

SOUTHWEST ALASKA MUNICIPAL CONFERENCE

COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY, 2015

NOTE: An electronic version of this document and its appendices can be found online at www.swamc.org



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Economic Development Administration



ACKNOWLEDGEMENTS

A special thanks to:

- The People of Southwest Alaska
- SWAMC Board of Directors
- SWAMC Municipal and Associate Members
- SWAMC Business Council Members
- SWAMC Economic Summit CEDS Strategic Planning Session Attendees
- Shirley Kelly, Economic Development Administration

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TABLE OF CONTENTS

EXECUTIVE SUMMARY 1

CHAPTER 1: INTRODUCTION 6

CHAPTER 2: SUMMARY BACKGROUND 11

CHAPTER 3: SWOT ANALYSIS..... 39

CHAPTER 4: SWAMC WORK PLAN..... 68

CHAPTER 5: SWAMC ACTION PLAN 72

LIST OF ACRONYMS

AEA	Alaska Energy Authority
ANCSA	Alaska Native Claims Settlement Act
APICDA	Aleutian-Pribilof Islands Community Development Association
ARDOR	Alaska Regional Development Organization
AVSP	Alaska Visitor Statistics Program
BBEDC	Bristol Bay Economic Development Corporation
BBNA	Bristol Bay Native Association
BBNC	Bristol Bay Native Association
CBSFA	Central Bering Sea Fishermen's Association
CEDS	Comprehensive Economic Development Strategy
CDQ	Community Development Quota
EDA	Economic Development Administration
EDD	Economic Development District
FSMI	Fisheries, Maritime and Seafood Initiative
PCE	Power Cost Equalization
SAVEC	Southwest Alaska Vocational & Education Center
SWAMC	Southwest Alaska Municipal Conference

EXECUTIVE SUMMARY

INTRODUCTION

The strength of Southwest Alaska Municipal Conference (SWAMC) is the organizations ability to organize data and networks into actionable information. A Comprehensive Economic Development Strategy (CEDS) is the product of ongoing planning and outreach with the SWAMC Board, businesses, membership, attendees to SWAMC's Annual Economic Summit, and an ongoing public review process. Building on these relationships and findings the CEDS is updated continually throughout the 2015-2019 period, representing the most current account of economic activity available. The CEDS is a guiding document for all of SWAMC's efforts, providing background and direction for working with partners, allocating funding and prioritizing efforts that support economic development in the region, while also addressing resiliency. The CEDS analyzes strengths, weaknesses, opportunities and threats and proposes actionable strategies that enhance the potential of Southwest Alaska.

THE SOUTHWEST ALASKA MUNICIPAL CONFERENCE

SWAMC is the regional economic development organization representing Southwest Alaska, serving the three subregions of: the Aleutian/Pribilofs, Bristol Bay, and Kodiak. A 501(c)(4) non-profit, SWAMC is the designated State of Alaska Regional Development Organization (ARDOR) and Federal Economic Development District (EDD) entity tasked with expanding public-private partnerships and growing the Southwest Alaska based on sound strategic planning efforts. Organized as a regional membership organization, SWAMC advocates the collective interests of Southwest Alaska people, businesses, and communities. The 11-member Board of Directors is comprised of two elected officials and one associate member from each subregions, plus two, regional at-large seats. In addition to providing a regional voice and setting strategic direction, the Board serves as the regional CEDS Committee. SWAMC work closely with members and partners to provide perspectives and recommendations to support economic development in the region.



SWOT ANALYSIS: Regional Strengths, Weaknesses, Opportunities and Threats

Strength, weaknesses, opportunities and threat (SWOT) Analysis, helps identify actionable strategies. Primary sections of the CEDS, including the SWOT Analysis and Work Plan, are organized by five key topics that have emerged through the planning process (background research and stakeholder outreach), including: Workforce Development, Resources Infrastructure, Energy and Partnerships.



WORKFORCE DEVELOPMENT – Businesses and organizations note the difficulty of training and maintaining a stable, qualified, reliable workforce in Southwest Alaska. Southwest Alaska sees a large influx of nonresident seasonal employees, in part due to the lack of workforce development in the region for residents. In recent years, statewide and regional efforts have begun to identify and address workforce development needs, especially in the fishery, seafood and maritime industry.



RESOURCES – Southwest Alaska has an abundance of natural resources. In particular, the region has world-class fish stocks and rich mineral deposits. The SWAMC region also has scenic natural landscapes and other intrinsic value that draw external interest to the region, supporting the basic sector economy. Responsibly managed resources can provide many generations of non-renewable development and conceivably eternal value from renewables to grow regional wealth for Southwest Alaska.



INFRASTRUCTURE – Southwest Alaska is a large region with a small population and many dispersed communities. The region has a substantial base of port infrastructure and harbor services; however, great distances add expenses to existing services and costs to develop new infrastructure.



ENERGY – Energy costs are high in Southwest Alaska and contribute to higher costs of doing business and an increase in the cost of living for regional residents. Southwest Alaska has an abundance of renewable energy options that have the potential to offset the current high costs of energy but remain largely stranded based on current technology.



PARTNERSHIPS – Businesses; local, state and federal government; Alaska Native entities; regional non-profits; and communities all contribute to the economic development and employment picture in Southwest Alaska. SWAMC supports existing local and regional economic development efforts and aims to identify new partnerships that can affect change and build regional wealth.

STRENGTHS

Existing relative competitive advantages.

Resources

FISH

6 of top 10 ports in U.S. are in SWAMC region



(measured by \$ value of fish harvest, 2012)

18 Communities have land-based seafood processing.²

TOURISM

Out-of-state visitors to Southwest AK spent an average of **\$1,514** per person on their trip, compared with the statewide average of **\$941**.⁵

3 National Parks in the region

MINING

52% of 2010 Alaska mining exploration expenditures were made in Southwest AK.⁴



22 communities with harbor facilities support a fleet of **1,487** boats.⁶



Many potential sources of energy

Fisheries, Seafood and Maritime Initiative - addressing workforce development needs

Workforce Development

2012 Rural Jobs + Innovation Accelerator Challenge grant: **\$405,023**

Partnerships

Funded by: U.S. Dept. of Commerce's Economic Development Administration, the U.S. Dept. of Agriculture

Partners: BBNA, SAVEC, University of Alaska, AK Regional Training Centers, Bristol Bay School District and more



Job growth to population growth ratio (1997-2008)¹

4.88 Southwest AK vs **0.93** United States

Energy

Alaska Energy Authority's Power Cost Equalization (PCE) program reimburses up to **70 percent of residential energy costs** in some Southwest Alaska communities.¹¹

PRIORITY ACTIONS

- Expand Fisheries Cluster
- Implement Alaska Maritime Workforce Development Plan
- Promote Local Guiding Training for Tourism
- Establish Youth Mentorship and Training Program
- Promote Entrepreneurial Enterprise
- Promote Energy and Infrastructure Development

Resources

- Outer Continental Shelf (OCS) oil + gas potential
- Rich regional mineral deposits
- Arctic development, resources + science

Value-Added Seafood Processing

\$ Catch ← Happens in AK
 \$\$ Process ← Usually happens in AK
 \$\$\$\$ Package ← Sometimes happens in AK

Workforce Development

BBEDC's Permit loan program is increasing the number of locally-owned commercial fishing permits

Partnerships

3 Alaska Native Corporations + 3 Community Development Quota organizations

18 SWAMC Business Council members

International interest in adventure tourism: increased **65%** between 2009-2012.¹²

Creative efforts to improve housing infrastructure:

ALASKA WATER AND SEWER CHALLENGE

AK Dept. of Environmental Conservation

LIVING ALEUTIAN HOME DESIGN COMPETITION
Aleutian Housing Authority

Infrastructure

Recent and planned investments in microwave and fiber optic network improvements, including the proposed **Quintillion Arctic Fibre cable**



Source: Arctic Fibre

Energy

Many current and potential efforts to reduce regional energy costs:

- Bulk fuel purchasing (Pilot project in Unalaska)
- Natural gas development (Tidal power in False Pass)
- Hydro energy (Hydrokinetic in Igiugig)
- Waste-to-heat incinerators (Dillingham, Egegik)

WEAKNESSES

Existing relative competitive disadvantages.

Resources

Fluctuating seafood stocks



Seasonality of resource jobs: Unemployment in Aleutians East Borough ⁷

8% July 2013 vs 26% December 2013

Workforce Development

Widely dispersed population: Less than 30,000 people over an area the size of Oregon

Lack of trained local workforce: More than **80%** of fish processing jobs held by non-residents

Infrastructure

One-way flight costs from Anchorage⁸...

To Adak, Unalaska, St. Paul	\$450-\$700
To Honolulu	\$350-\$500
To London	\$650-\$900



Energy

There is **no area-wide energy plan** to guide investments

Average annual household energy costs:¹⁰

\$ **8,410** Lake + Peninsula Borough vs. \$ **2,790** Municipality of Anchorage

4/6 Regions have higher overcrowding rates than the statewide rate of 6%. In Dillingham Census Area, 18% of housing units are overcrowded.⁹

The M/V Tustumena is nearing retirement

Partnerships

2 There are only **2** Chambers of Commerce in Southwest Alaska

Resources

THREATS TO FISH STOCKS

- Climate change
- Oil spill
- Mining accident
- Farmed fish

Environmental protections limit development!¹⁵

Endangered since 1990

Proximity to the Pacific Ring of Fire

Energy

cheap energy alternatives

Workforce Development

300 people

Net migration loss between 2011 - 2012¹⁴

Partnerships

Tribal offices are relocating out of the region

Southwest Alaska

Anchorage

Heavy reliance on public funds. Declining state and federal budgets may result in decreased investment and employment.



Infrastructure

Average of **200 earthquakes ≥ 4.0** per year.¹⁷

36 of Alaska's 41 active volcanoes are in Southwest AK.¹⁶

Climate change: current + potential threats

- Erosion
- Flooding
- Melting permafrost
- ...and more

OPPORTUNITIES

Chances/opportunities for regional improvement or progress.

THREATS

Threats to regional improvement or progress.

SWAMC VISION

Vibrant and livable communities for Southwest Alaska.

SWAMC MISSION

Support the collective interests of Southwest Alaskans, businesses, and communities; promote long-term economic opportunities through improved quality of life and responsible development.

SWAMC GOALS, OBJECTIVES AND STRATEGIES: 2015-2019

1) GOAL: Support Regional WORKFORCE DEVELOPMENT Initiatives

Objective 1: Training and Education – Promote professional development that prepares Southwest Alaska residents to contribute to the region’s economic development potential.

Objective 2: Applicable Training – Promote workforce training that is closely aligned with needed skills.

2) GOAL: Support Access to and Development of RESOURCES

Objective 1: Fisheries Development – Promote fisheries that provide a sustainable income base to the communities, businesses, and residents of Southwest Alaska.

Objective 2: Tourism Development – Promote investment in new and existing tourism opportunities that grow and retain regional wealth by taking advantage of the region’s intrinsic ability to draw outside interest.

Objective 3: New Resource Development – Promote mineral and other resource development activities that increase regional wealth, are responsibly managed, and account for the greatest long-term benefit to the region.

3) GOAL: Support INFRASTRUCTURE Improvements

Objective 1: Strategic Infrastructure Investments – Promote infrastructure that facilitates and supports the region’s social, cultural, and economic development needs.

Objective 2: Community Planning – Promote long-term visions, goals, and plans for sustainable community development.

4) GOAL: Improve ENERGY System Efficiency

Objective 1: Energy Efficiency – Promote energy systems that stabilize or reduce the long-term cost of power, by increasing the efficiency of every unit of energy.

