



# Yukon Kuskokwim

## Comprehensive Economic Development Strategy

## YK CEDS

# Progress Report & Updated Focus Area Summaries

April 30, 2024

Prepared for the Association of Village Council Presidents by Agnew::Beck Consulting

Visit the project webpage to:

- View results from past YK CEDS Work Sessions
- Find copies of the 2017-2023 Five-Year YK CEDS and recent Annual Updates
- View the draft YK CEDS (when posted later in 2024) and share your comments

[www.avcp.org/regional-comprehensive-economic-development-strategy](http://www.avcp.org/regional-comprehensive-economic-development-strategy)

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# I. Introduction

The Association of Village Council Presidents (AVCP), in close partnership with community partners, will be coordinating a five-year update to the Yukon Kuskokwim (YK) Comprehensive Economic Development Strategy (CEDS) in 2024.

The 2018-2023 YK CEDS expired at the end of 2023. Since the last 5-Year CEDS Update, YK communities have been through a lot. This includes federal administration and policy changes, the COVID-19 pandemic, severe and devastating storms, and limitations and uncertainty with regional salmon populations. The 2018-2023 5-Year CEDS and two annual updates that followed have guided regional leaders and partners through some of those challenges and contributed to the success of our region. Some recent successes include:

- Completion of the Emmonak Port.
- Innovative partnerships around the region to meet housing needs, including efforts with the Native Village of Napaimute and The Kuskokwim Corporation to stand up a commercial sawmill operation in the Middle Kuskokwim.
- Climate adaptation planning, including completion of *The Unmet Needs of Environmentally Threatened Alaska Native Villages: Assessment and Recommendations* (view online [here](#)).

## Purpose of the Progress Report

It is time for the YK CEDS to be updated, and to look toward the next five years. By coming together to develop partnerships and to share and discuss ideas, YK stakeholders can build economic resilience, exercise sovereignty, and build a bright future for the next generations. This progress report summarizes planning efforts over the past year, as well as an updated list of emerging strategies by focus area. These focus area summaries offer a starting point for the 2024-2028 update.

## What is a CEDS?

A CEDS is a document that identifies ways to support businesses, create more jobs, improve quality of life, and increase resilience to changes and threats. The planning process is driven by YK communities, Tribes, residents, organizations, and partners. Implementation of the strategies and actions are shared by communities and partners.

The EDA recommends including the concept of economic resilience into CEDS planning. Building economic resilience requires a proactive approach to identify and mitigate current and potential threats and disruptions to a community or region's economy. Examples of ways to build resilience include diversifying the economy, enhancing business and workforce development supports, strengthening infrastructure, and conducting pre-disaster recovery planning.

## YK CEDS Committee

The YK CEDS Committee represents the main economic interests of the YK region and offers guidance, input, and implementation support for the YK CEDS Update. Individuals serving on the current YK CEDS Committee include:

Organization	Representative(s)
Alaska Village Electric Cooperative	Bill Stamm, Anna Sattler
Association of Village Council Presidents	Clarence Daniel, Diane Atti
AVCP Regional Housing Authority	Peter Evon
Bethel Community Services Foundation	Michelle DeWitt
Bethel Native Corporation	Ana Hoffman
Calista	Miranda Strong & others on the Government Relations Team
City of Bethel	Alan Lanning, Lori Strickler
Native Village of Napaimute	Mark Leary
Nuvista	Sean Glasheen
Orutsararmiut Native Council	Brian Henry
The Kuskokwim Corporation	Andrea Gusty, Will Hartman, Jonathan Samuelson
Yukon Kuskokwim Health Corporation	Christopher Beltzer
Yupiit Piciryarait Cultural Center	Marybeth Whalen
Yuut Elitnaurviat	Tiffany Tony and Mike Hoffman

## 2. Methodology

### Summary of Activities, Summer 2023-Spring 2024

#### Overview

##### Summer and Fall 2023

- Kickoff process
- Conduct interviews
- Launch community assessment tool

##### Fall 2023 /Winter 2023-2024

- Collect economic, population data
- Convene working groups
- Host YK Work Session

##### Spring 2024

- Conduct craft vendor survey
- Convene final working group
- Refine focus area summaries

#### Detailed Description of Outreach Activities

- **CEDS Committee Input.** The CEDS Committee met periodically during the winter to provide input on the planning process, Work Session scheduling, and other details. Many CEDS Committee members also participated in interviews, working group conversations and the 2024 YK CEDS Work Session.
- **Community Assessment Tool.** A new tool was developed and launched to understand YK community priorities and needs. The survey asks communities about their priorities and barriers in eight key focus areas and an additional “other” category for all topics not addressed. AVCP hopes to conduct the assessment annually. A total of 17 communities out of 51 responded. Results will be available on the YK CEDS webpage.
- **Working Group Meetings.** The YK CEDS Working Groups offer expertise and experience around the specific focus areas. All YK CEDS Working Groups met once between October 2023 and April 2024 except for the Education and Workforce Development Working Group. Working Group meeting notes are available on the YK CEDS webpage.
- **2024 YK Work Session.** In early February 2024, partners from around the Yukon Kuskokwim Delta and beyond came together to develop solutions and actions to regional economic challenges. The work session kicked off with an opening plenary, followed by breakouts organized by CEDS focus area. Work session input was used to refine the focus area summaries included in this progress report. The work session also included an offsite visit to Meyer’s Farm in Bethel.
- **Craft Vendor Survey.** In March 2024, Agnew::Beck worked with the AVCP Community Development Manager to conduct an informal survey of vendors at a Bethel Saturday Market and at the Cemai Dance Festival. The purpose was to understand YK business priorities and needs from the perspective of craft fair vendors. The survey asked crafters about their business, what they envision for the future of their business, what has helped them, what barriers





they've experienced, and what supports would be helpful. A total of 24 vendors responded to the survey. Results will be posted to the YK CEDS webpage.

## What comes next?

AVCP will be initiating the planning process for the 2024-2028 Five-Year YK CEDS Update later this year. The planning process will include subregional community visits, a prioritization process with the YK CEDS Committee, and a public comment period to gather input on the draft CEDS. The emerging strategies in this progress report offer a starting point for the update.

## About the Focus Area Summaries

The following focus area summaries capture background information and proposed strategies for key sectors and topics in the YK. These summaries build from the YK CEDS 2021 Annual Update, with additional input from YK CEDS Committee interviews, YK CEDS Working Group meetings, the YK CEDS Community Assessment Tool results, and the YK CEDS Work Session. Each focus area summary is organized into the following components:

The image displays three focus area summary components, each with a title, a representative image, and a set of guiding questions.

- Measures of Success:** The image shows white plastic bags hanging in a room. The questions are: "How can we track **progress**?" and "What information can help us **measure** whether we are successful?"
- Strategies & Actions:** The image shows a group of people in a meeting. The questions are: "What **solutions** and **actions** are most important?" and "How can we **collaborate** to make progress?"
- Strengths & Challenges:** The image shows people walking in a snowy field. The questions are: "What are the **strengths** of this focus area in our region?" and "What are the **challenges** hindering our success?"

The focus area summaries also include a list of relevant resources such as reports and tools, as well as potential funding sources for implementation.

The content and draft policies in these focus area summaries will be further refined during the upcoming 2024-2028 YK CEDS Update.

# 3. YK Vision and Economic Development Goals

The following are the economic vision and goals from the 2018-2023 YK CEDS.

## What is our economic vision?

A strong, innovative, self-reliant Yukon-Kuskokwim economy supported by our resilient culture and regional collaboration.

## What are our current economic development goals?



## 4. Focus Area Summaries

**Business Development & Entrepreneurship**

**Connectivity**

**Education and Workforce Development**

**Energy**

**Food Security**

**Housing and Water-Sewer Infrastructure**

**Transportation**





Yukon Kuskokwim Comprehensive Economic Development Strategy

# Business Development & Entrepreneurship Summary: April 2024

Where We Are Today	What data indicators can we monitor to track progress? Where do we want to be in 5 years?	Where We Aim to Be in 2028
<b>227 businesses</b>	<b>Locally Owned Businesses:</b> Number of businesses owned and operated in the YK region. <sup>1</sup>	<b>250 businesses</b>
<b>265 jobs lost in 2021</b>	<b>Jobs Created:</b> Number of jobs created from new/expanded establishments (founded in the last three years) minus jobs from closing establishments in the YK.	<b>100 jobs gained</b>
<b>744 self-employed individuals</b>	<b>Self-Employed Individuals:</b> Number of self-employed individuals in the YK, based on nonemployer statistics that count businesses with no employees.	<b>Need to identify</b>

Sources: <sup>1</sup>[Bureau of Labor Statistics Quarterly Census of Employment and Wages](#) | <sup>2</sup>[Business Dynamics Statistics](#) | <sup>3</sup>[United States Census Bureau](#)

## Business Development & Entrepreneurship Objective *(adapted from 2018-2023 YK CEDS)*

- I. Build interest, investment in, and capacity for locally owned, operated, and innovative businesses.

### Business Development & Entrepreneurship Strategic Direction: Potential Strategies and Actions

#### **Proposed Strategy A: Invest in business generation and entrepreneurship through supportive education, training opportunities, and funding.**

1. Offer community support for local businesses.
  - Distribute resource guides and offer companion trainings (see relevant resources below) to support anyone interested in starting a local business. Include education on understanding varying market demands and their impacts on business, for example, how to market hobbies and skills to meet community demand.
  - Expand and promote local business directories (*e.g., Calista's site, Calivika Business Directory*).
  - Sustain the small business development “Best in the West” competition.
    - Identify a hosting organization (*Potential partner: Southwest Alaska Arts Group*).
    - Add mentorship opportunities and increased funding for winners.
2. Develop business training program(s) in partnership with school districts. Potential training topics could include the below (*Potential partner: Business Impact NW*).
  - Business development
  - Administration (accounting, payroll, and labor laws)
  - Service or product development
  - Marketing/advertisement
  - Customer service
  - Selling and transporting goods
  - Financial support
3. Invest in micro-lending opportunities and grants for start-ups, entrepreneurs, commercial fishers, and small business owners (*Navista offers technical assistance and grants for small businesses, see “Potential Funding Sources” below*).

#### **Proposed Strategy B: Strengthen operating business’ success and sustainability.**

4. Reestablish the Bethel Chamber of Commerce (*Potential partner: Small Business Administration, Alaska District*).
5. Explore the feasibility of creating a village corporation consortium/investment pool.
6. Advocate for policy improvements to address lengthy delays with bypass mail delivery in rural Alaska.

#### **Other Potential Actions**

7. Support and increase the retail sector and tourism-related businesses in the region, especially for in-demand services like guiding and food service.
8. Work with visitor-related businesses to incorporate socially responsible practices. Examples include meat and game donations to local communities, cultural awareness, and low-impact activities.
9. Create shared spaces where new trades and crafts can grow and develop. Examples include garages, workshop spaces, and commercial kitchens in communities.
10. Establish a visitor center at the Bethel airport.

# Other Relevant Resources and Potential Funding Sources

## Relevant Resources (sorted alphabetically)

- **Business Impact NW.** A nonprofit Community Development Financial Institution (CDFI) with lending services throughout the Pacific Northwest, including Alaska. [View here.](#)
- **Calivika Business Directory.** Calista Corporation. [View here.](#)
- **Steps to Success for Rural Entrepreneurs - Rural Handbook Series.** Developed by the University of Alaska Center for Economic Development with support from the Economic Development Administration. [View here.](#)
- **Workshops, tools, and one-on-one business advising.** Alaska Small Business Development Center. [View here.](#)
- **Best in the West Business Plan Competition Awardees Share Startup Stories.** Prepared by The University of Alaska Center for Economic Development, October 2020. [View here.](#)

## Potential Funding Sources

- **Rural Energy for America Program (REAP) Renewable Energy Systems & Energy Efficiency Improvement Guaranteed Loans & Grants.** US Department of Agriculture, Rural Development and Nuvista. [View here.](#)

### Strengths and Opportunities

*Internal and external factors that contribute to our success in this focus area (in alphabetical order)*

- Best in the West competition.
- Improved access to online training and resources as connectivity improves.
- Statewide organizations provide free resources, tools, trainings, and one-on-one support to entrepreneurs and small businesses. Organizations include the Alaska Small Business Development Center and the University of Alaska Center for Economic Development.

### Weaknesses and Threats

*Internal and external factors that are barriers to our success in this focus area (in alphabetical order)*

- Limited access to finance support and resources.
- Limited private employer recruitment and retention due to higher Tribe wages.
- Negative impacts of seasonal work combined with small market size.
- Significant financial loss due to limited regional tourism, including fish and big game guiding.



