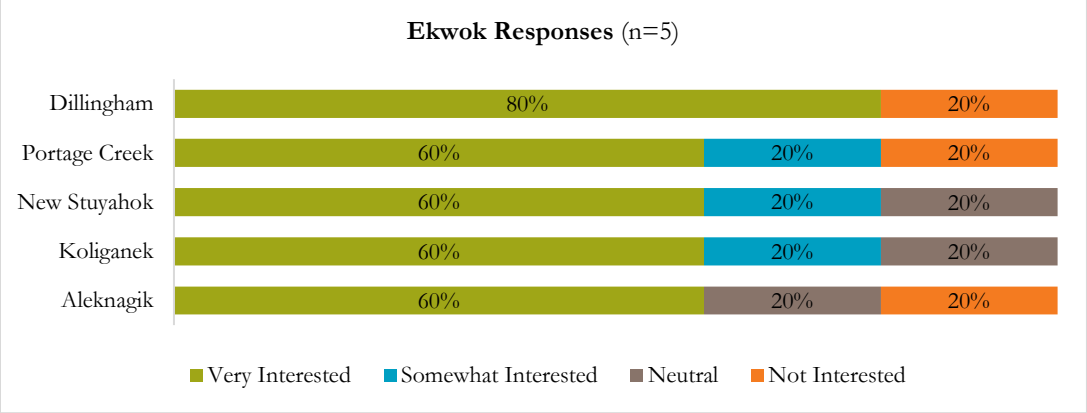

Aleknagik Response (n=9)
Dillingham
Portage Creek
Ekwok
New Stuyahok
Koliganek
29%
14%
43%
14%
11%
11%
78%
11%
22%
67%
11%
22%
67%
22%
11%
67%
Very Interested
Somewhat Interested
Neutral
Not Interested


Koliganek Response (n=11)
Dillingham
Portage Creek
Ekwok
New Stuyahok
Aleknagik
18%
9%
73%
11%
89%
18%
18%
64%
18%
18%
64%
11%
89%
Very Interested
Somewhat Interested
Neutral
Not Interested


New Stuyahok Responses (n=1)
Dillingham
Portage Creek
Ekwok
Koliganek
Aleknagik
100%
100%
100%
100%
100%
Very Interested
Somewhat Interested
Neutral
Not Interested


Ekwok Responses (n=5)
Dillingham
Portage Creek
New Stuyahok
Koliganek
Aleknagik
80%
20%
60%
20%
20%
60%
20%
20%
60%
20%
20%
60%
20%
20%
Very Interested
Somewhat Interested
Neutral
Not Interested

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*What concerns or hopes do you have regarding these potential road connections that you would like to share with the project team? (n=24)*

**Opportunities:**

- A road could provide access during bad weather for emergencies
- Potential to support and help maintain transmission lines to share hydro power from Nuyakuk Falls and reduce energy costs
- Reducing damage to the tundra caused by ATVs
- Reduction of travel costs and less of a reliance on air transportation
- Easier connection to regional hubs to access essential services and transportation networks
- Easier connections to see friends and family in neighboring communities
- Increased economic opportunities
- Reliable fuel delivery options for upriver communities (specifically during spring and fall)

**Concerns:**

- Concerns about increased littering
- Concerns around opening protected areas to increased access/overuse of subsistence resources
- Expensive long-term maintenance costs and overall accountability for road maintenance
- Cell service along any new roads that are constructed to respond to accidents/emergencies
- Increased importation of drugs and alcohol to communities in the study area
- Drunk driving/driving under the influence
- Negative environmental impacts on the land and surrounding waterways

**Neutral Sentiments**

- All communities in the study area should have the opportunity to provide input
- Acknowledgement that any additional road will come with both positive and negative impacts

*Do you have any concerns about the construction or maintenance of potential road connections that you would like to share with the project team? (n=25)*

**Opportunities:**

- Potential to spread out/share maintenance cost among different user groups/entities
- Lessons learned from other road projects (e.g. Dillingham to Aleknagik)
- Opportunity to train and pay local workforce to support road maintenance

**Concerns:**

- Pollution and environmental impacts on the surrounding areas
- Bridges and potential stream crossings that might be expensive to maintain with seasonally shifting water levels
- Potentially creating barriers for fish or impeding fish runs
- Maintenance/snow plowing during the winter months while still allowing for snow machine access
- General perception that the cost to maintain additional roads will be too expensive
- Seasonal flooding and ice jams are difficult to plan for and anticipate

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- Road drainage could be challenging and expensive given the terrain in this region

**Neutral Sentiments**

- Request to be mindful of community concerns
- Would like to explore all available options and technologies to find most appropriate route

*Are there any other potential impacts or topics that this study should explore in order to accurately summarize the impact of a potential road connection? (n=19)*