Objective 2: Ownership of Energy Systems– Promote local ownership of energy planning, decision-making, and projects.

Objective 3: Supply of Low-Cost Power – Promote projects that supply low-cost power.

5) GOAL: Support Regional PARTNERSHIPS

Objective 1: Regional Economic Planning – Promote a regional Comprehensive Economic Development Strategy, with sub-regional and local planning efforts.

Objective 2: Communications – Promote partner networks and activities of the organization, region, state, and federal interests.

Objective 3: Advocacy – Promote local, regional, state and federal policies that benefit the region, its communities, businesses, members and key partners.

Objective 4: Organizational Effectiveness – Maintain leadership from a Board of Directors, representative of regional interests, who guide activities of a productive staff, manage a financially secure organization, and pursue regionally collective interests.

PRIORITY STRATEGIES (PROGRAMS, PROJECTS, ACTIVITIES)

- Support Youth Mentorship and Skills-Gap Training Programs
- Strengthen and Diversify Alaskan Manufacturing
- Understand Operating Environment and Resource Needs of Business
- Promote Energy Planning and Infrastructure Development
- Maintain a Data Library and Publish Economic Trends
- Host SWAMC Economic Summit and Membership Meeting



Kodiak Harbor



1st annual SWAMC Business Council meeting



Airplane in Port Alsworth

CHAPTER I: INTRODUCTION

PURPOSE

The Comprehensive Economic Development Strategy (CEDS) is the product of an ongoing regional planning process. The CEDS provides an overview of economic indicators and identifies projects and actions that will support economic development and increase regional wealth in Southwest Alaska. The CEDS aims to highlight the region's economic development strengths, challenges and opportunities and proposes strategies and actions that enhance the economic development potential of Southwest Alaska. As federal funds in the region continue to decline, it is increasingly important that the public, private and non-profit sectors in the region work together in order to grow the region's economy. Southwest Alaska Municipal Conference (SWAMC) uses the CEDS to help these partners collaborate and work strategically in order to leverage the resources and strengths of the region.

The Southwest Alaska CEDS is prepared, in part, as a requirement of the region's designation as an Economic Development District (EDD) by the Economic Development Administration. The document also fulfills SWAMC's obligation as an Alaska Regional Development Organization (ARDOR) to develop a regional plan. The CEDS is updated every five years; this 2015-2019 CEDS builds upon the efforts of previous CEDS planning efforts. The CEDS is the guiding document for all of SWAMC's efforts and provides staff with the background and direction they need for working with partners, allocating funding and prioritizing efforts that support economic development in the region.

WHO IS SWAMC?

The Southwest Alaska Municipal Conference (SWAMC) is a non-profit regional economic development organization for Southwest Alaska, serving three subregions of Southwest Alaska: the Aleutian/Pribilofs, Bristol Bay, and Kodiak. This area corresponds to the incorporated boundaries of

REMAINING BOARD

- Mayor Shirley Marquardt – Aleutians/Pribilofs Municipal Seat; City of Unalaska
- Paul Gronholdt – Aleutians/Pribilofs Associate Seat; Commercial Fisherman
- Christina Salmon – Bristol Bay Municipal Seat; Lake and Peninsula Borough
- John Whiddon – Kodiak Municipal Seat; City of Kodiak
- Cynthia Berns – Kodiak Associate Seat; Old Harbor Native Corp
- Glen Gardner – At Large Seat B; Shumagin Corporation

In addition to the oversight provided by the CEDS Committee, SWAMC has an existing framework for four standing committees that consist of professionals and business leaders who volunteer their time and expertise. These standing committees provide focused attention to specific areas of interest to the organization, including fisheries, energy, infrastructure and tourism. The role of these committees is to vet issues and ideas and provide recommendations to the SWAMC Board and staff. These ongoing efforts will direct, monitor, and inform the implementation of the Action Plan.

THE SWAMC BUSINESS COUNCIL

In an effort to enrich SWAMC’s working relationship with the business community in Southwest Alaska, and to gain critical perspectives of people that own and operate businesses in the region, in December of 2013, SWAMC convened the SWAMC Business Council. The Business Council is comprised of 18 industry leaders representing primary sectors in Southwest Alaska including fisheries, Alaska Native corporations, banking, communications, transportation, retail and other businesses. By identifying the primary industries that drive the region’s competitiveness and create economic activity, and coordinating a face-to-face discussion with representatives of those sectors, SWAMC is better able to align public and private sector goals. The non-fiduciary Business Council complements the SWAMC Board, which is largely composed of municipal and tribal representatives.

The objectives of the Business Council include:

- Share and incorporate feedback from membership on focus areas identified by Business Council members, to clarify achievable objectives for SWAMC;
- Collect and aggregation of known and unknown (gaps) data;
- Help businesses in the region better outline their individual, industry and collective needs;
- Identify what resources are needed to retain and expand regional economic activity; and
- Inform SWAMC’s overall Economic Development Strategy and advocacy efforts to support regional strengths and plan for resiliency; and
- Facilitate ongoing networking and communication opportunities to support business-to-business, business-to-government and government-to-government relationships on the region’s economy.

As outlined in the “Process” section below, the December Business Council meeting, as well as pre- and post-member surveys and interviews, was an important first step in the CEDS development. In their feedback, Business Council Members helped SWAMC identify preliminary economic development/business climate issues, challenges and opportunities for the region, and a list of potential strategies for improving the area’s business climate and increasing economic development opportunities. SWAMC aims to continue working with Southwest Alaska business leaders, facilitating conversations, and partnering with business leaders to champion and implement economic development strategies in the region, including direct implementation, updating and evaluating of the CEDS.

STRATEGY DEVELOPMENT

Outlined below are the main steps in the SWAMC Comprehensive Economic Development Strategy planning process. The CEDS was developed by SWAMC staff with assistance from Agnew::Beck Consulting. The process began in December of 2013 and ended in July of 2014.

The CEDS planning process began with SWAMC's Business Council Meeting on December 16th, 2013. After reviewing key indicators and data points for the region, Business Council Members provided feedback on the benefits and challenges of doing business in Southwest Alaska. They also discussed ways to build on the region’s strengths through a preliminary set of recommendations for improving the Southwest Alaska business climate and quality of life for all Southwest Alaska residents. The group also shared specific roles SWAMC can play in implementing and supporting strategies that will have a broad, positive impact on the region’s economy.

Results from the meeting, as well as feedback from subsequent one-on-one conversations with business council members, were reviewed and revised by the SWAMC Board. The finalized results, in the form of “preliminary CEDS strategies” were shared back at a CEDS planning session with SWAMC members at the March 6th and 7th SWAMC Annual Economic Summit. At the Summit, participants had the opportunity to review, discuss and add to the list of preliminary strategies. They also gave feedback on what SWAMC should focus on over the next five years by voting their top five priority strategies. Workforce Development, Collaborative Partnership Efforts and Energy/Infrastructure needs were confirmed as priority action items..

An important component of the planning process included research and analysis of past and current trends for the region. The previous 2010-2014 CEDS contains a wealth of background information on the geography, history, demographics and natural resources of Southwest Alaska. This collection of baseline data supported an in-depth regional SWOT analysis, as well as clearly-defined actionable items for SWAMC and partners to address. The complete collection of baseline data is available in the appendices attached to this report.

Feedback from membership, business, and others in the SWAMC network, in coordination with development of the baseline data library, and were compiled to create the content and foundation for the updated CEDS. The project team also reviewed current local and regional planning documents to ensure CEDS strategies align with these efforts and to identify opportunities to expand partnerships. Working with the SWAMC Board, the project team also added a detailed framework for tracking the progress of plan implementation.

UNDERSTANDING REGIONAL NEEDS

Continued efforts to understand the needs of communities and businesses in Southwest Alaska are implemented through SWAMC's Energy Planning and Business Retention and Expansion projects.

Through the Energy Plan, Phase I - Resource Assessment, and Phase II - Outreach, have been completed and now moving into Phase III - Energy Solutions, the energy committees have been initiated in each of the three subregions of Aleutians, Bristol Bay and Kodiak. Working with regionally representative and community supported stakeholders the committees are tasked with identifying community priority projects to address the high costs of energy and explicitly outline necessary steps to improve energy systems. Due to the technical nature and complexity of community scale energy projects, SWAMC works closely with over 50 technical programs and 90 financing programs that provided input and direction on pathways communities must take to improve their energy future. After communities develop roadmaps to achieve priority energy projects, committee discussion provides regional input, support and learning that helps align the effort.

As the regional partner on the Statewide Business Retention and Expansion (BRE) project, SWAMC is coordinating outreach with four Boroughs, two census areas, three communities and many more regional entities to form a strategic approach to understanding strengths and weaknesses within the existing businesses climate. Through targeted surveys by geographic location and industry sector, this partnership is able to develop personal relationships with businesses, and collect empirical data so that the necessary resources, programs or regulations support economic activity, where non-profit and government act as partners in prosperity. The continued outreach efforts to support and be a partner to the Southwest Alaska Business community derive directly from the successful findings with the SWAMC Business Council.

CHAPTER 2: SUMMARY BACKGROUND

The regional economy must be understood in order to establish strategic priorities. This chapter provides an overview of the people, regional wealth, industrial clusters, infrastructure and resources that comprise the foundations of Southwest Alaska. This chapter identifies compelling data, relevant trends and economic indicators that help define Southwest Alaska strengths, weaknesses, opportunities and threats (SWOT), and ultimately, highlights strategies from which to build economic resilience. The rest of the baseline data library can be found in the Appendices.

GEOGRAPHY

Southwest Alaska is a vast area that includes portions of mainland Alaska as well as hundreds of islands. The region, which stretches nearly 1500 miles across, encompasses four incorporated boroughs and two federally recognized census areas: the Aleutians East Borough, the Aleutians West Census Area, the Bristol Bay Borough, the Dillingham

Table 2.1: Southwest Alaska Area by Boroughs and Census Areas

Borough or Census Area	Land Area (sq. miles)	Water Area (sq. miles)	Total Area (sq. miles)	%
Aleutians East Borough	6,988.10	8,023.5	15,011.6	16.0%
Aleutians West Census Area	4,397.00	9,719.7	14,116.5	15.0%
Bristol Bay Borough	504.9	382.8	887.7	0.9%
Dillingham Census Area	18,675.00	2,253.6	20,928.40	22.3%
Kodiak Island Borough	6,559.80	5,463.8	12,023.70	12.8%
Lake & Peninsula Borough	23,782.00	7,125.0	30,907.00	32.9%
Southwest Region Total	60,906.80	32,968.5	93,874.80	100.0%