## Yukon Kuskokwim Comprehensive Economic Development Strategy

# Connectivity Summary: April 2024

Where We Are Today	What data indicators can we monitor to track progress? Where do we want to be in 5 years?	Where We Aim to Be in 2028
0 communities	<b>Communities Served:</b> Number of communities served (defined by at least 100 Mbps download speed, 20 Mbps upload speed). <sup>1</sup>	Need to identify
0 communities	<b>Tribally Owned Broadband Rate:</b> Number of communities served by Tribally owned broadband.	25% of YK communities
Need to identify	<b>Internet Speed:</b> Average upload/download speeds available, in megabits per second (Mbps).	Minimum 100 Mbps download speed Minimum 20 Mbps upload speed
Need to identify	<b>Internet Cost:</b> Average cost of internet service.	\$60 or less/month

Sources: <sup>1</sup>[Alaska Broadband Office](#)

*Other Potential Indicators (need baselines and targets): Percentage of remote, local employment; accrued savings for public institutions as broadband infrastructure expands; percentage of local employment in broadband deployment and maintenance jobs; number of communities connected in multiple modes.*

## Proposed Communications Objectives

1. Increase connectivity in the YK region.
2. Support Tribal efforts to develop the YK Tribal broadband spectrum.

### Communications Strategic Direction: Potential Strategies and Actions

#### **Proposed Strategy A: Ensure affordable and safe connectivity throughout the region.**

1. Advocate for policies, subsidies, and resources to offset high household internet and broadband costs.
2. Educate communities about safe internet usage with expanding internet accessibility (*Potential partner: Yukon Kuskokwim Health Consortium*).

#### **Proposed Strategy B: Plan for broadband build-out by creating strong partnerships and collaborations between public, private, and Tribal entities on communications infrastructure projects.**

3. Organize a Yukon Kuskokwim Broadband Conference that gathers data and inventories existing gaps. Consider whether this conference should occur on an annual basis.
4. Develop a Yukon Kuskokwim Region Broadband Plan that addresses the following subcomponents.
  - Education and Workforce Development Policy: Develop a workforce development strategy for telecommunications infrastructure build-out, including establishing needed trainings as well as collecting and monitoring data (*Potential partner: Yuut Elitnaurviat*).
  - Funding: Build a cohort of innovators or specialists to assist Tribes in pursuing funding opportunities.
  - Regional Data Collection and Monitoring: Build data tracking and reporting into broadband planning efforts to measure progress and successes.
  - Capital Construction Tracking: Utilize currently funded opportunities to develop telecommunications infrastructure. Develop a regional map that shows what projects are due to be completed and which communities will be served (*Potential partner: Alaska Broadband Office*).



# Other Relevant Resources and Potential Funding Sources

## Relevant Resources (sorted by date published)

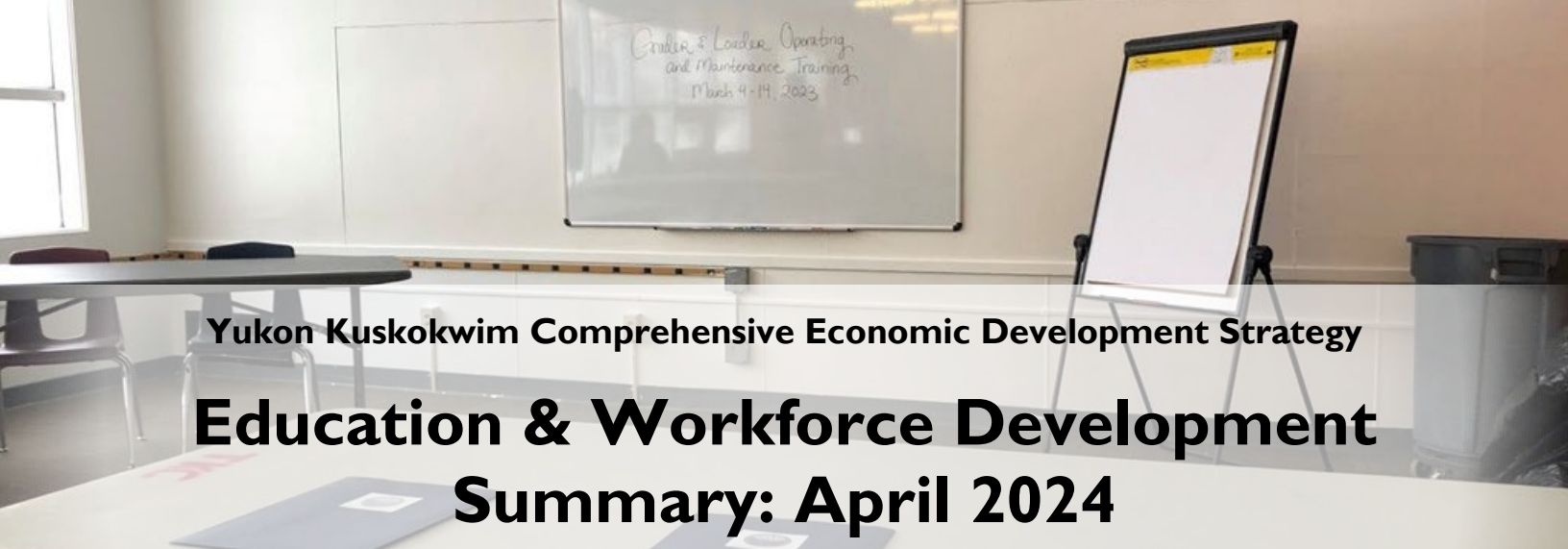
- **The Unmet Needs of Environmentally Threatened Alaska Native Villages: Assessment and Recommendations.** Alaska Native Tribal Health Consortium. January 2024. [View here.](#)
- **Bristol Bay Broadband Implementation Plan for Virtual Jobs Adoption.** Bristol Bay Native Corporation and the Denali Commission. December 2023. [View here.](#)
- **Mapping HUB.** Alaka Broadband Office. September 2023. [View here.](#)
- **Southwest Alaska Long-haul Microwave and Optical Network (SALMONet) Job Opportunity Evaluation.** Bristol Bay Native Association. 2023. [View here.](#)

## Potential Funding Sources

- **Distressed Area Recompete Pilot Program.** Economic Development Administration, US Department of Commerce. Future rounds of funding may be available. [View here.](#)

<b>Strengths and Opportunities</b> <i>Internal and external factors that contribute to our success in this focus area (in alphabetical order)</i>	<b>Weaknesses and Threats</b> <i>Internal and external factors that are barriers to our success in this focus area (in alphabetical order)</i>
<ul style="list-style-type: none"> <li>• Continued upgrades and expansion of regional telecommunications infrastructure.</li> <li>• Availability of federal funding for broadband infrastructure such as Digital Equity and Broadband, Equity, Access, and Deployment (BEAD).</li> <li>• Increased access to training and virtual employment opportunities due to faster, more reliable internet.</li> <li>• Growing acknowledgement of the need for digital equity and Tribal consultation.</li> <li>• More local construction and maintenance jobs for telecommunication broadband systems infrastructure build-out.</li> <li>• Short-term connectivity needs met by Starlink.</li> </ul>	<ul style="list-style-type: none"> <li>• Affordable Connectivity Program expires in April 2024 (Potential partner: Alaska Communications System).</li> <li>• Challenges with permitting requirements and securing rights of way.</li> <li>• Communities susceptible to potential scams.</li> <li>• High cost of telecommunications services.</li> <li>• Poor coordination and alignment between funders and organizations.</li> <li>• Limited capacity, technical assistance, and training for telecommunications infrastructure planning. Needs include grant writing, ongoing maintenance, operations, and relevant data collection.</li> <li>• Not enough cell service carriers to meet community needs.</li> <li>• Limited workforce development training and education to meet regional broadband infrastructure needs.</li> <li>• Lack of state regulation over the telecommunications industry.</li> <li>• Despite growing acknowledgement, there is still little engagement with Tribes in broadband planning.</li> <li>• Poor cell, landline, and internet services that do not meet equitable access standards.</li> <li>• Persistent issues with National Telecommunications and Information Administration (NTIA) telecommunications infrastructure planning fund disbursement.</li> </ul>





# Yukon Kuskokwim Comprehensive Economic Development Strategy

## Education & Workforce Development

### Summary: April 2024

Where We Are Today	What data indicators can we monitor to track progress? Where do we want to be in 5 years?	Where We Aim to Be in 2028
<b>11.2% of residents are unemployed (2022)</b>	<b>Unemployment Rate:</b> The number of jobless civilians 16 and older who are seeking employment. It does not include retirees or those who choose not to work. Average unemployment rate of both YK census areas (Bethel Census Area and Kusilvak Census Area). <sup>1</sup>	<b>4.6% unemployed<sup>1</sup></b> <i>(statewide unemployment rate)</i>
<b>Need to identify</b>	<b>YK Resident Employment Rate:</b> Percent of jobs in the region filled by regional residents.	<b>Need to identify</b>
<b>Need to identify</b>	<b>Jobs:</b> Number of jobs created or retained among YK region in emerging sector industries.	<b>Need to identify</b>

Sources: <sup>1</sup> [2022 American Community Survey 5-Year Averages](#)

*Other Potential Indicators: Per capita wages; Labor force participation rate; graduation rates (Potential source: University of Alaska Fairbanks); placement rates for students graduating from programs; skills gap data; community-specific data. Use data from “Where We Are Today for Percent of Jobs Filled by Regional Residents for 2022” in the [Nonresidents Working in Alaska 2022 report](#) from Alaska Department of Labor and Workforce Development.*

## Education & Workforce Development Objectives *(adapted from 2018-2023 CEDS)*

1. Regional residents are prepared to work in emerging economic sectors, including aviation, energy, housing construction and rehabilitation, infrastructure, planning, transportation, and resource development.
2. All youth in YK have access to a quality education.

### Education & Workforce Development Strategic Direction: Potential Strategies and Actions

#### **Proposed Strategy A: Address barriers to training and employment.**

1. Recognize and address the need for childcare in all workforce-related discussions.
2. Fund and develop a regional workforce needs assessment.
3. Provide mental health and wellness support alongside education and training.
4. Standardize culturally appropriate worker benefits; imbed cultural values in the workforce.
5. Increase options for remote training and certifications. Include more technically advanced remote training, like commercial driver's license (CDL) and heavy equipment simulators. Coordinate with training centers and other regional groups to increase access to the internet and computers to allow for more online training opportunities.

#### **Proposed Strategy B: Collectively develop and implement regional vocational training workforce development plans for crucially needed occupations.**

6. Workforce development plans should consider a diversity of strategies and cover key industries.
  - Communications (e.g., broadband technicians) – see “Connectivity Summary”
  - Energy (e.g., utility operators, renewable energy infrastructure build-out and maintenance) – see “Energy Summary”
  - Housing construction/rehabilitation and water-sewer infrastructure installation and maintenance (e.g., skilled trade jobs, localized sawmills for Harvest to Home programming, operators); *(Potential partner: Alaska Native Tribal Health Consortium)* – see “Housing and Water-Sewer Summary”
  - Aviation (e.g., ground school instructors, pilots)
  - Childcare
  - Health care (e.g., community health aides)
  - Planning (e.g., climate adaptation)
  - Public safety (e.g., Village Public Safety Officers)
  - Resource development (e.g., biotechnicians, natural resource management, Geographic Information System [GIS])
  - Transportation (e.g., CDL-certified drivers, traffic control technicians, surveyors, equipment operators)

#### **Other Potential Actions**

7. Conduct regular meetings between education/workforce development agencies and representatives from major employers *(potentially through expanded participation with Calista's YK Workforce Development Group)*.
8. Once communities have improved broadband connectivity, develop and implement a remote workforce development strategy to encourage more village residents to pursue remote work.
9. Partner with Yuut Elitnaurviat or the Kuspuk School District's EXCEL program for high school students to expand construction apprenticeship programs.
10. Increase youth engagement in governance and decision-making on commissions, boards, and councils.
11. Increase salaries and wages to be competitive and support local costs of living.
12. Consider and plan for workforce development and training in infrastructure build-out grant applications to better coordinate large projects' implementation (e.g., project schedule, capacity).
13. Conduct finance, business basics, and life management skills education in communities to help residents understand credit, loans, insurance, and banking opportunities. Start with junior and senior high school students, then include younger children and adults.