**Opportunities:**

- Increasing economic opportunities for residents so that they can continue to live in the community
- Could increase access to education within the region and allow for families to more easily stay in touch

**Concerns:**

- Lack of law enforcement and emergency response along new roads
- Perception that roads are expensive to construct and maintain
- Mitigation of environmental impacts to the tundra and surrounding waterways
- Increased importation of drugs and alcohol into dry communities
- Increased pressure on subsistence resources
- Could potentially make it easier for residents to participate in commercial fishing activities in Bristol Bay (stopping the outmigration of fishing permits)

**Neutral Sentiments**

- Request to continue involving and updating community members

# Benefit Cost Analysis

*Will be added to future drafts- Summer/Fall 2027*

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# Literature Review

The literature review reflects publicly available planning documents relevant to transportation feasibility in the Dillingham Census Area, recognizing that not all communities have current or accessible capital or tribal transportation plans. The two lists below are separated into **Regional and Standalone Documents** and **Community Documents**. This review will be updated throughout the project as more information is available.

## Regional and Standalone Documents

The regional and standalone documents reviewed below provide broader policy, environmental, economic, and transportation context that informs the feasibility study by situating community conditions within regional systems, constraints, and planning priorities.

Figure 18. Table of Regional and Standalone Documents Relevant to Road Feasibility Study

| Name | Author/Source | Publication Date |
|---|---|---|
| State Transportation Improvement Plan Volume 1: Project Details | DOT&PF | 2024 |
| Bristol Bay Comprehensive Economic Development Strategy 2022–2026 (Updated 2024) | BBNA | 2024 |
| The Unmet Needs of Environmentally Threatened Alaska Native Villages: Assessment and Recommendations | ANTHC | 2024 |
| Nushagak Regional Ferry/Barge Planning Study | BBNA | 2022 |
| Dillingham Airport Emergency Plan | DOT&PF | 2022 |
| An Overview of the Subsistence Fisheries of the Bristol Bay Management Area, Alaska | ADF&G | 2022 |
| Southwest Alaska Transportation Plan (SWATP) | DOT&PF | 2016 |

### *State Transportation Improvement Plan Volume 1: Project Details (2024)*

The STIP covers primarily road, bridge, ferry, and transit projects (airports are handled separately) and includes a few projects in the Dillingham Census Area. Relevant to the road feasibility study, the STIP shows that currently there are no major new road construction projects connecting the Nushagak River communities in the funded pipeline – most projects in the region are modest, such as Dillingham downtown road improvements, airport rehab projects (via FAA), and maintenance of existing infrastructure. This may point to alternative funding needs (such as the federal RAISE grant) to study and potentially build inter-village roads. (Note that this feasibility study itself is funded by a $350k federal RAISE grant (2023) outside the STIP.) The STIP document can be used as a reference for existing investment levels and to ensure any proposed new road would align with state planning processes (future inclusion in the STIP if it moves forward).

### *Bristol Bay Comprehensive Economic Development Strategy (CEDS) 2022–2026 (Updated 2024)*

The regional CEDS identifies regional goals, priority projects, and action plans across sectors. Transportation & Infrastructure is a core focus, with a goal to increase communities' access to funding and collaboration for infrastructure improvements. The CEDS lists key projects such as improving airports and ports, developing

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local transportation plans, supporting construction of new roads between villages, though the plan does not include a route connecting Aleknagik and Koliganek specifically. The plan stresses that better transportation connectivity is critical for reducing cost of living, improving safety (emergency response times), and fostering economic opportunities (e.g. moving fish, freight).

### *The Unmet Needs of Environmentally Threatened Alaska Native Villages: Assessment and Recommendations (2024)*

This report provides statewide context on flood, erosion, and permafrost risks affecting communities within the Dillingham Census Area. While the report does not evaluate transportation infrastructure directly, its findings establish baseline environmental conditions that may influence road feasibility, alignment considerations, and long-term infrastructure resilience for communities including Dillingham, Aleknagik, Koliganek, New Stuyahok, and Ekwok.

### *Nushagak Regional Ferry/Barge Planning Study (2022)*

The comprehensive planning study for a water transit system serving Dillingham and Nushagak River villages. It evaluates feasible alternatives (landing craft vs hovercraft) to provide passenger and freight service between Dillingham and the upriver communities. Highlights the lack of year-round surface access and the high costs of existing air cargo and seasonal barging. It includes information about airfare and proposed ferry/barge rates.

### *Dillingham Airport Emergency Plan (2022)*

This plan provides context on the role of the Dillingham Airport as a critical regional transportation and emergency response facility, supporting medical evacuations, disaster response, and intercommunity access during emergencies. It also highlights the importance of reliable access to Dillingham during adverse conditions and reinforces the region's reliance on a limited number of transportation lifelines.