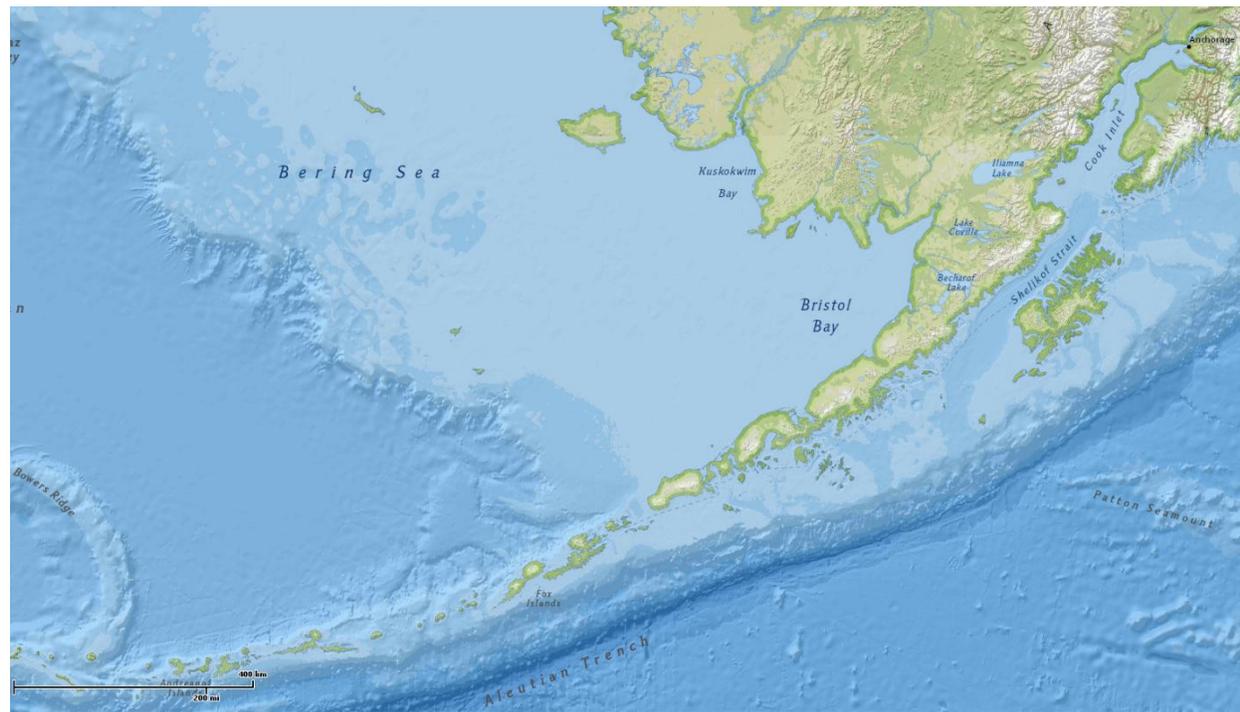
Source: U.S. Census Bureau and Alaska Department of Community & Economic Development

Census Area, the Kodiak Island Borough and the Lake and Peninsula Borough. It is bordered by the Yukon-Kuskokwim to the northwest, the Bering Sea to the west, the North Pacific Ocean to the south, the Gulf of Alaska to the south and east, and portions of the Kenai Peninsula Borough and an unorganized portion of Southcentral Alaska to the east and northeast. From Anchorage, Alaska's largest city and population center, it is 180 air miles to the nearest Southwest community of Port Alsworth. In contrast, to reach the westernmost Attu Island, it would require a flight of nearly 1,700 miles. There is no overland connectivity within or two the region; primary transportation to and from the region is by boat and plane.

The combined area of the four boroughs and two census areas equal 93,875 square miles. Of the total area, nearly 61,000 square miles is land mass and an additional 33,000 square miles is water surface, including the State water boundaries extending 3-miles from land. It is an area roughly equivalent to the State of Oregon, the tenth largest state in the U.S., or 16.5% of the total area of the state. See Table 2.1 for information on land area for each of the region's boroughs and census areas.

Southwest Alaska boasts a wide variety of landscapes and physical characteristics including estuaries and lagoons; wetlands and tideflats; rocky islands and seacliffs; exposed high-energy coasts; rivers, streams and lakes; boreal forests/taiga; alpine and low arctic tundra; glaciers and barren alpine; and temperate rainforests. Southwest Alaska has nearly 12,000 miles of shoreline, which accounts for nearly 40% of the shoreline for the State of Alaska. In comparison, the contiguous 48 states have a combined shoreline of 16,900 miles. See Figure 2.1 for a topographical map of the region. As the map shows, a shallow continental shelf follows the near-shore landmass, accompanied by deeper water in the westerns Bering Sea, and extreme depths of the Aleutian Trench. Historically, sea ice forms annually from the Pribilof Islands to in the Bering Sea, extending into Bristol Bay, south to Egegik, but remains ice-free year-round south of this line. Due to its proximity to a very active section of the Pacific Ring of Fire, the region is home to many active volcanoes and experiences frequent earthquakes.

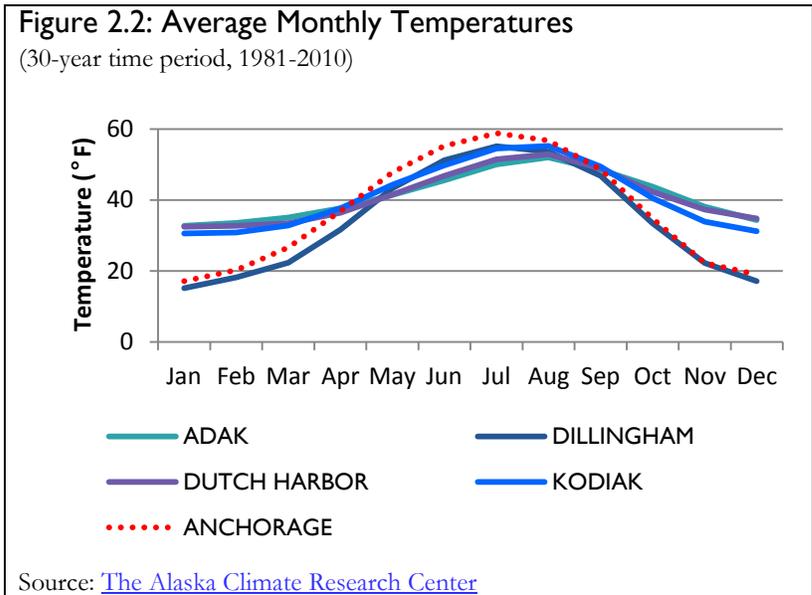
Figure 2.1: Topography of Southwest Alaska



Source: National Geographic Map Maker, 2014

CLIMATOLOGY & OCEANOGRAPHY

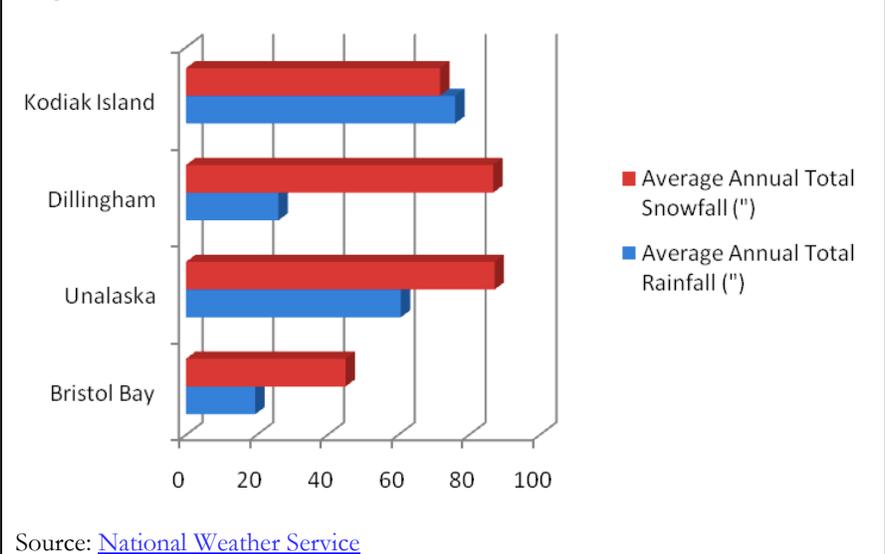
There are four climatic regions in Southwest Alaska: Western Maritime, Southcentral, West Coast, and Interior. The weather of Southwest Alaska is relatively warm and mild compared to other parts of the state. Wind and rain are prevalent across the marine environment, turning to snow inland and along the mountains, although variation exists across the vast geography. Figure 2.2 and Figure 2.3 display average monthly temperatures and precipitation for



select communities in the region. Average

temperatures range from a high of 56.1°F in Illiamna in July to an average low of 15.1°F in Dillingham in January. Precipitation varies widely across the region; Dillingham receives an average of 25.32 inches of precipitation a year while Kodiak receives an average of 78 inches per year. In comparison, the statewide average is 19.49 inches per year. Climate dramatically

Figure 2.3 Average Annual Temperatures for Selected Southwest Regions



influences daily life in Southwest Alaska. The local economy is based almost entirely on fishing, and having reliable weather information is critical; and critical to traveling long distances over air and sea. In addition to standard weather forecasts, marine and aviation forecasts are of particular importance to the region.

Ocean basin topography, currents, the extent of sea ice, water temperature and other environmental characteristics influence the productivity of the region's salt water environments. The Kuroshio Current flows across the Pacific Ocean from Japan, splitting into two currents as it approaches North America. One current, the Alaska Current, turns north creating a counterclockwise flow into the Gulf of Alaska. Currents from the North Pacific move through passes in the Aleutian Chain into the Bering Sea. Currents in the Bering Sea are very complex, but generally tend to move counterclockwise. The interaction of ocean currents with nutrient-rich freshwater runoff from the region's uplands is part of what makes the area such a productive fisheries ecosystem. A shallow continental shelf follows the near-shore landmass, including the entire eastern Bering Sea, north and east of the Pribilof Islands, accompanied by deeper water in the western Bering Sea, and extreme depths of the Aleutian Trench (www.gi.alaska.edu). The last Ice Age left deep scars in the remaining land formation, which over the centuries of heavy rainfall have created some of the biggest lakes in Alaska, fed by mineral rich glaciers, creating abundant and rich fresh water rivers. The Alaska Department of Fish & Game lists 3,174 entries for Southwest Alaska in the Catalog of Waters Important for the Spawning, Rearing or Migration of Anadromous Fishes (Jay Johnson, ADF&G, personal communication, www.adfg.alaska.gov).

Figure 2.4: Land Ownership in Southwest Alaska

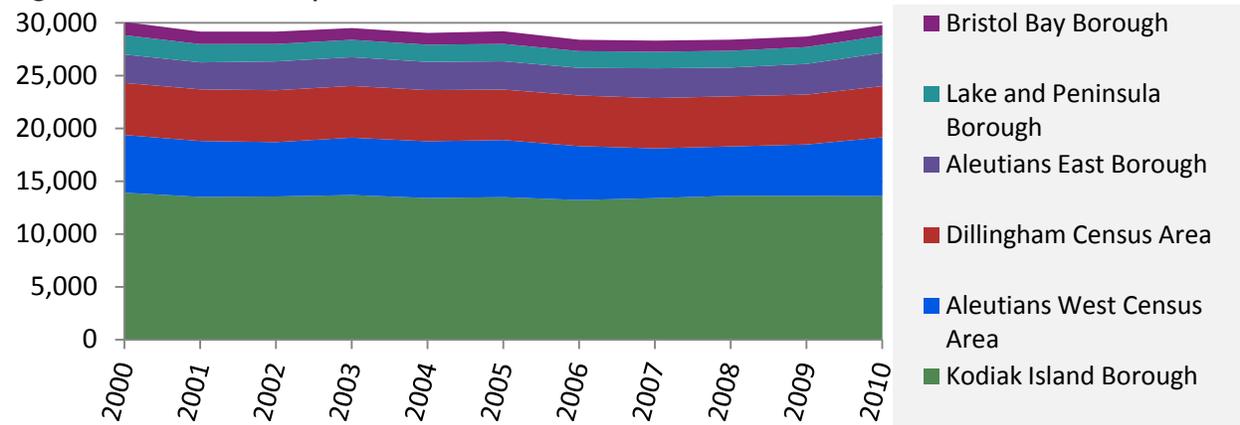


Source: Alaska Department of Natural Resources

HISTORY, CULTURE & LAND OWNERSHIP

Southwest Alaska has over 29,300 residents living in fifty-four communities within the region. The people of Southwest Alaska are a diverse mix, with roots in the Alaska Native cultures of Yupik, Athabaskan, Aleut and Alutiiq, overlaid with over 100 years of Russian heritage and western influences, especially development of commercial fisheries. The Alaska Native Claims Settlement Act of 1971 (ANCSA) addressed which lands Alaska Natives owned by right of traditional use and occupancy. ANCSA provided for the creation of regional and village corporations to receive

Figure 2.5: SWAMC Population, 2000-2010



Source: [Alaska Department of Labor and Workforce Development, Research and Analysis Section](#); [U.S. Census Bureau](#)

settlement compensation in the form of cash and various land rights. The boundaries of three ANCSA regional corporations are wholly or partially contained in Southwest Alaska, including 47 village corporations also established by ANCSA. Some village corporations have become wealthy organizations that contribute substantially to local economic resiliency.