# Other Relevant Resources and Potential Funding Sources

## Relevant Resources

- **The Unmet Needs of Environmentally Threatened Alaska Native Villages: Assessment and Recommendations.** Alaska Native Tribal Health Consortium. January 2024. [View here.](#)
- **Bristol Bay Broadband Implementation Plan for Virtual Jobs Adoption.** Bristol Bay Native Corporation and the Denali Commission. December 2023. [View here.](#)
- **Alaska EXCEL.** [View here.](#)
- **Alaska Native Science and Engineering Program.** [View here.](#)
- **Association of Village Council Presidents.** [View here.](#)
- **Northern Industrial Training** (Mat-Su Valley-based). [View here.](#)
- **The Kuskokwim Corporation.** [View here.](#)
- **University of Alaska Fairbanks, Kuskokwim Campus.** [View here.](#)
- **Yuut Elitnaurviat People’s Learning Center.** [View here.](#)

## Strengths and Opportunities

*Internal and external factors that contribute to our success in this focus area (in alphabetical order)*

- Additional employment opportunities in broadband build-out, water-sewer installation, and others due to federal infrastructure funding.
- Alaska Native Science and Engineering Program (ANSEP), the University of Alaska Fairbanks Kuskokwim Campus, and regional school districts training opportunities in Science, Technology, Engineering, and Math (STEM), allied health, and Tribal and community leadership.
- High local involvement and control at YK schools, and the inclusion of cross-cultural education and language revitalization programs.
- Prioritizing opportunities for local vocational training.
- More regional investment in workforce development from key entities like The Kuskokwim Corporation (TKC), Yuut Elitnaurviat, Northern Industrial Training, Association of Village Council Presidents (AVCP), and EXCEL Alaska. Includes targeted training courses, certification programs, force account hiring, job centers, and trade school facilities.
- Growing rural employment opportunities for remote work and online education due to broadband expansion.
- Many new or under-construction schools.

## Weaknesses and Threats

*Internal and external factors that are barriers to our success in this focus area (in alphabetical order)*

- Limited workforce availability for several months out of the year due to seasonal jobs.
- High teacher turnover.
- Highest paying jobs often filled by people outside the region (e.g., doctors, teachers, administrators, pilots).
- Limited local jobs, training, and vocational education availability in many communities.
- Inadequate climate adaptation planning due to limited workforce capacity and few local hires.
- Limited long-term career opportunities, also known as upward job mobility, for workers performing short-term infrastructure build-out jobs.
- Unreliable internet connectivity and cell service limits growth in work-from-home and distance learning opportunities
- Negative impacts of high-achieving student migration on the regional workforce (i.e., “brain drain”).
- Inadequate access to affordable childcare services impacting parents from entering the workforce.
- State funding does not meeting community needs for school renovations, facility energy costs, curriculum updates, scholarships, Head Start programming, and teacher salaries, which creates complex issues around education, economic development, workforce development, and quality of life.
- Systemic workforce barriers for residents with criminal backgrounds.

# Yukon Kuskokwim Comprehensive Economic Development Strategy

## Energy Summary: April 2024

Where We Are	What data indicators can we monitor to track progress? Where do we want to be in 5 years?	Where We Aim to Be in 2028
<b>6.86 million gallons</b> (2022)	<b>Diesel Use:</b> Average [#] diesel fuel used for electricity generation for participating YK region Power Cost Equalization (PCE) communities. <sup>1</sup>	<b>Need to identify</b>
<b>Average of \$4,677 annually</b> (2017)	<b>Annual Household Cost:</b> Total annual energy cost per household. <sup>2</sup>	<b>Need to identify</b>
<b>Average of 132 million BTUs</b> (2017)	<b>Annual Household Energy Use:</b> Average annual energy use in million [#] British Thermal Units (MM BTUs) used to heat single-family homes. <sup>2</sup>	<b>Need to identify</b>

Sources <sup>1</sup> [AEA FY 2021 Power Cost Equalization Program Statistical Data by Utility](#), | <sup>2</sup> [AHFC Statewide Housing Assessment, 2018](#)

*Other Potential Indicators (need baselines and targets):* Number of communities receiving Power-Cost Equalization (PCE) Program community facility benefits; number of communities in the YK region that are served by renewable energy; annual number of outages; age of infrastructure.

## Proposed Energy Objectives *(adapted from 2018-2023 CEDS)*

1. Build renewable energy infrastructure.
2. Address barriers to building affordable energy infrastructure in the YK Delta.

### Energy Strategic Direction: Potential Strategies and Actions

#### **Proposed Strategy A: Improve utility operations, reliability, and data collection.**

1. Invest in energy and maintenance training and capacity building.
  - Provide training for rate making to ensure communities are covering costs for fuel, routine operations and maintenance (O&M), and planning for equipment replacement.
2. Advocate for Alaska Energy Authority (AEA) to provide technical assistance for power outages.

#### **Proposed Strategy B: Research and invest in renewable energy.**

3. Fast-track solutions that can be realized within five years, such as pilot projects with Alaska Center for Energy and Power.
4. Focus on transitional energy projects to support the addition and incorporation of renewables. Include upgrades to existing community energy systems.
5. Retrofit schools and community buildings with clean energy.
6. Explore the use of thermal heaters that use excess electricity.
7. Collectively define the desired future of energy in the YK. This includes defining key terms like “renewable energy” and “clean energy.”

#### **Other Potential Priority Actions**

8. Increase weatherization funding, programs, and incentives.
9. Address high home heating fuel prices, potentially through consortiums or collaborations.
10. Advocate for Power-Cost Equalization (PCE) protection and expansion to ensure cost equity.
11. Develop Independent Power Producer (IPP) template agreements to generate funding for improvements (*Potential Partner: Alaska Native Tribal Health Consortium*).
12. Address challenges with Coast Guard certificates of inspection for receiving fuel, which can be a barrier for some communities.



# Other Relevant Resources and Potential Funding Sources

## Relevant Resources (listed alphabetically)

- Alaska Energy Authority's (AEA) Digital Library. Alaska Energy Authority. [View here.](#)
- Alaska Energy Hub: One-Stop Resource to Energy Project Sponsors. Alaska Municipal League. [View here.](#)
- Alaska Residential Energy Rates. Alaska Energy Authority and Alaska Housing Finance Corporation. [View here.](#)
- The Arctic Energy Ambassadors Program. [View here.](#)
- Promoting Clean Energy Career Pathways Throughout Alaska. Alaska Network of Energy Education and Employment. [View here.](#)
- Weatherization Services. Rural Alaska Community Action Program, Inc. [View here.](#)
- Village Energy Efficiency Program. Alaska Energy Authority. [View here.](#)
- Yukon-Kuskokwim Delta Regional Energy Plan. Nuvista, November 2015. [View here.](#)

## Potential Funding Sources

- Energy Transitions Initiative Partnership Project: Coastal, Remote, and Island Community Technical Assistance. US Department of Energy (DOE) and National Renewable Energy Laboratory (NREL). [View here.](#)
- Technical Assistance. Office of Indian Energy Policy and Programs and NREL. [View here.](#)

## Strengths and Opportunities

*Internal and external factors that contribute to our success in this focus area (in alphabetical order)*

- ANTHC grant application to the Environmental Protection Agency (EPA) on community action plans for reduced fossil fuel use.
- Completed community energy audits through Nuvista and Alaska Native Tribal Health Consortium (ANTHC).
- Completion of energy action plans for all TKC communities.
- Easier renewable energy integration into existing electric grids.
- Increased federal funding opportunities.
- Launch of the DOE Arctic Energy Ambassadors program with 12 Alaska ambassadors focused on energy security, including a YK representative.
- Newly available Alaska Energy Authority (AEA) online library with hundreds of past reports and feasibility studies.
- Nuvista nonprofit Light and Electric Cooperative supports for affordable development and sustainable energy solutions.
- Reduction of diesel fuel dependence and lowered costs through investment in wind energy, establishment of consortiums, and completion of community energy plans with the US Department of Energy (DOE), Office of Indian Energy Policy and Programs.
- Regional renewable energy potential, ranging from biofuels (wood), hydroelectric from river currents, geothermal, and wind.
- Rural residential (and eligible community buildings) electricity cost reduction through Alaska's Power-Cost Equalization (PCE) program.

## Weaknesses and Threats

*Internal and external factors that are barriers to our success in this focus area (in alphabetical order)*

- High energy costs, including fuel, transportation and contractor costs.
- High household reliance on assistance programs to pay for heat and power, especially in the winter months.
- Lack of regional data regarding hydro, river, and solar energy potential.
- Limited capacity and workforce for ongoing energy-related maintenance and operations.
- Limited community capacity to pursue projects, even with available funding.
- Outdated power systems in existing homes.
- Potential cuts to the State of Alaska's PCE funding.





**Yukon Kuskokwim Comprehensive Economic Development Strategy**

**Food Security Summary:  
April 2024**

Where We Are Today	What data indicators can we monitor to track progress? Where do we want to be in 5 years?	Where We Aim to Be in 2028
<b>Need to identify</b>	<b>Traditional Food Harvest:</b> Percent of households who are able to meet their household subsistence needs.	<b>Need to identify</b>
<b>Need to identify</b>	<b>Farms and Gardens:</b> Number of commercial and community farms and gardens.	<b>Need to identify</b>
<b>Need to identify</b>	<b>Local Food Businesses:</b> Number of businesses providing local food (farm-to-table or seafood-to-table) products.	<b>Need to identify</b>
<b>Need to identify</b>	<b>Jobs:</b> Number of value-added production and distribution jobs in the agriculture and fishing industries.	<b>Need to identify</b>
<b>Need to identify</b>	<b>Local Food Schools:</b> Number of schools serving local food products.	<b>Need to identify</b>

*Other Potential Indicators (need baselines and targets): Subsistence metrics, such as cost and availability of subsistence equipment, impacts of traditional food on household food security, quantity of traditional food harvests (Potential source: Tanana Chiefs Conference); percentage of food imported into the region; number of reindeer husbandry operations; average food cost shown by household income and size & average percentage of food costs compared with other household expenses; changes in food consumption habits; identify nutrition metrics (Potential partner: Alaska Department of Health and Social Services); percentage of households that report food security; number increase of institutions providing local food, such as hospitals, private sector, restaurants, grocery stores.*

## Proposed Food Security Objective

1. Everyone has year-round access to nutritious, culturally appropriate, and affordable food.

### Food Security Strategic Direction: Potential Strategies and Actions

#### **Proposed Strategy A: Protect and revitalize subsistence resources.**

1. Strengthen co-Indigenous, place-based stewardship that elevates local and Tribal perspectives in resource management and decision-making.
2. Continue to support the Inter-tribal Fisheries Commissions for the Yukon and Kuskokwim Rivers.

#### **Proposed Strategy B: Identify ways to grow and produce more food locally.**

3. Identify funding mechanisms for farm development and farming equipment to remove barriers to entry into jobs as local producers.
4. Expand the availability of local farming and community gardening resources (*Potential partners: University Extension Services, Cooperative Extension; Rural Alaska Community Action Program; Alaska Village Initiatives; Orutsararmiut Native Council (ONC); Alaska Native Plant Society; University of Alaska Fairbanks, Tribal Cooperative Extension*).
5. Identify and dedicate potential land toward farming.
6. Create peer mentorship or apprenticeship opportunities for future farmers to learn on existing farms.
7. Identify YK farm production best practices and collaborate on data and information sharing (*Potential partner: University of Alaska Fairbanks, Tribal Cooperative Extension*).
8. Develop and establish school and community gardens (*Potential partners: Tok, Chickaloon, Tyonek, and Sitka*).
9. Educate communities on canning and food preservation; increase food-preserved storage in the region.
10. Increase advocacy with the US Department of Agriculture and Alaska Villages Initiative about grant awareness and better funding alignment with potential opportunities to grow and store food locally and/or regionally.
11. Investigate and invest in local and regional operations that could expand the produce box model to incorporate traditional protein sources (e.g., reindeer, commercially processed moose).

#### **Proposed Strategy C: Strengthen regional collaboration, information sharing, and data monitoring to improve food security resiliency.**

12. Develop tools to better track and share relevant regional data (*Potential partners: Orutsararmiut Native Council, Alaska Division of Homeland Security & Emergency Management*).
13. Evaluate household food access. Consider workforce development opportunities that investigate current research and best practices to develop strong regional food security planning (*Potential partner: Yukon Kuskokwim Health Consortium*).
14. Support food security plan development through the development of a Tribal food security plan template. Include a local and regional strategy for coordinating local food distribution and storage, programming that connects affordable, nutritious food to households experiencing food insecurity, and data metrics that identify the level of impact on food security goals.
15. Improve cross-sector collaboration between nonprofits serving community members and federal programs to increase the use of SNAP, WIC, Food Distribution Program on Indian Reservations (FDPIR), Temporary Assistance for Needy Families (TANF), and other benefits across the region.
16. Create an information exchange among Arctic, Yukon, and Kuskokwim River fisheries programs.
17. Develop a more regional, collaborative approach to helping communities with plans, grant writing, and project management that increase food security (*Potential partner: Intertribal Agriculture Council, Alaska Chapter; Alaska Native Health Consortium, Food Sovereignty Program; Alaska Food Policy Council*).
18. Prepare recommendations for communities on how to become a food security hub.