### *An Overview of the Subsistence Fisheries of the Bristol Bay Management Area, Alaska (2022)*

This study documents the central role of subsistence fishing in the regional economy and daily life, particularly in smaller Nushagak District communities including Aleknagik, Koliganek, New Stuyahok, Ekwok, and Portage Creek. The report emphasizes strong seasonal patterns in harvest activity and travel, high local participation rates, and reliance on access to river corridors and harvest areas. The findings provide important context for understanding seasonal mobility needs, access reliability, and the ways transportation infrastructure may intersect with subsistence practices in the study area.

### *Southwest Alaska Transportation Plan (SWATP) (2016)*

This plan assesses regional transportation needs and priorities over 20 years (2016-2036. It notes that most communities in the region are not connected by roads, relying instead on air, water, and off-road travel. Improvements to regional connectivity are encouraged (e.g. road/port projects) to support economic development and access to resources, with Dillingham identified as a key transportation hub (airport, port) for surrounding villages.

## Community Documents

Community-level planning documents, including transportation safety plans, hazard mitigation plans, erosion assessments, and community plans, provide localized insight into access challenges, environmental constraints, and safety considerations that inform feasibility analysis and help identify community-specific conditions and risks that may influence design considerations of road connections.

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Figure 19. Table of Community Documents Relevant to Road Feasibility Study

| Document Type | Dillingham / Curyung | Aleknagik | Koliganek | New Stuyahok | Ekwok | Portage Creek |
|---|---|---|---|---|---|---|
| Tribal Transportation Safety Plans | 2020 | 2019 | | 2020 | 2019 | 2021 |
| Coordinated Transportation Plans | 2015 | 2023 | | | | |
| Hazard Mitigation Plans | 2022 | 2019 | | 2019 | 2019 | 2019 |
| Erosion Assessments | 2021 | 2007 | | 2008 | 2008 | |
| Community Plans | 2010 | 2023 | 2015 | 2015 | 2009 | |

### *Tribal Transportation Safety Plans*

The Tribal Transportation Plans for communities in the Dillingham Census Area were developed by the Bristol Bay Native Association (BBNA), in partnership with Bristol Engineering, through the Federal Lands Transportation Program using Tribal Transportation Program Safety Funds. These plans are safety-focused rather than capacity- or growth-oriented, and they evaluate all transportation modes, including local roads, seasonal trails, aviation, marine access, pedestrian travel, and transit. For this feasibility study, the TTSPs are relevant because they identify community-specific transportation safety concerns, hazardous locations, and priority safety improvements, providing insight into existing access challenges, modal reliance, and safety conditions that may influence corridor design assumptions, alignment screening, and potential project benefits.

### *Coordinated Transportation Plans*

Coordinated Transportation Plans address mobility needs for seniors, individuals with disabilities, and residents without reliable access to personal vehicles, with an emphasis on service coordination rather than infrastructure development. The plans for Dillingham and Aleknagik document existing road connections, travel distances, transit options, and transportation costs, and identify challenges related to affordability, limited transit service, and dispersed settlement patterns. These plans are particularly relevant to the feasibility study's access and equity considerations, as they highlight how residents currently rely on informal or limited transportation options and how road connections function as essential lifelines for healthcare, employment, and basic services rather than commuter travel.

### *Hazard Mitigation Plans*

Hazard Mitigation Plans for communities in the study area were prepared by BBNA and Bristol Engineering in accordance with FEMA requirements and focus on reducing risks from natural hazards such as flooding, erosion, permafrost degradation, and severe weather. The plans provide information on hazard exposure, vulnerable assets, and mitigation priorities. For the road feasibility study, these plans inform environmental constraints, alignment feasibility, and long-term resilience considerations, helping identify areas where flooding, erosion, or ground instability may affect constructability, maintenance needs, and lifecycle costs.

### *Erosion Assessments*

Erosion assessments for communities in the study area, primarily conducted by the U.S. Army Corps of Engineers, provide baseline documentation of erosion processes, rates, and areas of concern affecting community infrastructure. Although several of these assessments are dated, they remain relevant for identifying known erosion-prone areas and recurring risk patterns. For the feasibility study, erosion

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assessments support early-stage screening by informing corridor vulnerability, siting considerations, and the need for erosion-aware design, particularly where road alignments may intersect riverbanks, floodplains, or low-lying terrain.

### *Community Plans*

Community plans articulate locally adopted goals and priorities related to health, well-being, land use, transportation, and community services. While these plans are broader in scope than a road feasibility study, they establish local intent and identify desired outcomes related to access, safety, and quality of life. In this study, community plans provide policy context for understanding how improved surface access may support existing community goals, without implying growth or development pressure, and help ensure that feasibility considerations are aligned with community-defined priorities.

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