Land ownership patterns in Southwest Alaska mirror that of the rest of the state. The federal government is the largest landowner, followed by the State of Alaska, and then, collectively, the largest private land owners – the ANCSA Native corporations (see Figure 2.4). The majority of federally owned lands in Southwest Alaska have been set aside for public use. The National Park Service and U.S. Fish and Wildlife Service units are managed primarily for resource protection, fish and wildlife conservation, and recreation. The Bureau of Land Management manages for multiple use purposes including timber production, fish and wildlife, recreation, water and mining. Management of these lands is based on priorities and compatibility among various uses. The remaining federal land is designated for special purposes, such as military reservations.

The State of Alaska owns significant land holdings throughout the region. Major state land units in the region fall into several broad categories: tidelands and submerged lands, parks, game refuges and sanctuaries, and critical habitat areas. State park lands include Wood-Tikchik State Park, the largest state park in the nation at 1.6 million acres.

Native Corporations make up the largest private landowners in the region. Native lands in the region have been developed in a variety of ways including: logging; tourism facilities and activities; residential real estate development; federal and state land acquisition through the EVOS Council habitat restoration activities; mining; and gravel and rock sales. Other private landowners, including individual and community holdings, comprise less than 1% of the remaining land in the region. The University of Alaska and the Alaska Mental Health Trust both have modest land holdings within Southwest Alaska.

PEOPLE OF SOUTHWEST ALASKA

Populations throughout the region were mostly static 2000-2010. According to the 2010 Census there are 29,769 people living in the Southwest Region. Almost half (13,592) of these residents live in the Kodiak Island Borough. See Figure 2.5 for trends by borough and census area. These numbers estimate permanent full-time residents and do not include temporary or seasonal residents. The number of some communities in Alaska can vary by as much as 20% due to the influx of seasonal tourism, fishing and construction workers.

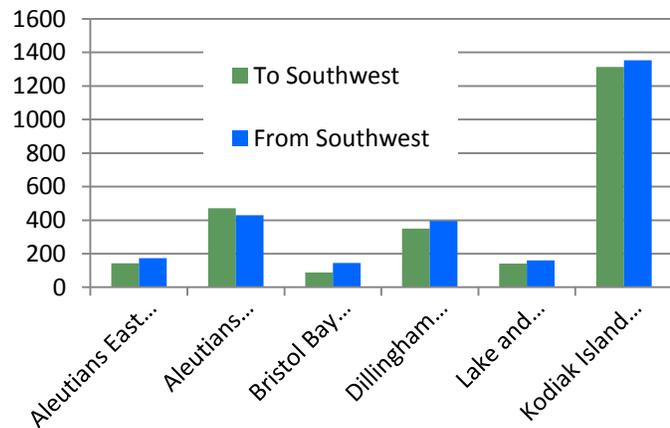
Estimates from the Alaska Department of Labor and Workforce Development indicate that there is a net migration out of the region (see Figure 2.6). Between 2011 and 2012 - 2,507 residents moved to the region and 2,656 residents left the region for a loss of 149 residents. However, population changes due to natural increases (births minus deaths) are resulting in a steady population over time.

The Southwest region is very diverse. As seen in Figure 2.7, 40 percent of the population is white, followed by 28% who are American Indian and Alaska Native and 18 percent who are Asian.

There is significant variation in demographic composition in each borough/census area. The primary Alaska Native groups in the region include Aleut, Alutiiq and Central Yupik peoples and cultural traditions.

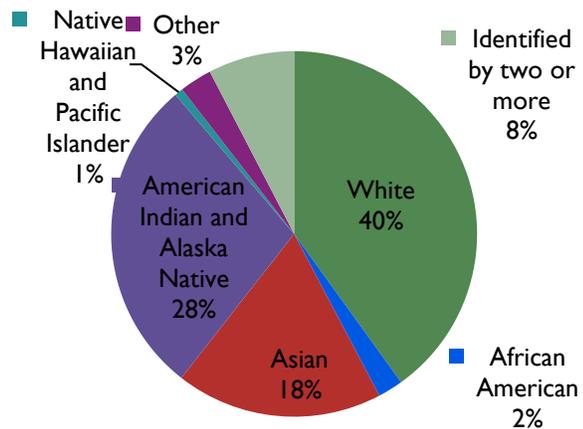
Fifty-six percent of the population in Southwest Alaska is male, which is higher than the statewide average of 52 percent. Most of this difference is accounted for by the gender composition of the populations in the Aleutians East Borough and the Aleutians West Census Area. In each of

Figure 2.6 Migration In and Out of Southwest Alaska



Source: [Alaska Department of Labor and Workforce Development, Research and Analysis Section](#) (based on PFD Filing data).

Figure 2.7: Population by Race, Southwest Alaska

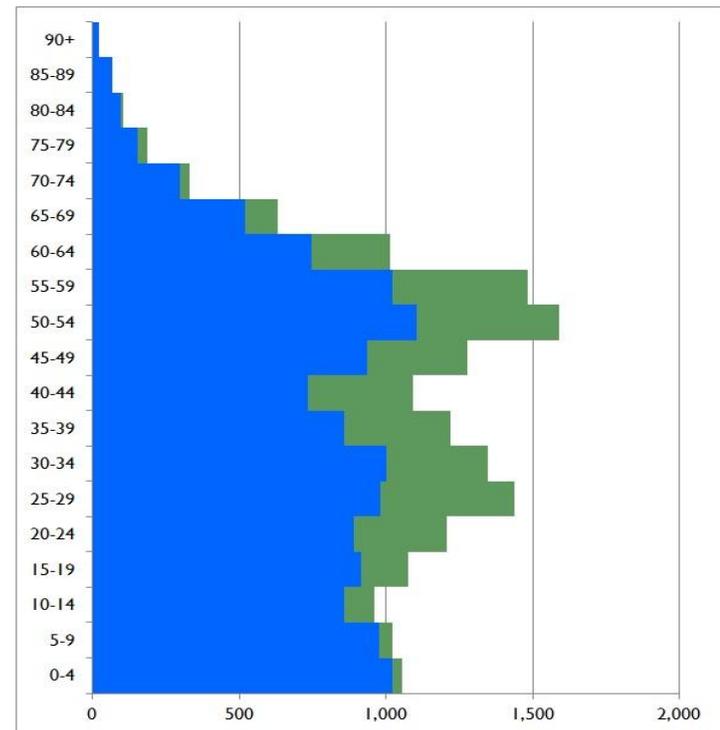


Source: [Alaska Department of Labor and Workforce Development, Research and Analysis Section](#) (based on 2010 Census data).

these two sub-regions, the population is comprised of nearly two-thirds males and slightly more than one-third females. A full distribution of the population by gender and age can be seen in Figure 2.8, with females in blue and males in green.

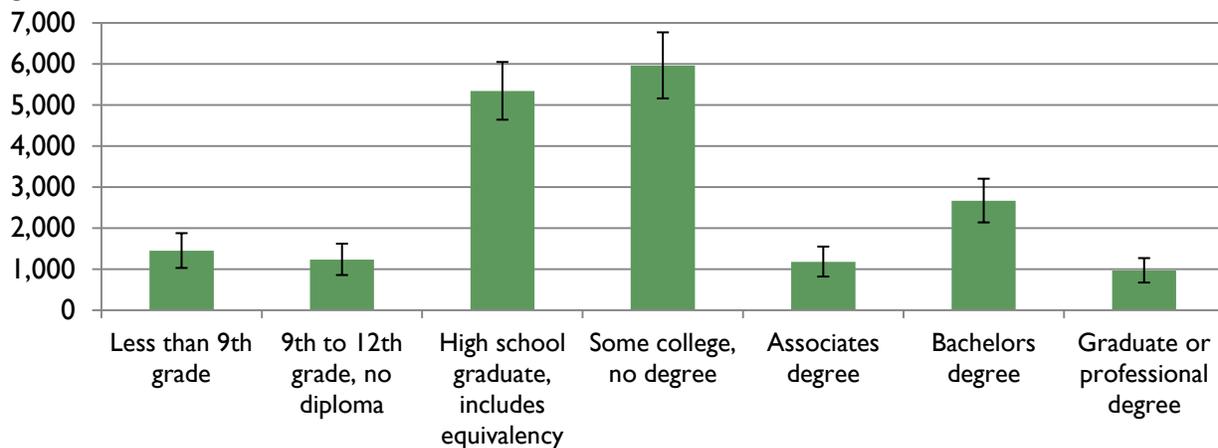
In terms of education, school district enrollment has been holding steady across the region, see Figure 2.9. 57% of the population has gone to secondary school compared with 64% of the population in the state. 32% have some college but no degree. Nineteen percent of the population has a bachelor’s degree or higher compared with 27% in the state. Given the small sample size these numbers should be considered general estimates due to high margins of error.

Figure 2.8: Southwest Population by Age + Gender, 2014 Estimate



Source: [Alaska Department of Labor and Workforce Development, Research and Analysis Section; U.S. Census Bureau](#)

Figure 2.9: Level of Educational Attainment, 2012



NOTE: These figures include the Bethel and Wade Hampton Census Areas, which are not in the SWAMC region.

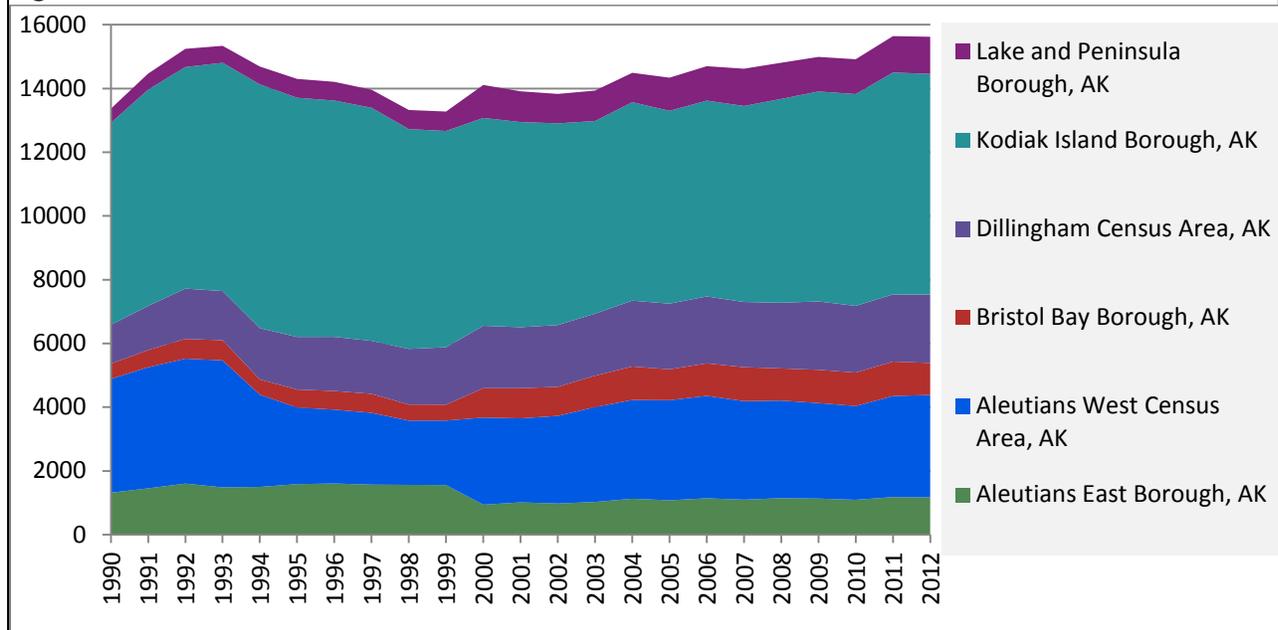
Source: [Alaska Department of Labor and Workforce Development, Research and Analysis Section; U.S. Census Bureau.](#)

REGIONAL EMPLOYMENT & EARNINGS

EMPLOYMENT

The labor force in Southwest Alaska is largely structured to respond to the direct demands of the commercial seafood industry, as well as support functions ancillary to that industry. Unfortunately, employment and industry data is somewhat limited due to high self-employment numbers, limited reporting, proprietary information of large sole-owner processing facilities and other factors.