## Other Potential Actions

19. Serve locally grown and harvested foods in schools (*Potential partner: US Department of Agriculture*).
  - Determine how to share knowledge from other successful communities and regions who have been able to navigate regulation and serve traditional foods in institutional settings.
20. Develop regional food security and safe drinking water storage that can be accessible to the community and support disaster planning.
21. Expand traditional food education in schools and communities, such as plant identification and local food production (*Potential partners: Alaska Native Medical Center, Kotzebue & Yukon Koyukuk Elder Homes, Southeast Fish to School*).
22. Consider community refuse and compost opportunities.
23. Launch prescription produce policy with support from Medicaid and YKHC's diabetes program grant funding. Focus initial six-month efforts on launching this policy alongside Medicaid waivers and refining eligibility criteria for these prescriptions.

## Other Relevant Resources and Potential Funding Sources

### Relevant Resources

- **The Unmet Needs of Environmentally Threatened Alaska Native Villages: Assessment and Recommendations.** Alaska Native Tribal Health Consortium. January 2024. [View here.](#)
- **Food Security and Sovereignty in Alaska Native Communities: Recommendations for Improving Language and Inclusivity in Food and Agriculture Planning.** Institute of Agriculture and Natural Resources, University of Alaska Fairbanks and Alaska Food Policy Council. January 2024. [View here.](#)
- **Tribal Nations in Alaska to receive more than \$7 million in USDA grants.** US Department of Agriculture, Forest Service. December 2023. [View here.](#)
- **Neqkiuryaraq – The Art of Preparing Food.** National Institutes of Health (NIH), RePORTER. September 2023. [View here.](#)
- **House Bill 298: Alaska Food Strategy Task Force 2023 Report.** Alaska Food Strategy Task Force. August 2023. [View here.](#)
- **Food System Resilience: A Planning Guide for Local Governments.** John Hopkins, Center for a Livable Future. December 2022. [View here.](#)
- **Changes in Sharing and Participation are Important Predictors of the Health of Traditional Harvest Practices in Indigenous Communities in Alaska.** ResearchGate. June 2022. [View here.](#)
- **2022 Aruqutet Project.** Bethel Community Service Foundation and Calista Corporation. [View here.](#)
- **Food Security Resources.** Intertribal Agriculture Council – Alaska. [View here.](#)
- **Tribal Food Sovereignty and Security.** University of Alaska Fairbanks. [View here.](#)
- **US Department of Agriculture Regional Food Business Centers, Islands and Remote Areas.** US Department of Agriculture. [View here.](#)

### Potential Funding Sources

- **Local Agriculture Market Program.** US Department of Agriculture, Agricultural Marketing Service. [View here.](#)
- **Growing Rural Opportunities for Wellness – Orchards and Food Forests (GROW-OFF) Grant Program.** Rural Alaska Community Action Program. [View here.](#)
- **Microgrants for Food Security.** Alaska Department of Natural Resources, Division of Agriculture. [View here.](#)
- **Resilient Food Systems Infrastructure Program.** Alaska Department of Natural Resources, Division of Agriculture. [View Here.](#)
- **Value Added Produce Grants.** US Department of Agriculture, Rural Development. [View here.](#)

## Strengths and Opportunities

*Internal and external factors that contribute to our success in this focus area (in alphabetical order)*

- Alaska-wide food security efforts in the works (House Bill 298, Alaska Food Policy Council's Food Systems Action plan, Alaska Salmon Research Task Force's YK Work Group, etc.).
- Bethel Community Service Foundation operates new food bank.
- Co-Stewardship and co-management discussions and agreements toward local/Tribal management of subsistence and other resources.
- Excellent regional soils for growing produce.
- Increased collaboration between industries and organizations on food security-related topics.
- Lower Kuskokwim, Kashunamiut, and Yupiit School Districts to distribute shelf-stable meals to low-income children during the summer of 2024.
- Opportunity for community food bank expansion.
- Subsistence harvests are a vital regional economic resource that also preserve important cultural traditions.

## Weaknesses and Threats

*Internal and external factors that are barriers to our success in this focus area (in alphabetical order)*

- Bethel Community Service Foundation's food bank provides a safety net for food security, but is not a long-term solution.
- High grocery costs negatively impact community food security.
- Increasingly difficult to eat accessible, nutritious, shared foods.
- Need additional capacity for outreach on supportive services and programs like Supplemental Nutrition Assistance Program (SNAP) and Women, Infants and Children (WIC).
- Poor partnership and coordination for food security and farming initiatives.
- Insufficient infrastructure and limited food storage capacity.
- Lack of regional and community-level data collected and/or available.
- Limited local farming and local produce available.
- Increased regulations are lowering salmon numbers in both the Kuskokwim and Yukon Rivers, resulting in fishery closures.
- Climate change decreasing access to local subsistence foods.
- Increased vessel traffic along Alaska's western coasts negatively impacting subsistence and commercial activities.
- Restrictive state and federal policies and regulations limiting access to traditional food sources.
- Underdeveloped regional agriculture/farming industry.



# Housing and Water-Sewer Infrastructure Summary: April 2024



Where We Are Today	What data indicators can we monitor to track progress? Where do we want to be in 5 years?	Where We Aim to Be in 2028
<b>8,358 housing units</b>	<b>Units:</b> Number of total housing units in the YK. <sup>1</sup>	<b>Need to identify</b>
<b>14 communities with completed analysis</b>	<b>Water-Sewer Analysis:</b> Number of unserved/underserved communities who have an in-progress or completed Preliminary Engineering Report (PER) for water and sewer systems. <sup>2</sup>	<b>All unserved/underserved communities have a completed analysis</b>
<b>26 communities with piped water and sewer</b>	<b>Piped Communities:</b> Number of communities who have piped water and sewer available in public facilities AND residents' homes. <sup>2</sup>	<b>All YK communities have piped water and sewer</b>
<b>Bethel Census Area: 59% Kusilvak Census Area: 70.9%</b>	<b>Homeownership Rate:</b> Number of residents who own their own home. <sup>3</sup>	<b>Need to identify</b>
<b>Bethel Census Area: 70.7% Kusilvak Census Area: 73.8%</b>	<b>Complete Plumbing Facilities Rate:</b> Percent of occupied units with water-sewer infrastructure. <sup>3</sup>	<b>Need to identify</b>
<b>44% of homes</b>	<b>Overcrowded Homes:</b> Percent of occupied units considered overcrowded. <sup>4</sup> Housing units with 1.01 to 1.50 occupants per room are considered <i>overcrowded</i> , and housing units with 1.51 or more occupants per room are considered <i>severely overcrowded</i> .	<b>Need to identify</b>

Sources: <sup>1</sup> [2022 United States Census Bureau](#) | <sup>2</sup> 2024 ANTHC Data | <sup>3</sup> [2022 American Community Survey 5-Year Average](#) | <sup>4</sup> [2024 AVCP RHA Housing Need Forecast](#)

*Other Potential Indicators (need baselines and targets): Catalogue existing or upcoming projects.*

## Housing and Water-Sewer Objectives *(adapted from 2018-2023 CEDS)*

1. Increase the number of affordable housing units in the YK region.
2. All YK homes have access to clean water through piped or hauled water systems.

### Housing and Water-Sewer Infrastructure Strategic Direction: Potential Strategies and Actions

#### **Proposed Strategy A: Construct new housing and rehabilitate aging housing.**

1. Evaluate housing models to determine what is working and how to improve.
2. Support local lumber, sawmill, and home manufacturing efforts (e.g., a truss manufacturing plant).
3. Explore regional corporation long-term lease solutions for accessing land for housing.
4. Update the Association of Village Council Presidents Regional Housing Authority (AVCP RHA) Housing Needs Assessment (last conducted in 2018).
5. Create community master plans to align water-sewer, energy, and road infrastructure planning. Combine this work with collaborative engagement alongside Native allottees.
6. Renew investment in securing equipment and training needed to level homes impacted by permafrost.
7. Develop more rehabilitation strategies to prevent current stock from falling into disrepair.
8. Invest in housing weatherization to reduce household costs by lowering power demand.

#### **Proposed Strategy B: Identify and invest in appropriate water-sewer technologies to meet the unique needs of communities and households.**

9. Install appropriate water-sewer infrastructure in underserved and unserved communities.
10. Install household-level systems in communities where piped water-sewer systems to homes are not feasible.
11. Conduct climate resiliency and disaster recovery planning for housing and water-sewer systems.
12. Proactively update equipment in water treatment plants.
13. Increase understanding of the Rural Utility Business Advisor (RUBA) and Environmental Protection Agency's (EPA) Operations and Maintenance Best Practices tool. Determine how to implement findings and how results impact eligibility and scoring for Village Safe Water capital improvement projects.

#### **Proposed Strategy C: Increase collaboration for housing and water-sewer projects to align infrastructure build-out and potentially reduce costs.**

14. Fund housing and water-sewer partnership coordinators at regional organizations.
15. Align housing and water-sewer pre-design survey work to co-occur (*Potential partner: Alaska Native Tribal Health Consortium*).
16. Strengthen regional partnerships and collaboration through quarterly coordination meetings.
17. Expand on the success of existing programs (e.g., *Coastal Villages Region Fund tiny house program, TKC's Harvest to Housing program, ONC/NeighborWorks/Cook Inlet Housing Authority projects*). Replicate strategies in other YK communities.
18. Advocate for regional housing authorities' eligibility for water-sewer infrastructure funds to offset installation costs for new homes.
19. Expand private and community-based financing options for housing projects.
20. Meet with the Bureau of Indian Affairs (BIA) about Category D funding to discuss how to move forward given the challenges of restricted lands in many villages.

#### **Proposed Strategy D: Build the local workforce capacity for housing and water-sewer infrastructure projects.**

21. Strengthen local community planning, grant writing, and grant management training.
22. Identify methods to retain the local worker population for infrastructure build-out and preventative maintenance work.
23. Develop continued education programming that keeps trade licensure active.



## Other Potential Actions

24. Provide home ownership financial education and home maintenance education to empower YK residents in applying for a mortgage, purchasing, renting to own, or maintaining homes.
25. Increase Tribal member access to land.
26. Develop emergency housing/shelter.
27. Develop policies and best practices for community relocation.
28. Determine best practices for when to condemn a house that is beyond rehabilitation.
29. Increase education about rural water-sewer infrastructure innovations in other parts of the state.
30. Invest in renewable energy generation to bring water-sewer fuel costs down.

## Other Relevant Resources and Potential Funding Sources

### Relevant Resources (sorted by date published)

- **The Unmet Needs of Environmentally Threatened Alaska Native Villages: Assessment and Recommendations.** Alaska Native Tribal Health Consortium. January 2024. [View here.](#)
- **Harvest to Home. The Kuskokwim Corporation, Fish Wheel.** 2023. [View here.](#)
- **From Lab to Tundra: Building a More Efficient Future with Rural Alaska.** National Renewable Energy Lab (NREL). September 2020. [View here.](#)
- **Alaska Housing Assessment: Statewide Housing Summary.** Alaska Housing Finance Corporation. January 2018. [View Part I Executive Summary here.](#) [View Part II Housing Characteristics here.](#)
- **Housing Needs Infographic: AVCP (Bethel Region).** Association of Village Council Presidents, Regional Housing Authority, and Cold Climate Housing Research Center. 2018. [View here.](#)

### Potential Funding Sources

- **Emergency Community Water Assistance Grants.** US Department of Agriculture, Rural Development- Alaska. [View here.](#)
- **Grants for Rural and Native Alaskan Villages.** US Department of Agriculture, Rural Development- Alaska. [View here.](#)
- **Single Family Housing Direct Home Loans.** US Department of Agriculture, Rural Development- Alaska. [View here.](#)
- **Capital Improvement Construction Grant.** Alaska Department of Environmental Conservation, Division of Water. [View here.](#)
- **Healthy Homes Program.** US Department of Housing and Urban Development. [View here.](#)

## Strengths and Opportunities

Internal and external factors that contribute to our success in this focus area (in alphabetical order)

### Overall

- Increased regional collaboration for housing and water-sewer projects.