Figure 2.10: Total Labor Force Estimates



Source: [U.S. Bureau of Labor Statistics](#)

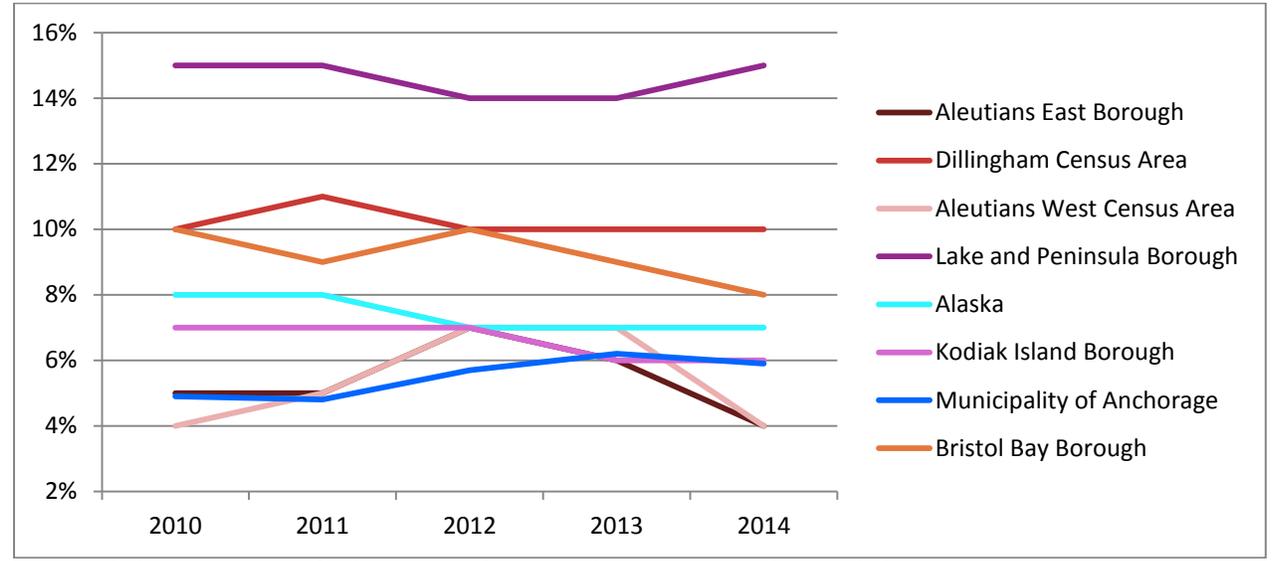
The total labor force saw a small decline in the 1990s and has been slowly increasing since (see Figure 2.10). In 2012 there were 15,621 residents in the labor force. A recent change in the way labor force statistics are calculated by the Alaska Department of Labor & Workforce Development has rendered labor data prior to 2010 incomparable to data from 2010 and onward. Figure 2.11 reflects newly calculated unemployment rates from 2010 onward. The most notable change is shown in the Lake and Peninsula Borough's unemployment rate, which now hovers around 15%.

Table 2.2 Nonemployer Statistics for the Southwest Region

	2007	2008	2009	2010	2011
Number of Firms	3,573	3,536	3,439	3,525	3,544
Number of Receipts	158,927,000	164,713,000	152,490,000	172,789,000	188,949,000

Source: [U.S. Census Bureau](#) and the [IRS](#).

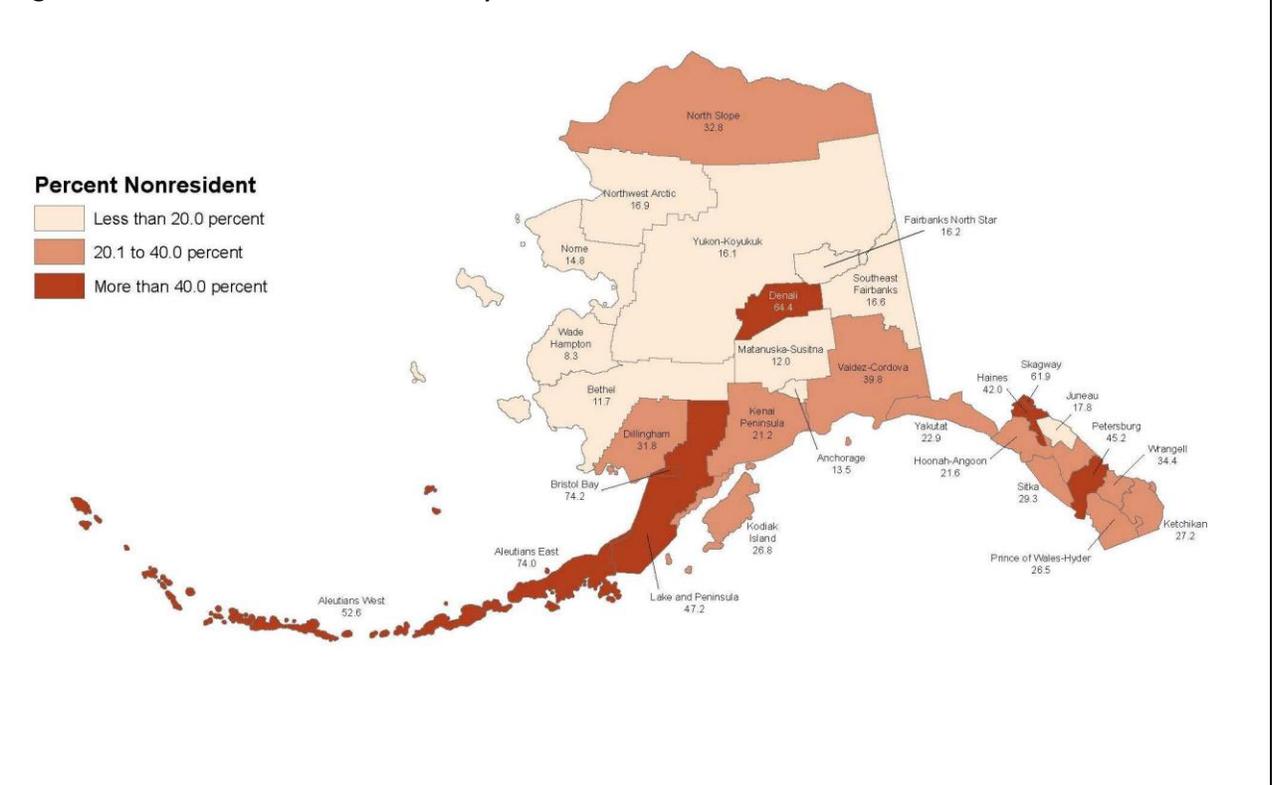
Figure 2.11: Unemployment Rate, 2010-2014



Source: [Alaska Department of Labor + Workforce Development, Research + Analysis](#)

Southwest Alaska also has high self-employment numbers. The U.S. Census Non-employer Statistics is based on the number of business income tax returns submitted by firms without any employees. Table 2.2 shows that the number of non-employer firms has stayed fairly steady at around 3,500 firms. The total receipts have been steadily increasing over the past five years. Over half of these

Figure 2.12: Nonresident Workers by Place of Work, 2013



Source: [Alaska Department of Labor and Workforce Development, Research and Analysis Section](#)

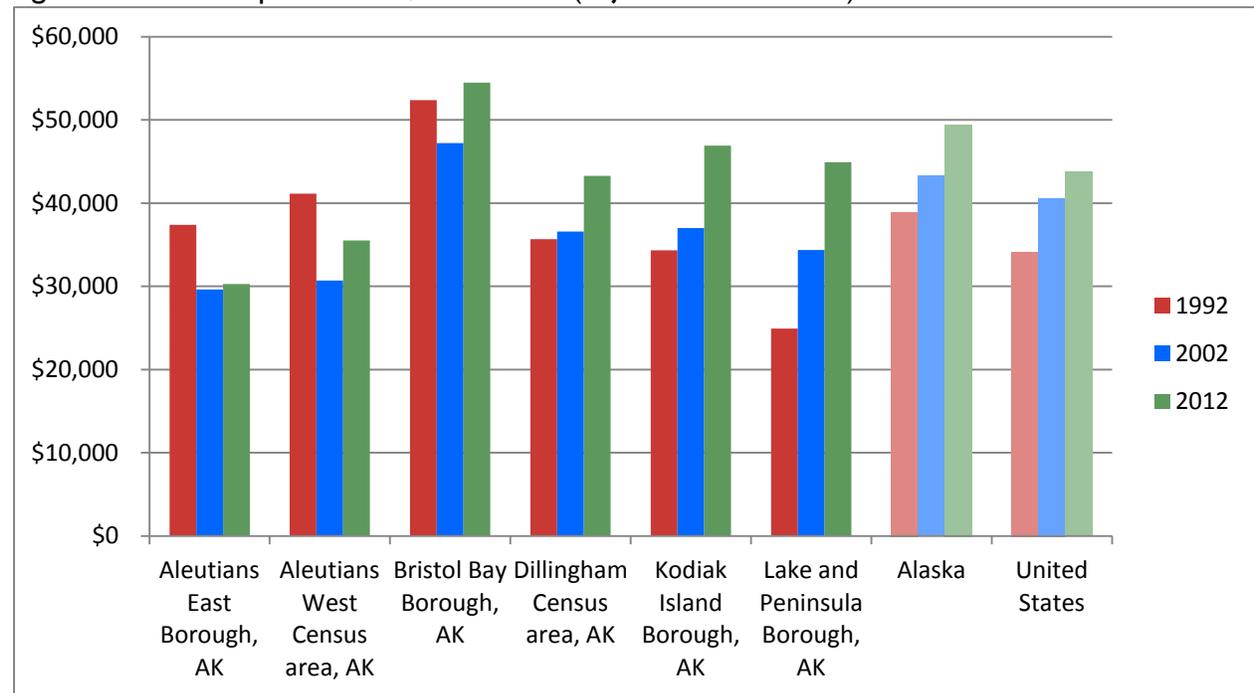
firms are businesses related to the fishing industry. These numbers are based on the submitter’s address, so if an individual fishes in the Southwest Alaska region, but lives and completes taxes outside the region, than the numbers will not be captured here.

In general, Southwest Alaska hosts many nonresident workers. Workers come from other parts of the state and from the contiguous United States for seasonal work in fishing, tourism, construction and more. Unfortunately, most of the labor force and employment figures in this section do not capture these migratory workers. Figure 2.12 shows the percentage of nonresident workers for various regions around the state. Southwest Alaska has some of the highest nonresident worker figures in Alaska, with Aleutians East Borough (74%), Bristol Bay Borough (74.2%) and Aleutians West Census Area (52.6 percent) seeing the highest percentages of nonresident workers.

REGIONAL EARNINGS

Per capita income for the region varies by borough and census Area (see Figure 2.13). Over the twenty-year period between 1992 and 2012, the region saw an average increase in per capita income of 18%. Aleutians East Borough and Aleutians West Census Areas both experienced declines over that period of -19% and -13.7%, respectively. In 2012, per capita income in Bristol Bay Borough, Kodiak Island Borough and Lake and Peninsula Borough was higher than the national average of \$43,735 and lower than the national average in Aleutians East Borough, Aleutians West Borough and Dillingham Census Area. This trend continues into 2013 per capita incomes reported by the US Bureau of Economic Analysis, though each region represents steady growth in their per capita income, a trend that was not always present in the past 20 years.

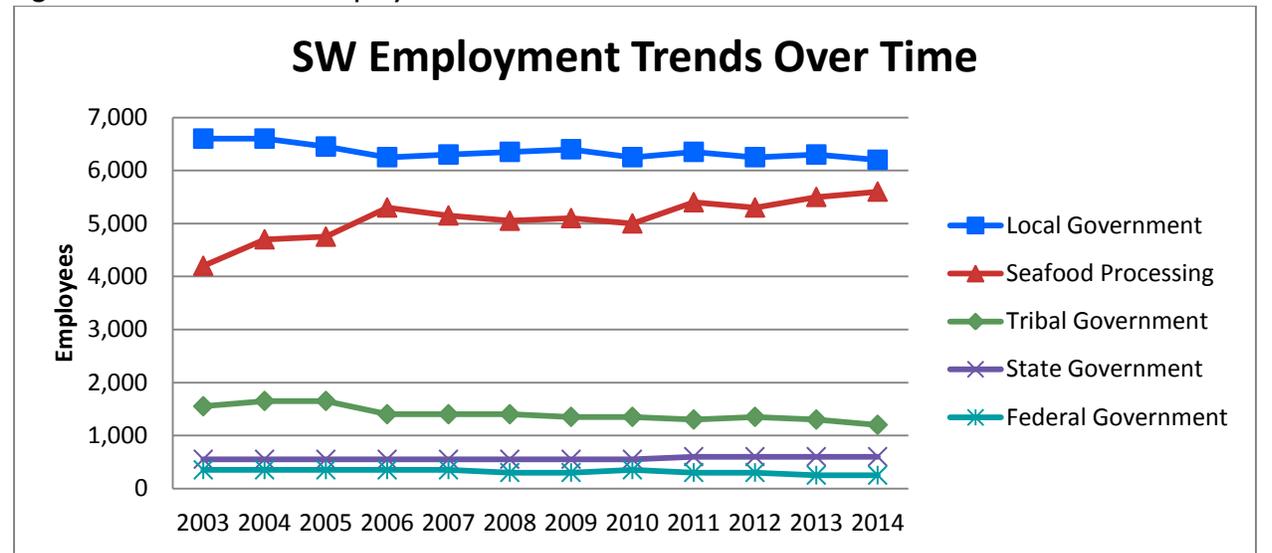
Figure 2.13: Per Capita Income, 1992-2012 (adjusted for inflation)



Source: [US Bureau of Economic Analysis](#); US Census Data

Figure 2.14 shows employment trends over time for some of the largest sectors. Fishing and government are the two largest employers in the region. Combined government (tribal, local, state and federal) employed 8,500 residents while seafood processing employed 5,300 residents in 2012. In 2014, government employed only 8,250 residents while seafood processing employed 5,600 residents. These figures do not include self-employed residents, many of whom fish. Self-employment information can be found later in this chapter under “Industry and Occupation Trends.”

Figure 2.14: Southwest Employment Trends Over Time



Source: [Alaska Department of Labor and Workforce Development, Research and Analysis Section.](#)

TAXES

At a statewide level, the tax climate in Alaska is relatively favorable compared to other U.S. states. The Tax Foundation compiles an annual State Business Tax Climate Index. Alaska ranks fourth out of all the states (a rank of 1 is most favorable for business). The three states with a higher ranking are Wyoming, South Dakota and Nevada. See Table 2.3 for a breakdown of Alaska’s tax ranking.

Table 2.3 State Business Tax Climate Index, 2015: Alaska

State	Overall Rank	Corporate Tax Rank	Individual Income Tax Rank	Sales Tax Rank	Unemployment Insurance Tax Rank	Property Tax Rank
Alaska	4	30	1	5	24	32

Note: A rank of 1 is more favorable for business than a rank of 50.

Source: [Tax Foundation, 2015 State Business Tax Climate Index.](#) Data comes from October 28, 2014.

A particularly relevant to the Southwest Alaska region is the fisheries business tax. The fisheries business tax is assessed on fisheries businesses and persons who process or export fisheries resources from Alaska. The Division collects fisheries business taxes primarily from licensed processors and persons who export unprocessed fish from Alaska. The State also levies the fishery resource landing tax on processed fishery resources. The Southwest region includes additional taxes that vary at the municipal level. These taxes are levied in a variety of ways including through property taxes, sales taxes, bed taxes, fuel taxes, liquor taxes and natural resources taxes.

INNOVATION

The U.S. Economic Development Administration (EDA) publishes an Innovation Index for comparing regions to the U.S. in order to assess innovative capacity. The innovation calculation uses measurable inputs and outputs from a region to evaluate what is driving innovation and where there is room for improvement. The scores are compared to the United States as a whole, which is given a baseline value of 100. Higher scores mean that a region is performing better than the country; scores lower than 100 mean that the region is not performing as well at the country as a whole. In 2014, the SWAMC region received a relatively low overall score of 74, less than Alaska's score of 88.8. In 2015, the region moved up to a score of 85.2, an increase of over 10 points, while Alaska only grew to 90.5 points. This growth in the last year is mirrored in the subcategories, with the region nearly closing gaps with Alaska in certain sectors. Productivity and Employment, for example, features the region and Alaska with only a .01 point difference. Data for the SWAMC region still indicates that the region excels in the number of large establishments per 10,000 workers (1.43 establishments per 10,000 workers compared with 1.1 for the U.S.), job growth to population growth ratio (a ratio of 4.88 compared to .69 for the U.S. between 1997 to 2008), and slightly lower unemployment rates (6.9 percent compared to 6.6 percent for the U.S.). Figure 2.15 shows how the SWAMC region scored compared to the state and the U.S.

Figure 2.15: Innovation Index Indicators

Red = SWAMC region

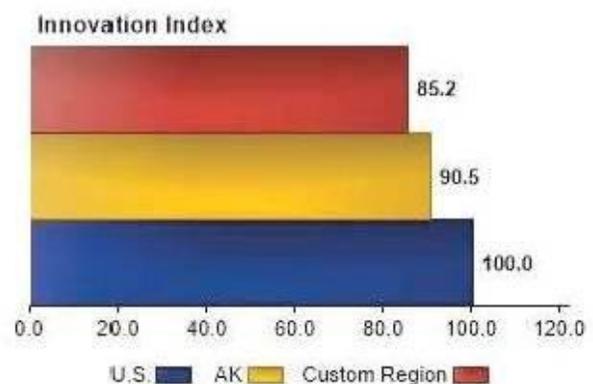
Yellow = Alaska

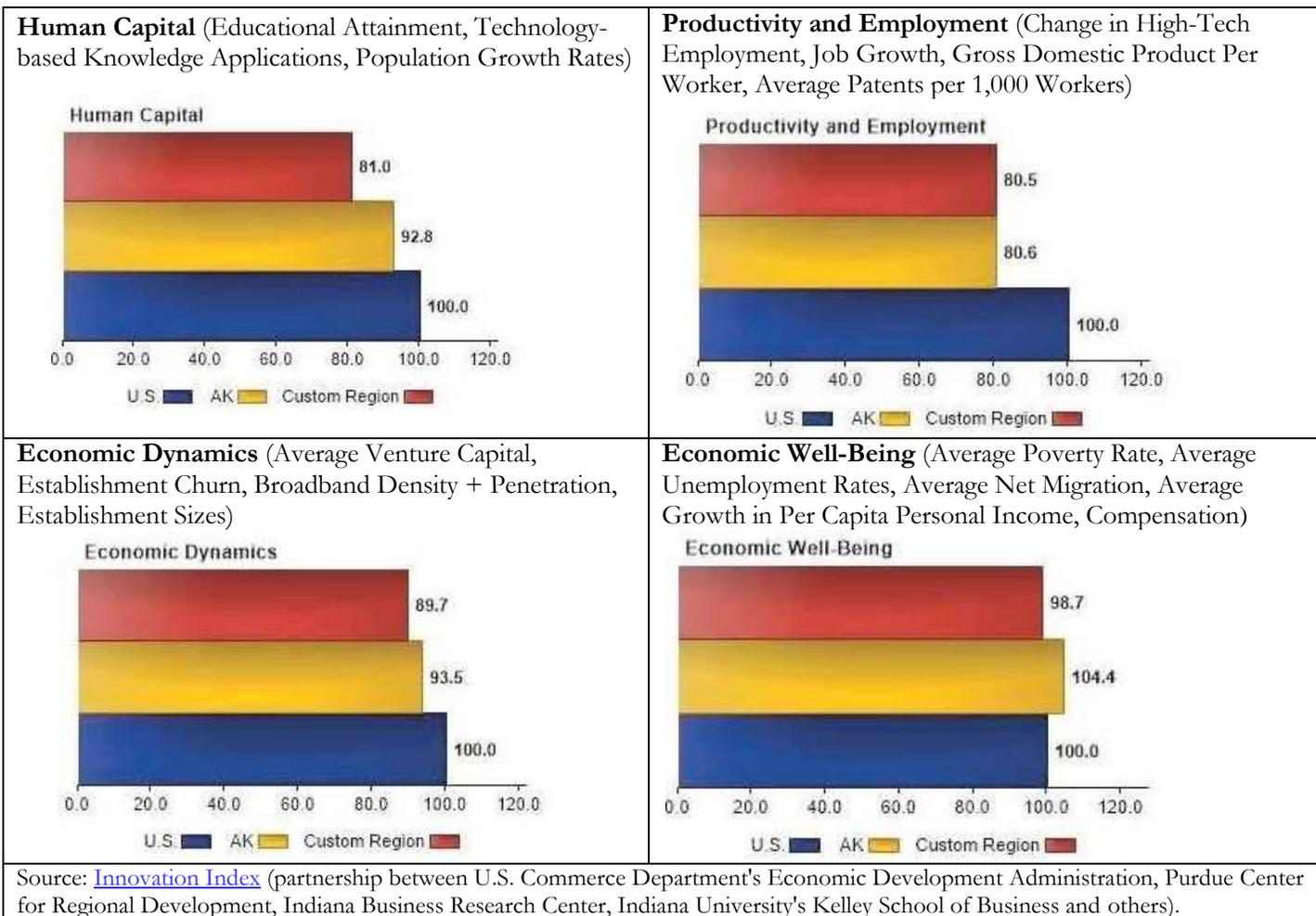
Blue = United States (baseline)

The index is calculated using the following indicators:

- Human Capital
- Economic Dynamics
- Productivity and Employment
- Economic Well-Being

Sub-scores for the each indicator are below.