### Housing

- Alaska Native Tribal Health Consortium (ANTHC) supports regional weatherization upgrades and reduces commercial and residential energy costs.
- Federal funding opportunities such as the Housing Preservation Grants and Mutual Self-Help Housing Technical Assistance Grants.
- Increased number of organizations (Orutsarmiut Native Council [ONC], NeighborWorks, Cook Inlet Housing Authority, the Rural Alaska Community Action Program [RurAL CAP], The Kuskokwim Corporation [TKC]) constructing housing.
- New grant writers hired at the Association of Village Council Presidents, Regional Housing Authority (AVCP RHA).
- Opportunity for an annual housing conference (*Potential partner: AVCP RHA*).
- Support for communities wanting to relocate existing infrastructure to a new site (*Potential partner: US Department of Agriculture*).

### Water-Sewer

- Addressed persistent issues of low Rural Utility Business Advisor (RUBA) scores impacting State of Alaska community fund procurement for water/wastewater sewer facilities.
- ANTHC and Indian Health Service (IHS) collaboration to expedite water-sewer projects alongside housing construction.
- ANTHC's support in planning efforts for major water-sewer projects.
- Capacity building through ANTHC's Alaska Rural Utility Collaborative program.
- Innovations in rural water-sewer technology.
- Potential decrease in water-sewer costs due to renewable energy.
- TKC addressing low RUBA scores in their communities.

## Weaknesses and Threats

Internal and external factors that are barriers to our success in this focus area (in alphabetical order)

### Overall

- High construction, shipping, and material costs.
- Lack of capacity, technical assistance, and training for ongoing maintenance, operations, and relevant data collection.
- Negative housing and water-sewer infrastructure impacts from permafrost thaw and shoreline erosion.

### Housing

- Existing housing stock needs repair, with some housing needing full replacement due to the extent of damage.
- Lack of available and affordable housing.
- Lack of sufficient land for new housing, including limitations of building within a wildlife refuge.
- Limited funding for new housing construction.

### Water-Sewer

- Federal agency requirements are not always appropriate or realistic when applied in rural Alaska.



**Yukon Kuskokwim Comprehensive Economic Development Strategy**

**Transportation Summary:  
April 2024**

Where We Are Today	What data indicators can we monitor to track progress? Where do we want to be in 5 years?	Where We Aim to Be in 2028
<b>Need to identify</b>	<b>Miles:</b> Miles of Kuskokwim River Ice Road maintained and/or marked each winter.	<b>Need to identify</b>
<b>Need to identify</b>	<b>Days of Operation:</b> Days Kuskokwim River Ice Road opened for travel annually.	<b>Need to identify</b>
<b>Need to identify</b>	<b>Ice Condition:</b> Ice thickness throughout the winter.	<b>Need to identify</b>
<b>Need to identify</b>	<b>Incidents:</b> Annual winter travel fatalities.	<b>Need to identify</b>

*Other Potential Indicators (need baselines and targets): Amount of public vs private funding invested in the Kuskokwim River Ice Road and winter trail projects; access to subsistence, services, and communities.*

## Transportation Objective *(adapted from 2018-2023 CEDS)*

- I. Address barriers to providing safe, equitable, and affordable access to YK communities.

### Transportation Strategic Direction: Potential Strategies and Actions

#### **Proposed Strategy A: Maintain funding for ongoing Kuskokwim River Ice Road construction and maintenance.**

1. Sustain Kuskokwim River Ice Road funding in perpetuity.
2. Determine how to safely measure ice thickness on the Kuskokwim River Ice Road.
3. Develop an economic impact study of the Kuskokwim River Ice Road to illustrate how funding provides a wide-ranging benefit.
4. Conduct regular traffic counts and traffic use studies of the Kuskokwim River Ice Road.

#### **Proposed Strategy B: Invest in a safe, connected, consistently marked winter trails network.**

5. Develop a crowd-sourcing app for sharing trails and weather conditions. Work with The University of Alaska Fairbanks Arctic Infrastructure Development Center on possible weather station placement on trails that could feed into app data.
6. Use drones for mapping and tracking dangers on trail conditions. Increase training opportunities for drone operations in communities.
7. Secure easements to move ahead with trail projects.
8. Adopt winter trail design standards and universal color coding for trail marking. Assist communities with needed funding to implement and provide markers.
9. Continue community education about trail markings.
10. Identify funding for trail shelters to implement trail shelter design plans in the Federal Lands Access Program, Southwest Winter Trail Marking Improvements project.
11. In addition to trail markings, communities need the channels of the Yukon River marked for subsistence use and to keep people safe.

#### **Proposed Strategy C: Establish a Western Alaska Emergency Response Center in Bethel**

12. Work with St. Mary's or another community on the Yukon River to develop an emergency operations center for Lower Yukon communities.
13. Consult with the Village Public Safety Officer (VPSO) program for possible partnership and to understand facility needs.

#### **Other Potential Actions**

14. Relocate the Bethel Port to an alternative location with more storage, more stable ground, and above the flood zone.
15. Ensure all communities have safe and accessible barge landings. Increase the frequency of barges.
16. Build redundancy of travel options, especially during freeze-up and break-up conditions.
17. Advocate with the congressional delegation to explore how to allow federal agencies to lend/share equipment with state agencies, communities, and Tribes to help with maintenance in their areas. (For example, Alaska DOT&PF has asked Federal Aviation Administration repeatedly to use airport maintenance equipment off airport property, but they have declined to allow this use.)
18. Complete conceptual designs for Pilcher Mountain gravel pit, including access road and port access.
19. Revisit the feasibility of the YK Corridor Project.

# Other Relevant Resources and Potential Funding Sources

## Other Relevant Resources (listed by date, then alphabetically)

- Coastal Alaska communities net \$50M in federal transportation grants. Alaska’s News Source. April 2024. [View here.](#)
- Alaska Tribal Technical Assistance Program. University of Alaska Fairbanks. [View here.](#)
- AVCP Transportation Resources. Association of Village Council Presidents. [View here.](#)
- Bethel Search and Rescue. [View their website here.](#) [View their Facebook page here.](#)
- Community Winter Trails Program. Alaska Department of Transportation and Public Facilities. [View here.](#)
- Local Training and Assistance Program (LTAP). Alaska Department of Transportation and Public Facilities. [View here.](#)
- Native Village of Napaimute. [View their website here.](#) [View their Facebook page here.](#)
- Office of Tribal Transportation. Federal Highway Administration. [View here.](#)
- Safe Ice Roads for Alaska Program. Alaska Department of Transportation and Public Facilities, Statewide Transportation Improvement Program. [View here.](#)
- Transportation Resources. Denali Commission. [View here.](#)
- Tribal Transportation Program Funds. Bureau of Indian Affairs. [View here.](#)
- U.S. Army Corps of Engineers, Alaska District. [View here.](#)

## Potential Funding Sources

- Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Program. US Department of Transportation, Federal Highway Administration. [View here.](#)
- Denali Commission Program Grants. [View here.](#)

### Strengths and Opportunities

*Internal and external factors that contribute to our success in this focus area (in alphabetical order)*

- The Kuskokwim and Yukon River ice roads have critical transportation linkages in winter and are used for water transportation in summer.
- Increased recognition and funding for Kuskokwim River Ice Road.
- Improved regional connectivity, increasing safer rural travel.
- Opportunity for disaster declaration funding investment in improved infrastructure.
- YK regional representative on the U.S. Department of Transportation (DOT) Advisory Committee on Transportation Equity.
- Improvements in regional standardization of winter trail markings.
- Increased support for boardwalk maintenance (*Potential partner: Association of Village Council Presidents, Transportation*).

### Weaknesses and Threats

*Internal and external factors that are barriers to our success in this focus area (in alphabetical order)*

- Lack of basic regional transportation infrastructure (e.g., very few roads, limited connectivity, no land connection to the “Railbelt” communities).
- Prohibitive transportation and shipping costs limit YK residential access to health care, training, employment, and other resources and services.
- Negative impacts on transportation route reliability and safety due to climate change.
- High cost of fuel impacting subsistence activities, travel, and freight costs.
- Increased Kuskokwim River Ice Road maintenance costs.
- High cost of rural transportation operations and equipment maintenance.
- Restrictive use of DOT airport equipment for local needs.
- Negative air transit impacts from inconsistent village weather reporting.
- Insufficient village airport infrastructure is limiting flight operations, thus decreasing tourism-related travel.

# 5. Economic Changes to the YK Region

This section presents a set of key demographic and economic indicators for the YK region, updated with the most recent data available. The 56 member Tribes of AVCP are spread across 48 communities and two U.S. census areas: the Bethel Census Area and the Kuskokwim Census Area (formerly the Wade Hampton Census Area). The map below shows a breakdown of the YK into four subregions. In this section, socioeconomic information for the two census areas was compiled and combined. Comparative data to Anchorage and Alaska is included throughout.

Figure 1: Map of the YK Region



Source: Agnew::Beck Consulting

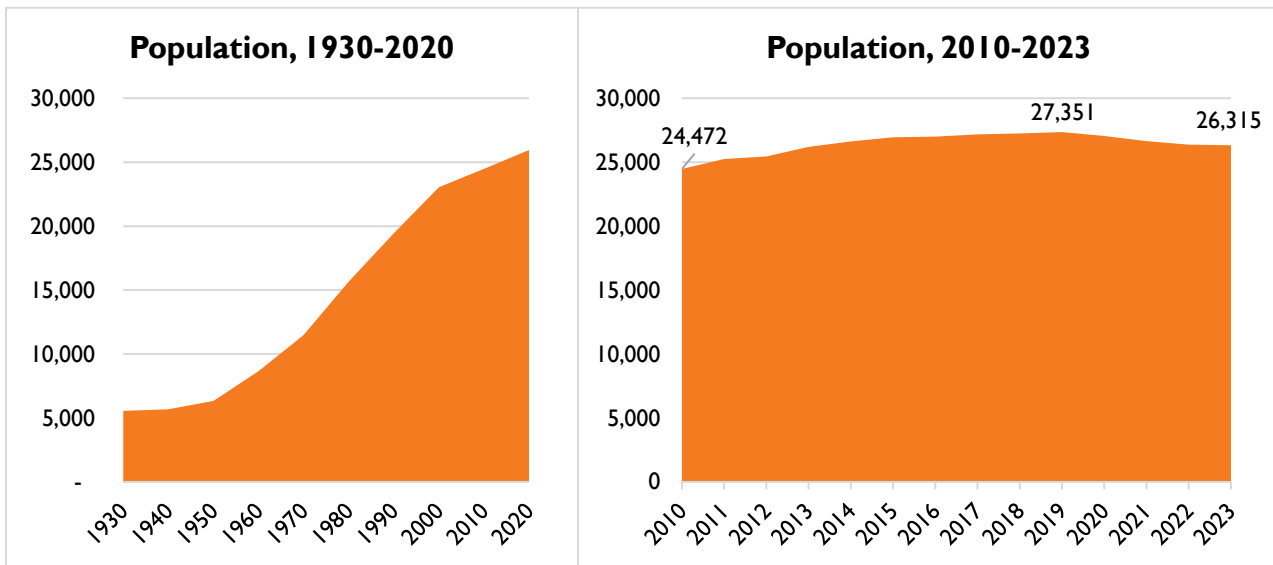


# Population Updates

## Regional Population

Based on decennial Census and state data, the YK region’s population has been increasing steadily since 1930. This growth largely leveled off between 2010 and 2020 with a peak in 2019 of 27,351. The population has declined slightly since 2019, with an estimated 26,315 residents in 2023.

Figure 2: YK Region Population, 2010-2023



1930 – 2020 source: U.S. Census; 2020-2023 source: Source: Alaska Department of Labor and Workforce Development, Research and Analysis

## Population by Community

The populations of individual communities continue to fluctuate. Population changes over the last five years is shown in Figure 3. The data come from the Alaska Department of Labor and Workforce Development (DOWLD). Small shifts in population in communities with small populations can result in a significant percentage change. Most communities aligned with trends across the state of communities losing population in recent years to outmigration and/or declining birth rates.

Communities with a population increase of three percent or more between 2018 and 2023 include: Akiak, Chefornak, Tuntutuliak, and Marshall. Several communities saw minimal or no change, while the majority of communities saw a large percentage of population decline. In the table below, the communities that saw a population decline of 10 percent or more are highlighted in red.