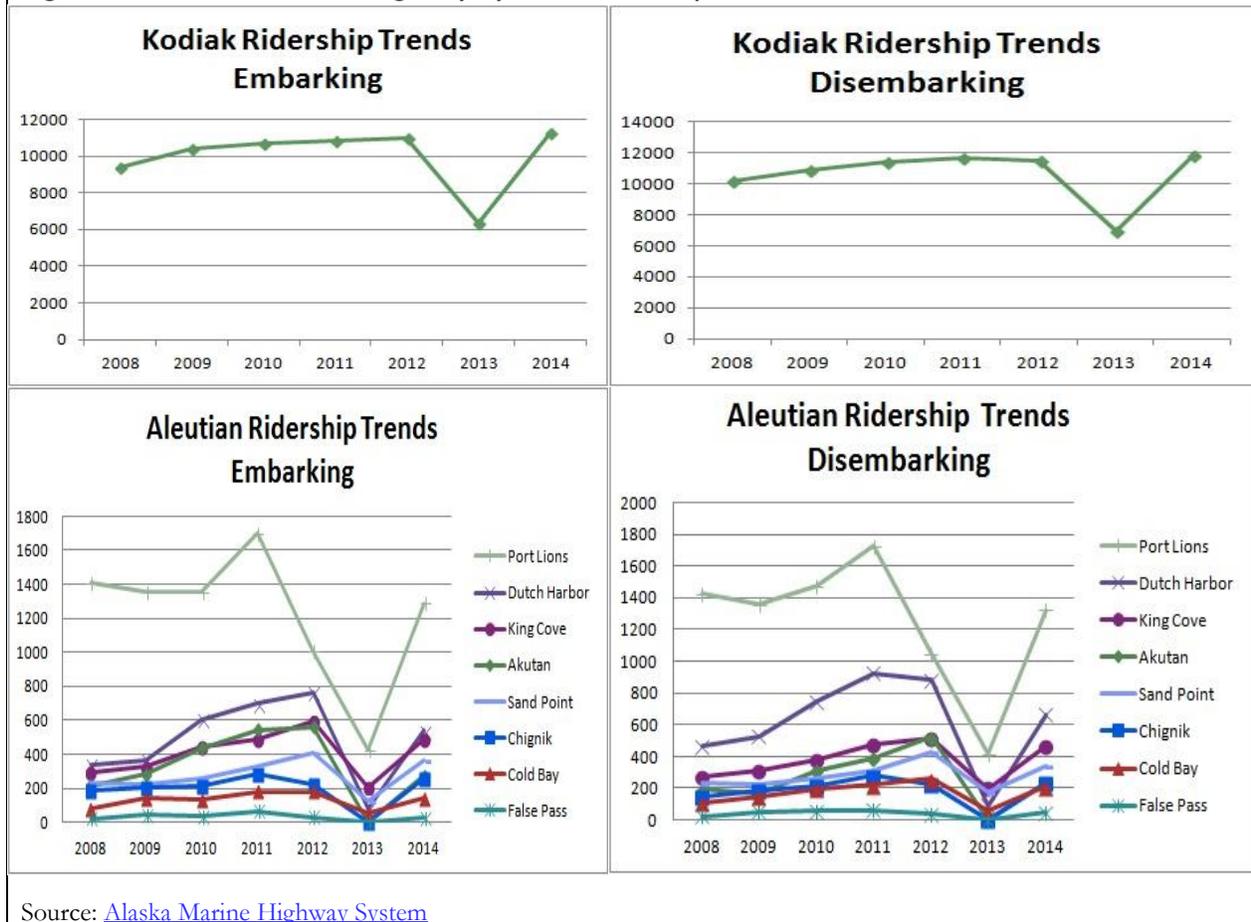
INFRASTRUCTURE

Southwest Alaska is a large region with a small and dispersed population. Maintaining infrastructure is difficult given challenging logistical cost of mobilization. Although, the resource rich region provides a market incentive to develop even expensive infrastructure in order to access resources. Some of the highest capacity fishing communities in the nation are located in Southwest Alaska. Expensive infrastructure is also justified given the military and scientific geo-location, particularly as the US's nearest region to Asia and the Arctic. The geography limits overland connectivity, leaving water and air as the primary modes of inter-community transportation.

WATER

Transportation by boat is the most common means of transporting goods around Southwest Alaska. Unalaska’s deep-water port is one of the most productive cargo ports in the United States, as an anchor for both regional fishing as well as domestic and international cargo. The Alaska Marine Highway system serves the Kodiak hub year-round, and the southern Aleutian Chain as far as west as Unalaska during the summer months, May-September; no scheduled marine services is available for communities of the Bering sea and those east of Unalaska. As seen in Figure 2.16, Kodiak sees the highest ridership. The sharp drop in Port Lions in 2012 is likely due to inconsistent ferry service due to summer dock work. Ridership dropped in all ports for 2013 due to the M/V Tustemena being out of service for an extended time. Normal service resumed 2014 and ridership trends rose. Given the high per-capita costs of operating AMHS and State budget shortfalls, a growing concern in Southwest Alaska is the long-term sustainability of reliable ferry service.

Figure 2.16 Alaska Marine Highway System: Ridership Trends, 2008-2014

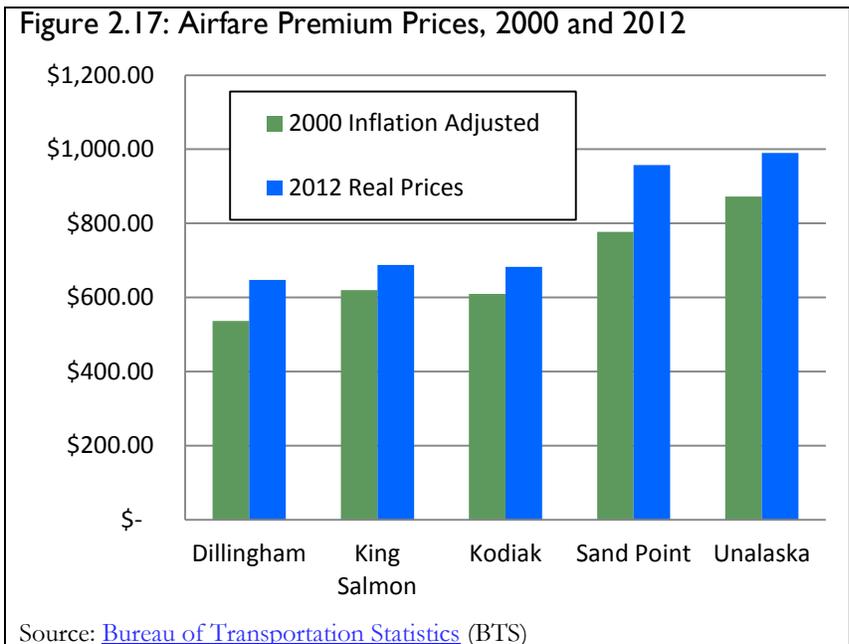


AIR

Aviation is the principle means of transporting people to communities throughout the Southwest region. A lack of interconnected roads means passenger and light goods such as mail and perishable food typically move by air. Extreme weather, poor visibility, long distances and low economies of scale all present challenges to the use of air as a primary mode of travel.

The cost of flying has increased significantly over the past

decade. Figure 2.17 shows 2000 inflation adjusted and 2012 real prices for airfare to select communities, to highlight that costs have risen faster than inflation vis-a-vis air service.¹ Adjusted for inflation, prices increased between 11 percent and 23 percent over the 12 year period.



ROADS

While small road connector some communities, Southwest Alaska has no overland connectivity.

COMMUNICATIONS

The SWAMC region has limited communication infrastructure. Connect Alaska compiles maps and information on the availability of broadband and internet connectivity around the state. Figure 2.18 shows that like other rural regions of the state, Southwest Alaska has limited broadband availability. Broadband connectivity, defined as the availability of download speeds of at least 768 Kbps and upload speeds of 200 Kbps, varies widely across the region. Table 2.4 shows the number of households with broadband service in each sub-region.

¹ Bureau of Transportation Statistics, Research and Innovative Technology Administration. (2013). *Average Domestic Airline Itinerary Fares by Origin City*. Retrieved April 18, 2014 from <http://www.transtats.bts.gov/AverageFare/default.aspx>

Area	Number of Households	Estimated Percent of Households w/ Broadband Service	Estimated Total Households w/ Broadband Service
Aleutians East Borough	553	ND	ND
Aleutians West Census Area	1212	ND	ND
Bristol Bay Borough	423	76	323
Dillingham Census Area	1563	94	1465
Kodiak Island Borough	4630	91	4202
Lake and Peninsula Borough	553	80	440
Total	8934	73	6495

Source: Connect Alaska

Network Connection Service Level	Fiber		Satellite		Microwave	
	Basic	Fastest	Basic	Fastest	Basic	Fastest
Kodiak Region	\$50 for 10 Mbps	\$130 for 22 Mbps	\$60 for 1 Mbps	\$200 for 2 Mbps	-	-
Bristol Bay Region	-	-	\$60 for 1 Mbps	\$200 for 2 Mbps	\$24 for .512 Mbps	\$150 for 6 Mbps
Aleutian Region	-	-	\$65 for .512 Mbps	\$110 for 1.5 Mbps	-	-

*Prices as of November 1, 2012

Source: [SWAMC](#)

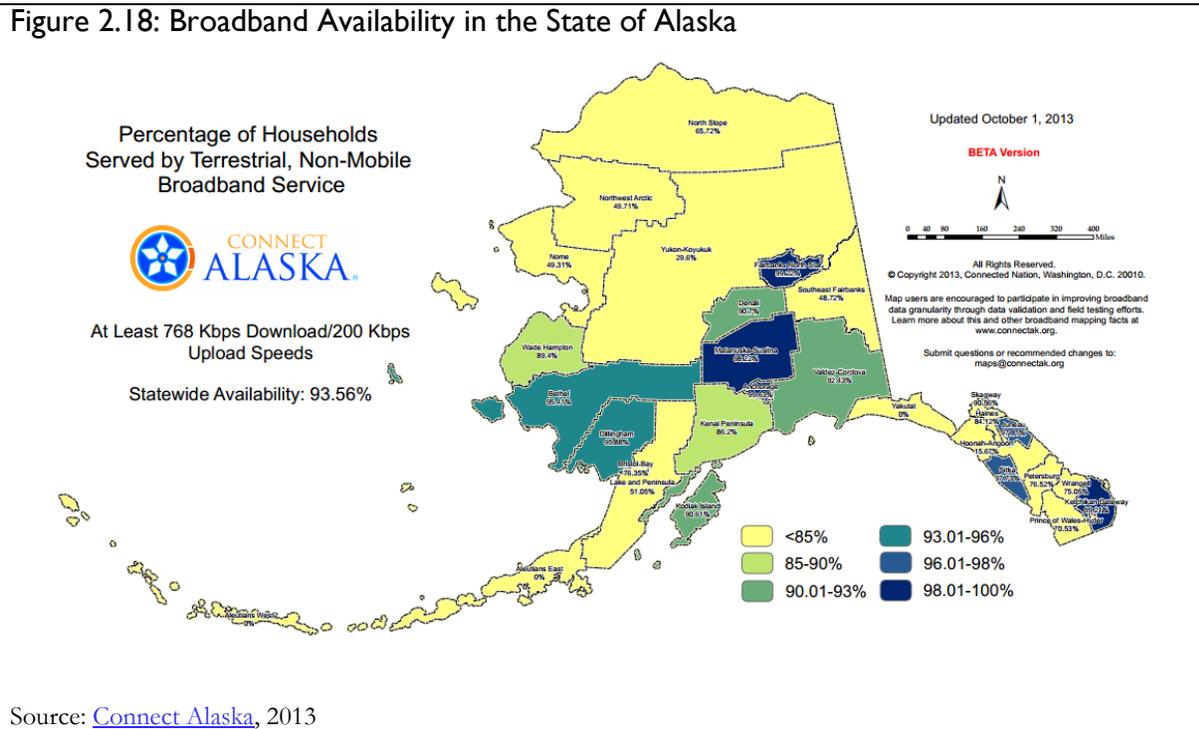
Dillingham and Kodiak have relatively more households with broadband service at 96% and 91% respectively; Bristol Bay Borough and Lake and Peninsula Borough have broadband coverage of 76% and 51%.² In the Aleutians, Dutch Harbor, Cold Bay, King Cove, and Sand Point have 1 Mbps broadband service available from TelAlaska³. Table 2.5 shows connection availability and costs in the SWAMC region as of November 1, 2012. This table shows that cost varies across the region, with prices ranging from \$24 for 0.512 megabits per second (\$0.05 per bit per second) for basic microwave in Bristol Bay to \$200 for two megabits per second of data via fast satellite connections in Kodiak and Bristol Bay.⁴ While network connection services still remain limited in many areas, recent

² Connect Alaska. (2014, May). *Facts and Figures*. Retrieved June 10, 2014, from Estimated Availability of Broadband Service by Borough, Census Area and Municipality: http://www.connectak.org/sites/default/files/facts-figures/files/ak_may_2014_table_5.pdf

³ Dave Goggins, TelAlaska, personal communication, July 29, 2014

⁴ Southwest Alaska Municipal Conference. (December 2012). *Regional Applications for a Digital Economy*. Accessed June 16, 2014 from http://www.swamc.org/files/RegionalApplicationsDigitalEconomy_FINAL.pdf.

investments in microwave and fiber optic networks are slowly bringing increasing levels of service to Southwest Alaska.