Figure 3: Five Year Population Comparisons by Community

Community Populations	2018 (DOLWD, July)	2023 (DOLWD, July)	% change, 2018-2023	Community Populations	2018 (DOLWD, July)	2023 (DOLWD, July)	% change, 2018-2023
<b>Bethel Census Area</b>	<b>18,685</b>	<b>18,193</b>	<b>-2.6%</b>	<b>Kusilvak Census Area</b>	<b>8,571</b>	<b>8,122</b>	<b>-5.2%</b>
Akiachak	675	672	-0.4%	Alakanuk	739	726	-1.8%
Akiak	466	489	4.9%	Chevak	1,040	943	-9.3%
Aniak	492	439	-10.8%	Emmonak	844	859	1.8%
Atmautluak	352	355	0.9%	Hooper Bay	1,401	1,351	-3.6%
Bethel	6,225	6,152	-1.2%	Kotlik	677	616	-9.0%
Chefornak	502	517	3.0%	Marshall	475	490	3.2%
Chuathbaluk	108	80	-25.9%	Mountain Village	681	610	-10.4%
Crooked Creek	109	98	-10.1%	Nunam Iqua	222	212	-4.5%
Eek	384	392	2.1%	Pilot Station	653	619	-5.2%
Goodnews Bay	267	253	-5.2%	Pitkas Point	129	111	-14.0%
Kasigluk	651	637	-2.2%	Russian Mission	417	417	0.0%
Kipnuk	702	708	0.9%	St. Mary's	596	548	-8.1%
Kongiganak	510	511	0.2%	Scammon Bay	605	596	-1.5%
Kwethluk	855	814	-4.8%				
Kwigillingok	405	370	-8.6%				
Lime Village	14	12	-14.3%				
Lower Kalskag	277	256	-7.6%				
Mekoryuk	235	193	-17.9%				
Mertarvik *	0	92	n/a				
Napakiak	334	337	0.9%				
Napaskiak	491	492	0.2%				
Newtok *	328	179	-45.4%				
Nightmute	311	297	-4.5%				
Nunapitchuk	613	548	-10.6%				
Oscarville	72	72	0.0%				
Platinum	65	52	-20.0%				
Quinhagak	802	789	-1.6%				
Red Devil	21	19	-9.5%				
Sleetmute	91	71	-22.0%				
Stony River	59	60	1.7%				
Toksook Bay	662	623	-5.9%				
Tuluksak	442	438	-0.9%				
Tuntutuliak	467	490	4.9%				
Tununak	406	402	-1.0%				
Upper Kalskag	230	179	-22.2%				

Source: Alaska Department of Labor and Workforce Development, Research and Analysis

*\*Newtok is part of a climate change-driven relocation project to Mertarvik, a new site about nine miles away on the south side of the Ninglick River. As of April 2024, more than half of Newtok's residents have moved to Mertarvik.*

## Economic Indicator Updates

The following section uses economic indicators to identify regional baselines in key components of the economy, track progress and evaluate performance toward reaching CEDS goals, and evaluate the overall economic health of the YK region. Indicators were selected that broadly capture the economic health and wellbeing of the region, are easily available from trusted state and federal sources, are available at a regional scale, and are updated at least annually. Key indicators in this update include:

Figure 4: List of YK CEDS Indicators

Indicator	Source	Scale	Frequency
Per capita income	Bureau of Economic Analysis	County/Census Area	Annually
Total wages	Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages	County/Census Area	Quarterly
Employment by sector	BLS Quarterly Census of Employment and Wages	County/Census Area	Quarterly
Unemployment	Alaska Department of Labor and Workforce Development	County/Census Area	Monthly
Number of business establishments	BLS Quarterly Census of Employment and Wages	County/Census Area	Quarterly
Gross Domestic Product (GDP)	Bureau of Economic Analysis	County/Census Area	Annually
Poverty	U.S. Census's Small Area Income and Poverty Estimates	County/Census Area	Annually
Graduation rates	Alaska Department of Education and Early Development	School District	Annually
Migration	Alaska Department of Labor and Workforce Development	County/Census Area	Annually

Income and employment measures indicate that the YK region lags Anchorage and the state. For most indicators, the Bethel Census Area outperforms the Kusilvak Census Area. One of the reasons for the discrepancy between census areas is the City of Bethel, which is the region's population and employment hub. The City of Bethel represents approximately one-third of the Bethel Census Area's population and has significantly higher incomes and a lower poverty rate. Data for the Bethel Census Area may not be fully representative of the economic realities of the more rural communities in the census area. As a result, for most indicators, the data for the two census areas has been combined and presented as a whole.<sup>1</sup>

<sup>1</sup> For more information comparing the economy of the City of Bethel with the Bethel Census Area, see page 32 of the Five-Year CEDS, available here: <https://www.avcp.org/tribal-resources/community-development/regional-comprehensive-economic-development-strategy/>

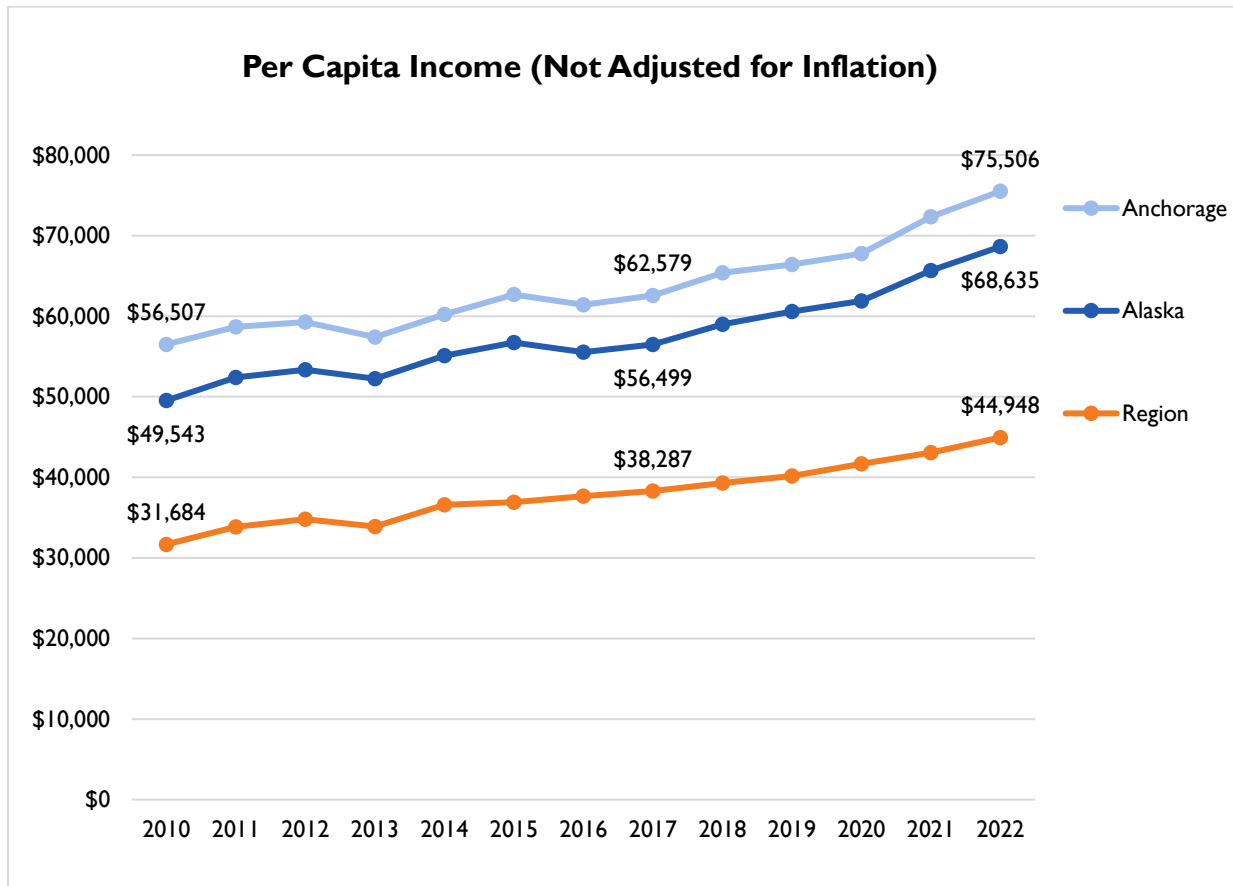
## Per Capita Income

What it tracks	Target	Where it comes from	Limitations
Total personal income divided by total population, not adjusted for inflation. Personal income includes wages, retirement earnings, unemployment benefits, dividends, etc.	Increase	Bureau of Economic Analysis	A small number of high-income residents can skew the averages. It does not show the spectrum of incomes and does not capture the value of subsistence harvests.

### Five Year Per Capita Income and Trends (between 2017-2022)

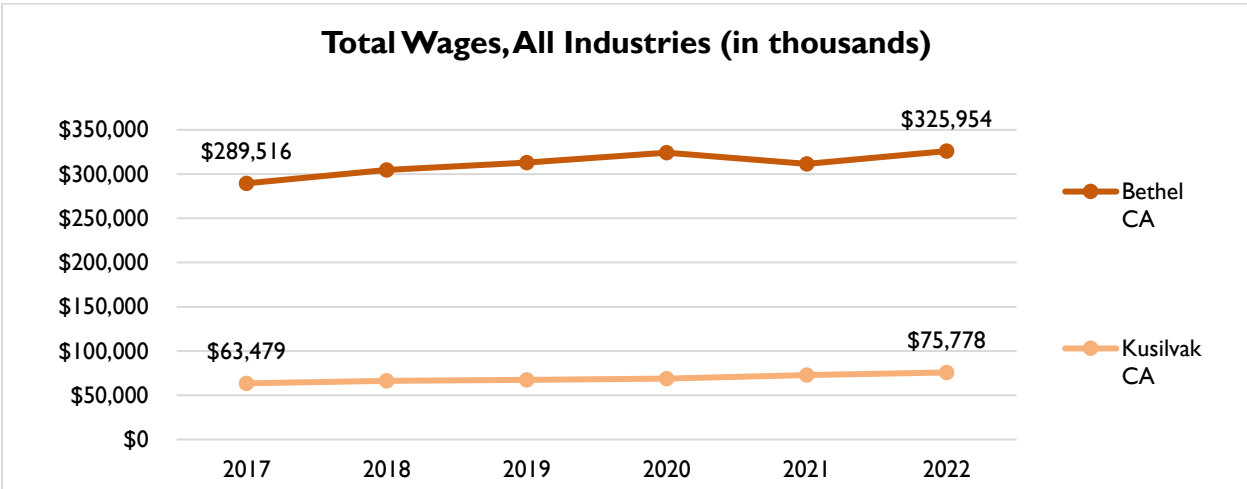
- Alaska: \$75,506 in 2022; Increased 21% over five years
- Anchorage: \$68,635 in 2022; Increased 21% over five years
- YK Region: \$44,948 in 2022; Increased 17% over five years
  - Bethel CA: \$48,700 in 2022; Increased 17% over five years
  - Kusilvak CA: \$36,672 in 2022; Increased 25% over five years

Figure 5: Per Capita Income for the YK Region, Anchorage and Alaska, 2010-2022



Total Wages			
What it tracks	Target	Where it comes from	Limitations
Total wages include pay, bonuses, and tips for all civilian jobs in the census area combined, based on unemployment insurance reporting.	Increase	BLS Quarterly Census of Employment and Wages	Excludes self-employed individuals (including many fishermen) and business owners. It does not capture the value of subsistence harvests.
<b>Five Year Trends (2017-2022)</b>			
<ul style="list-style-type: none"> <li>Alaska: \$20.5 million in 2022; Increased 19% in five years</li> <li>Anchorage: \$9.7 million in 2022; Increased 16% in five years</li> <li>Bethel CA: \$325,954 in 2022; Increased 13% in five years</li> <li>Kusilvak CA: \$75,778 in 2022; Increased 19% in five years</li> </ul>			

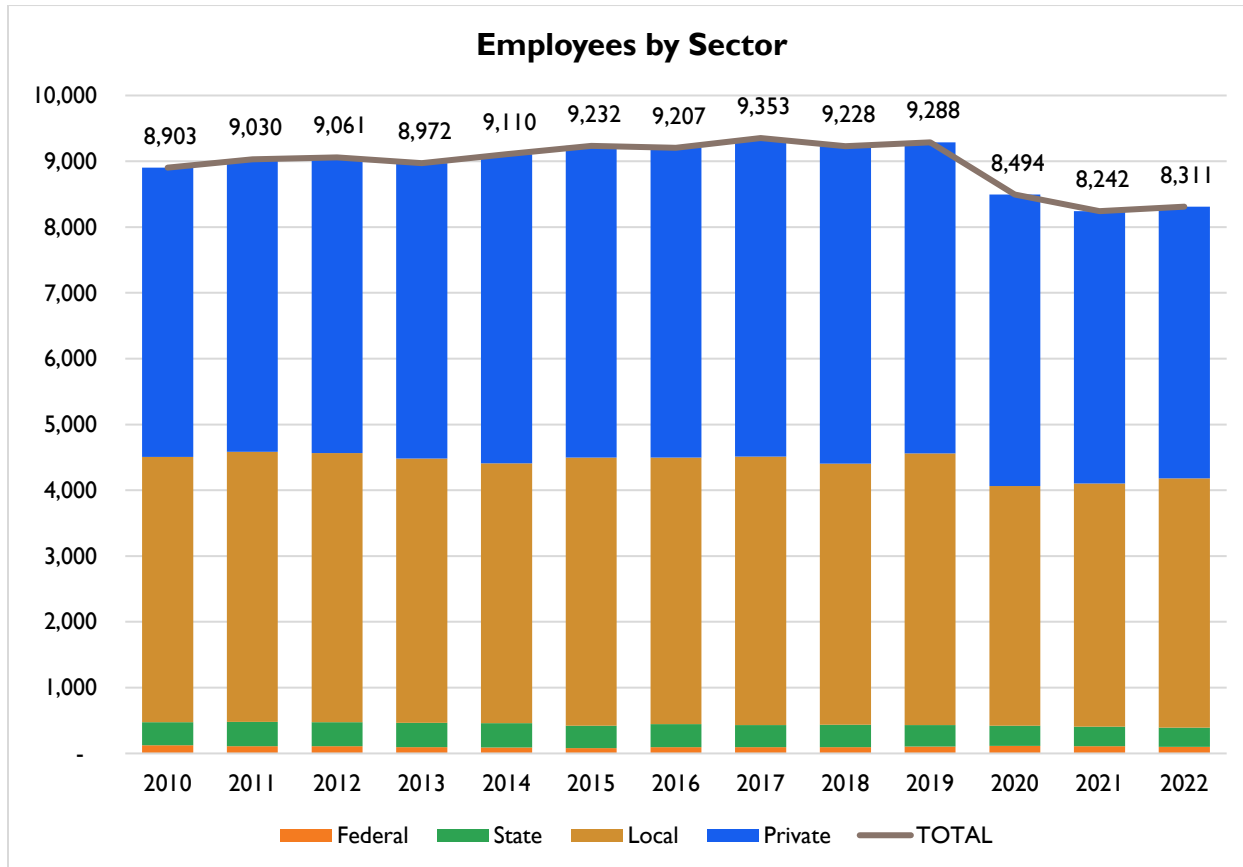
Figure 6: Total Wages (in thousands) for the Bethel and Kusilvak Census Areas, 2017-2022



## Employment by Sector

What it tracks	Target	Where it comes from	Limitations
The number of jobs by location of work (not the location of the worker). Most Tribal entities are categorized under “local government.”	Increase	BLS Quarterly Census of Employment and Wages	Excludes self-employed individuals and business owners. If someone holds multiple jobs, they may be counted more than once.
<b>Five Year Employment and Trends (2017-2022)</b>			
<ul style="list-style-type: none"> <li>YK Region: number of total jobs decreased 11.1% in five years</li> </ul>			

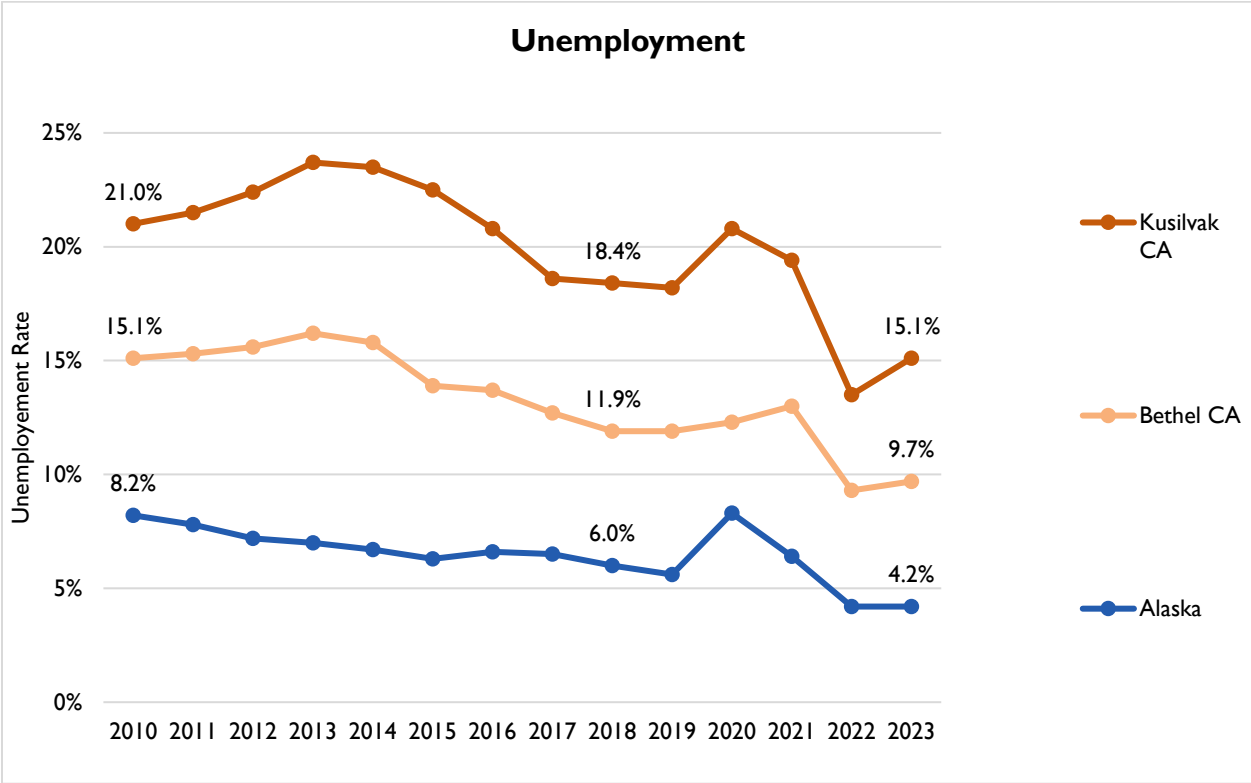
Figure 7: Employees by Sector in the YK Region, 2010-2022





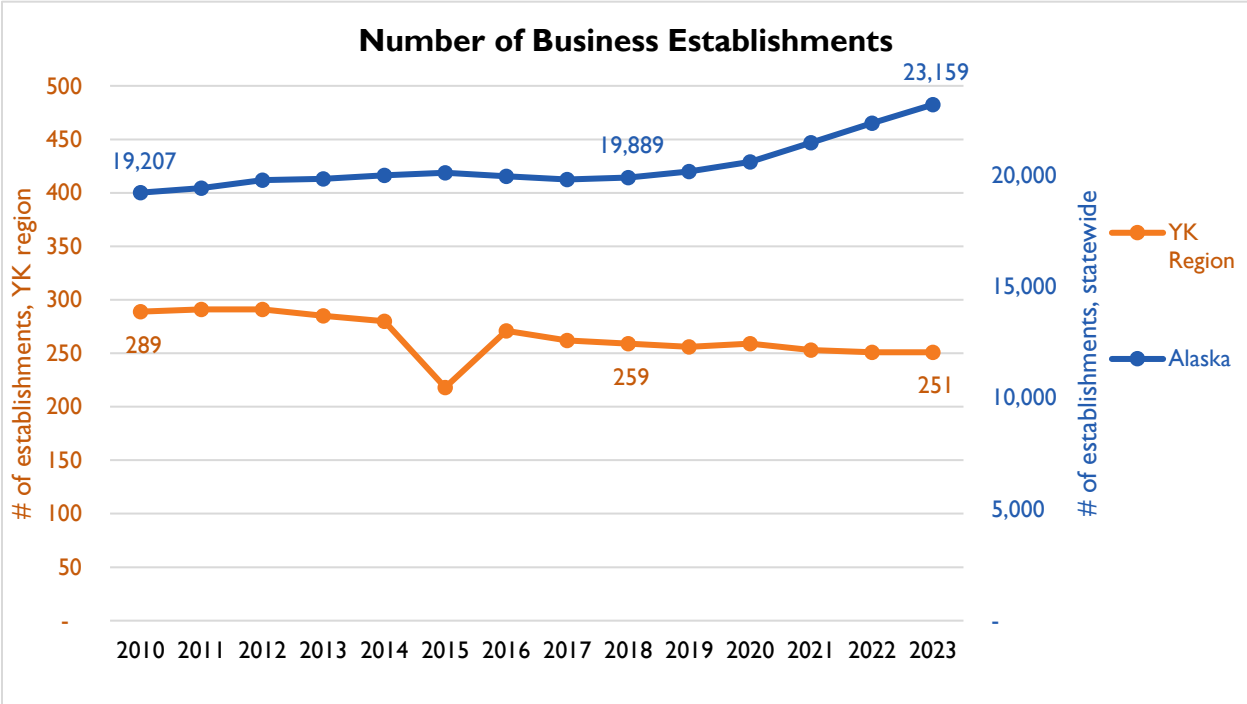
Unemployment			
What it tracks	Target	Where it comes from	Limitations
The number of jobless civilians 16 and older who are seeking employment. It does not include retirees or those who choose not to work.	Decrease		Does not include people who want jobs but have not searched for work in the past four months.
<b>Five Year Unemployment and Trends (2018-2023)</b> <ul style="list-style-type: none"> <li>Alaska: 4.2% in 2023, down from 6% in 2018</li> <li>Bethel CA: 9.7% in 2023, down from 11.9% in 2018</li> <li>Kusilvak CA: 15.1% in 2023, down from 18.4% in 2018</li> </ul>			

Figure 8: Unemployment in the YK Region and Alaska, 2010-2023



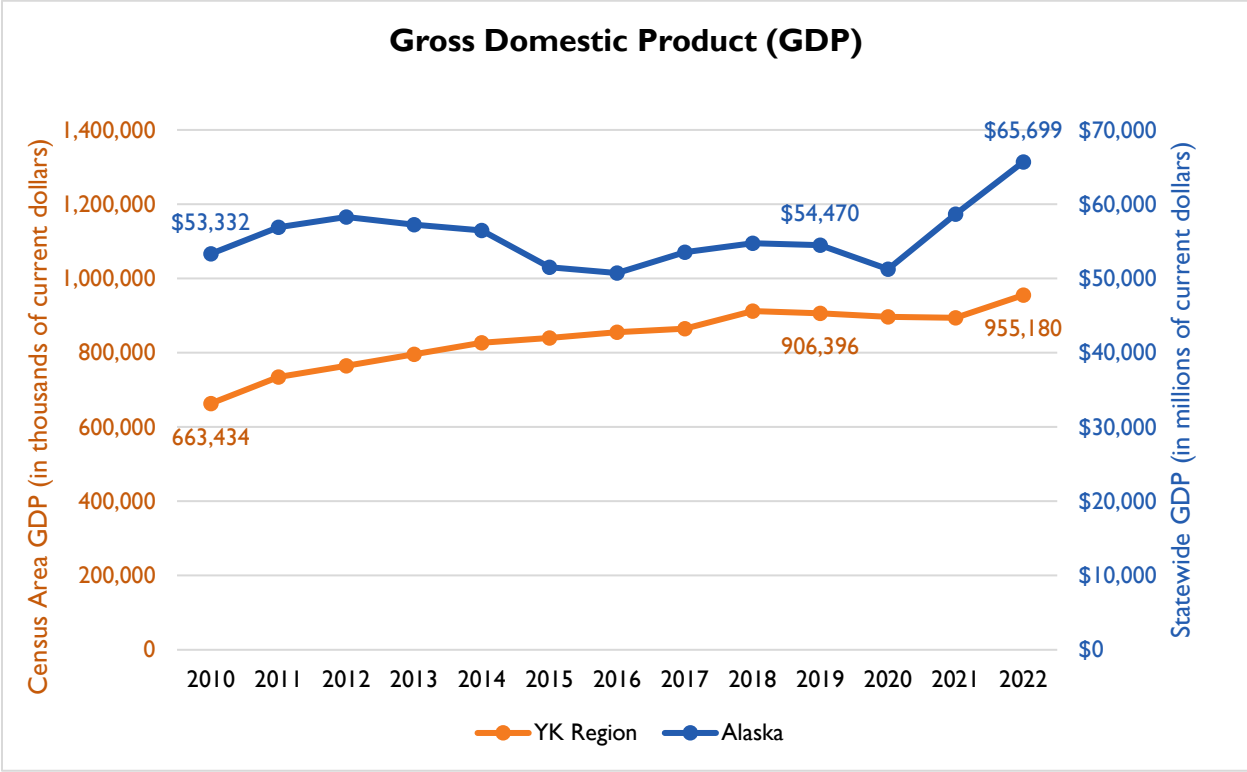
Number of Business Establishments			
What it tracks	Target	Where it comes from	Limitations
The number of private businesses by the location of work (not the location of the worker), based largely on unemployment insurance data.	Increase	BLS Quarterly Census of Employment and Wages	Excludes sole proprietorships and the self-employed (including many fishermen).
<b>Five Year Business Establishments and Trends (2018-2023)</b> <ul style="list-style-type: none"> <li>Alaska: 23,159 establishments in 2023; Increased 12% over five years</li> <li>YK Region: 251 establishments in 2023; Decreased 3% over five years <ul style="list-style-type: none"> <li>Bethel CA: 194 establishments in 2023; Decreased 3% over five years</li> <li>Kusilvak CA: 57 establishments in 2023; Decreased 5% over five years</li> </ul> </li> </ul>			

Figure 9: Number of Business Establishments in the YK Region and Alaska, 2010-2023



Gross Domestic Product (GDP)			
What it tracks	Target	Where it comes from	Limitations
The total market value of goods and services (both public and private) produced in the region based on earnings data, business receipts, production value and more. It can also be thought of as the sum of spending and exports, minus the sum of imports. <sup>2</sup>	Increase	Bureau of Economic Analysis	Does not capture many local economic activities, such as subsistence.
<b>Five Year GDP Trends (2017-2022)</b>			
<ul style="list-style-type: none"> <li>Alaska: \$65.7 million in 2022; Increased 20% over five years</li> <li>YK Region: \$955,180 in 2022; Increased 10% over five years</li> </ul>			

Figure 10: Gross Domestic Product in the YK Region and Alaska, 2010-2022



<sup>2</sup> For more information about this data source, visit this article on the Bureau of Economic Analysis’s webpage: <https://apps.bea.gov/scb/2020/03-march/0320-county-level-gdp.htm>

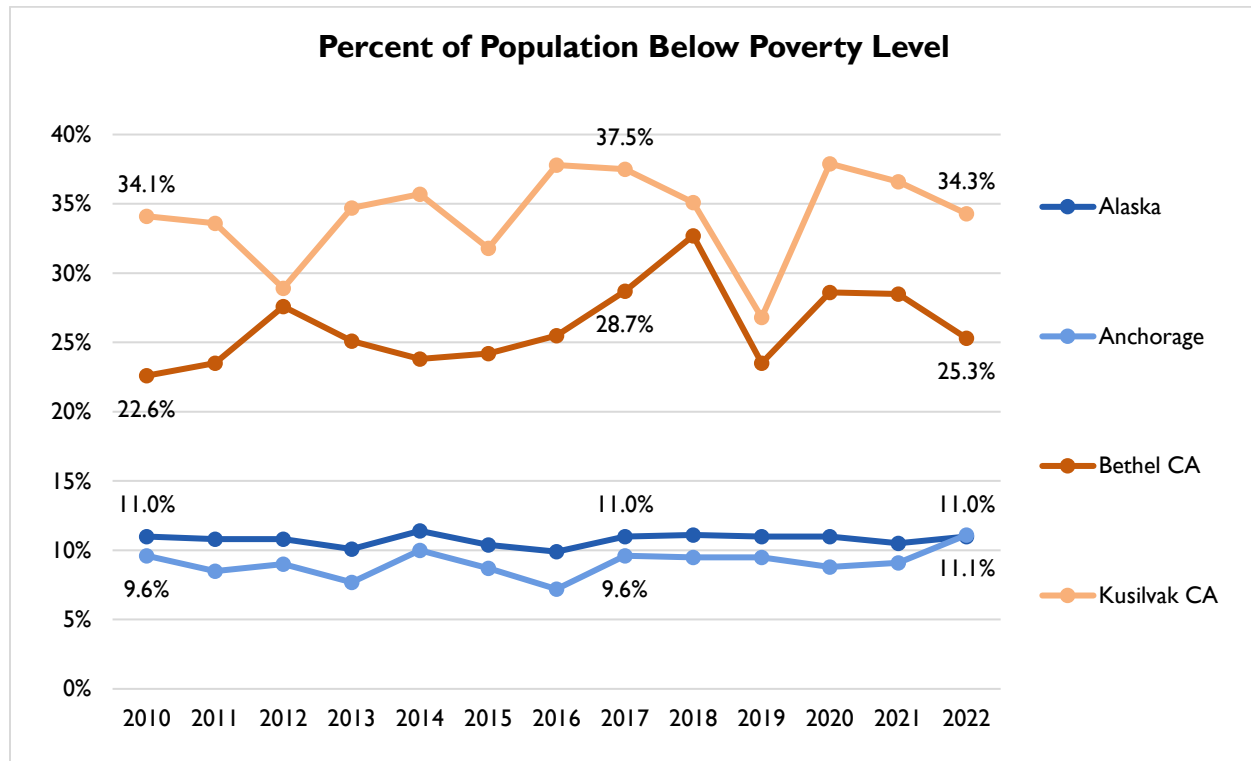
## Poverty

What it tracks	Target	Where it comes from	Limitations
Model-based estimates of poverty using state and county data from the American Community Survey, combined with other data such as federal income tax returns, SNAP benefits, etc.	Decrease	U.S. Census's Small Area Income and Poverty Estimates	The estimates have high error margins in low-populated areas.

### Five Year Poverty Rates and Trends (2017-2022)

- Alaska: 11% in 2022; No change over five years
- Anchorage: 11.1% in 2022; Increased 15.6% over five years
- YK Region: 29.8% in 2022; Decreased 10% over five years
  - Bethel CA: 25.3% in 2022; Decreased 11.8% over five years
  - Kusilvak CA: 34.3% in 2022; Decreased 8.5% over five years

Figure 11: Poverty in the YK Region, Anchorage, and Alaska, 2010-2022



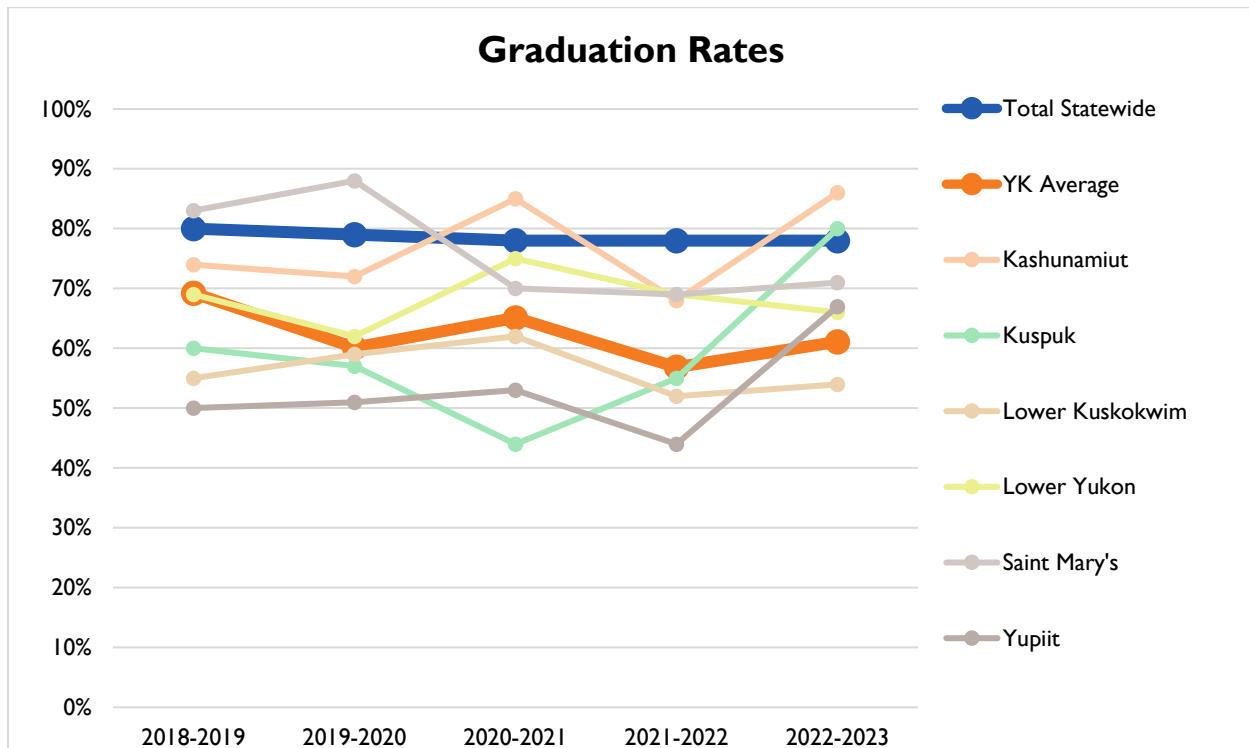
## Graduation Rates by District

What it tracks	Target	Where it comes from	Limitations
Percentage of students from each school district who graduate high school within four years.	Increase	Alaska Department of Education and Early Development	Does not capture students who later go on to earn their GEDs or those who graduate in more than four years. School districts with small populations typically experience larger year-to-year swings.

### Five Year Graduation Rates and Trends

- Alaska: 78% in 2022-2023; Decreased 2% over five years. The rate remained relatively steady through the pandemic.
- YK Region: 31% in 2022-2023; Decreased 8% over five years. The rate fluctuated throughout the pandemic.
  - Kashunamiut: 2022-2023, 86%, up from 74% in 2018-2019.
  - Kuspuk: 2022-2023: 80%, up from 60% in 2018-2019.
  - Lower Kuskokwim: 2022-2023: 54%, down from 55% in 2018-2019.
  - Lower Yukon: 2022-2023: 66%, down from 69% in 2018-2019.
  - Saint Mary's: 2022-2023: 71%, down from 83% in 2018-2019.
  - Yupit: 2022-2023: 67%, up from 50% in 2018-2019.

Figure 12: Graduation Rates in the YK Region by School District, 2018–2023





Migration			
What it tracks	Target	Where it comes from	Limitations
Migration trends of residents around the state using Permanent Fund Dividend (PFD) and Internal Revenue Service tax information. These numbers help explain what is driving regional population changes.	Decrease outmigration	Alaska Department of Labor and Workforce Development	The data only track PFD recipients. It does not capture seasonal workers or residents who are new to Alaska and ineligible for a PFD.
<b>Five Year Migration and Trends</b> <ul style="list-style-type: none"> <li>Bethel CA: lost 210 residents in 2022-2023; Outmigration up 24% over the past five years</li> <li>Kusilvak CA: lost 181 residents in 2022-2023; Outmigration up 36% over the past five years</li> </ul>			

Figure 13: Migration into and out of the Bethel Census Area, 2018-2023

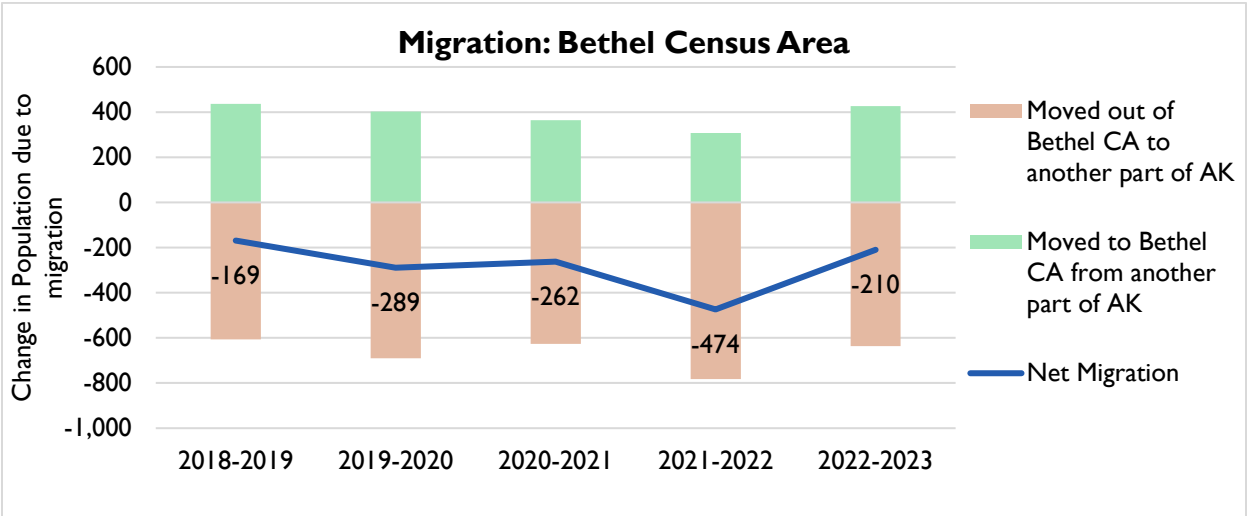


Figure 14: Migration into and out of the Kusilvak Census Area, 2018-2023