HOUSING

The housing stock in Southwest Alaska varies greatly between communities. According to interviews and conversations with within the SWAMC network, many communities are experiencing shortages of affordable housing. Table 2.6 shows information housing units, average household size and overcrowding percentages for the six boroughs/census areas as well as for the state. Four of the six areas are experiencing higher overcrowding levels than the state as a whole; in the Dillingham Census Area, 18% of occupied housing units are overcrowded, followed by 13% in the Lake and Peninsula Borough and 9% in both the Aleutians West Census Area and the Kodiak Island Borough.

Borough/Census Area	Housing Units				Household Size	
	Housing units	occupied	for sale/rent	seasonal /vacant	(%) of occupied units that are overcrowded	Avg. Household size
Aleutians East Borough	535	336	46	153	3.6%	2.3
Aleutians West Census Area	2,268	1,255	184	829	9.0%	2.4
Bristol Bay Borough	952	424	43	485	4.5%	2.4
Dillingham Census Area	2,416	1,369	128	919	18.0%	3.5
Kodiak Island Borough	5,323	4,445	112	766	9.0%	2.9
Lake and Peninsula Borough	1,605	562	45	998	13.0%	2.7
Statewide					6.0%	2.7

Source: [Cold Climate Housing Research Center](#), 2014 report.

ENERGY

Energy costs in Southwest Alaska are generally high with significant variability between communities. Annual household energy costs range from \$6,260 in the Kodiak Island Borough to \$8,410 in the Lake and Peninsula Borough. All SWAMC regions experience energy costs that are higher than the state average of \$4,681 per year and most regions are more than three times the national average of \$2,146 per year (see Table 2.7). Affordability is an issue for some communities although the region has fewer households spending over 30% of their income than the rest of the state and the nation. There are a number of energy cost saving programs in the state that are available to help reduce energy costs, including the Home Energy Rebate Program and Alaska Housing and Finance Corporation (AHFC)'s Weatherization Assistance Program. Participation in these energy programs varied widely across the region: 40% of Lake and Peninsula Borough households participated in a program, while only 4% of households participated from the Aleutians West Census Area.

Table 2.7 Energy use, cost, and participation in energy programs

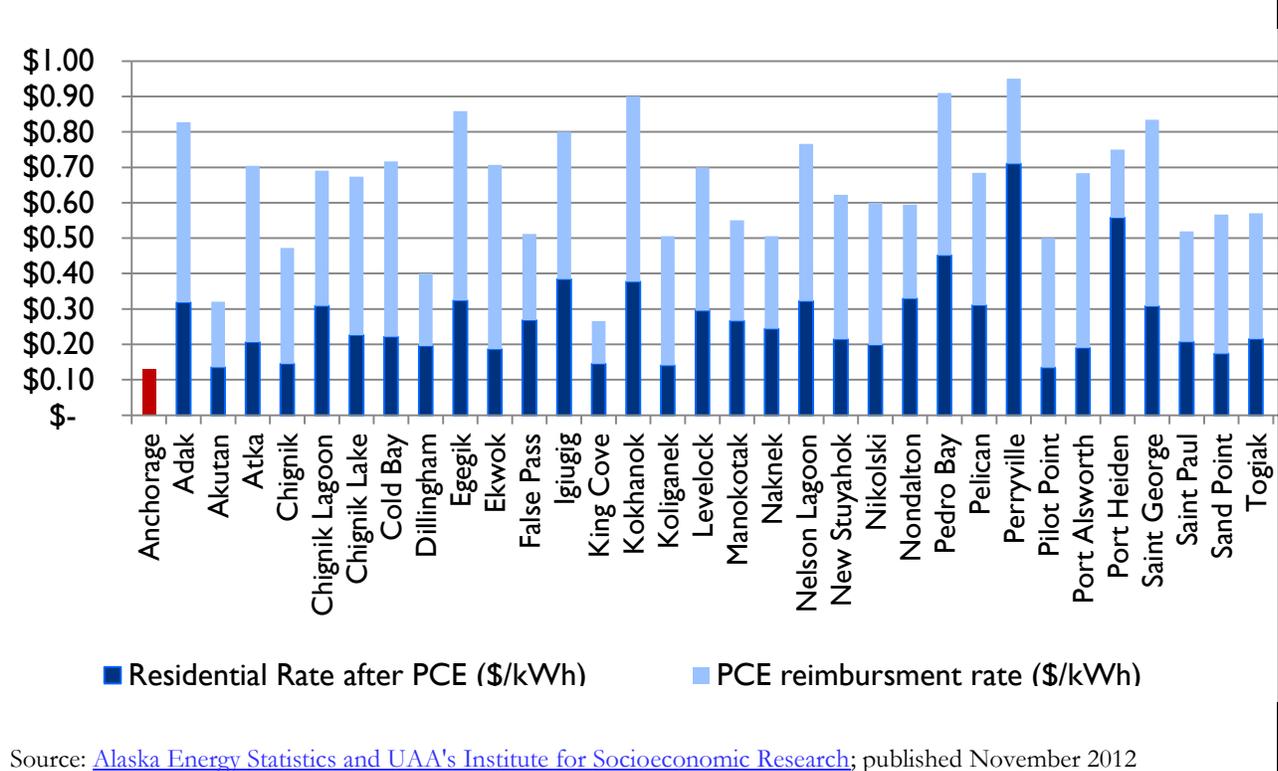
	Energy use/sf (BTUs)	Annual Energy Cost	% In Energy Programs	Households Spending Over 30% of Income on Housing
Aleutians East Borough	108,000	\$6,300	29%	21%
Aleutians West Census Area	120,000	\$ 6,620	4%	26%
Bristol Bay Borough	142,000	\$ 7,030	22%	16%
Dillingham Census Area	134,000	\$ 6,320	22%	20%
Kodiak Island Borough	117,000	\$ 6,260	16%	34%
Lake and Peninsula Borough	139,000	\$ 8,410	40%	24%
Municipality of Anchorage	141,000	\$ 2,790	23%	35%
Statewide	137,000	\$ 4,681	21%	31%
Nationwide		\$ 2,146	n/a	37%

Source: [Cold Climate Housing Research Center](#), 2014 report.

The Alaska Energy Authority's Power Cost Equalization (PCE) program subsidizes the cost of electricity for approved rural communities. The PCE subsidy has helped buffer households from the increasing rise in energy costs. Figure 2.19 shows the residential energy cost per kilowatt hour before and after the PCE subsidy. While the program helps buffer households from increasing energy costs,

it only applies to residential energy costs. As a result, commercial energy costs remain very high in Southwest Alaska.

Figure 2.19: Residential Energy Costs and PCE Reimbursements, 2011



RESOURCES

FISH

Southwest Alaska’s economy is largely centered on the region’s abundant marine resources. Southwest Alaska is home to four of the top ten ports in the United States by volume and six of the top ten ports in the United States in terms of value (Figure 2.20).

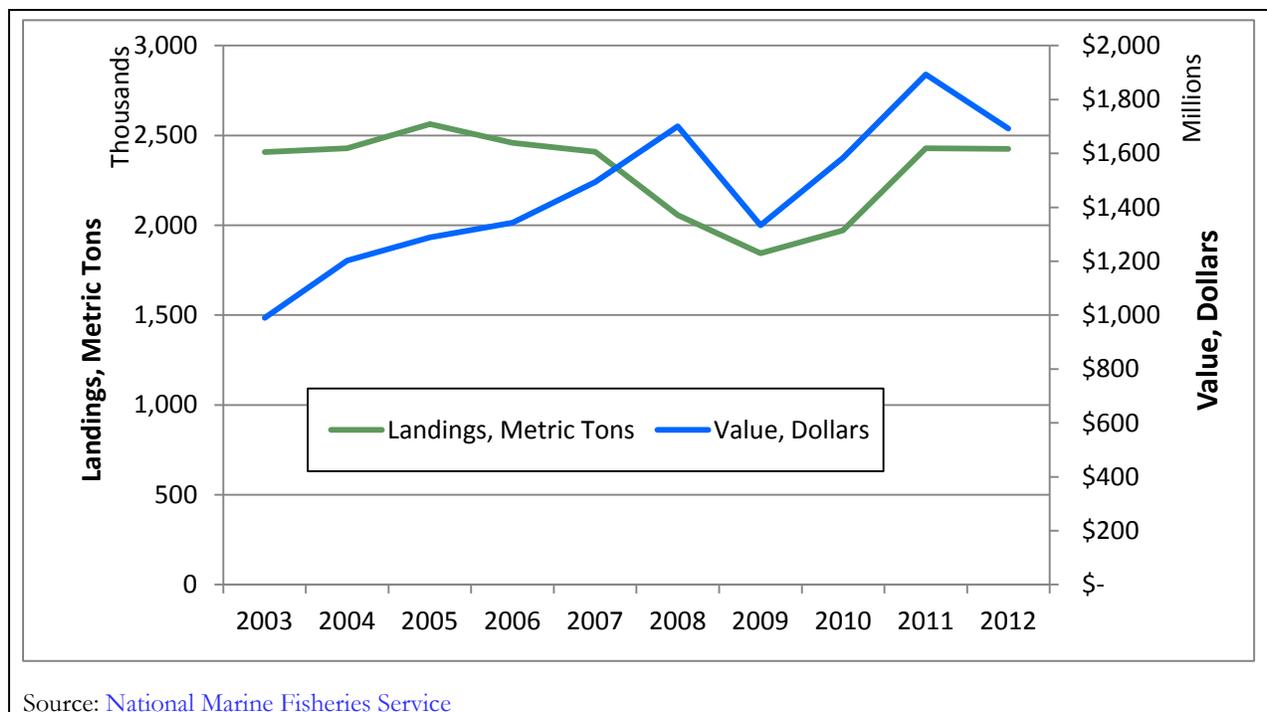
Regional fishery landings declined in 2008-2010 but then increased to almost 5 billion pounds in 2011 and 2012 (Figure 2.21). Similarly, fishery values dipped in 2009 but have otherwise been steadily increasing, and total price per pound has increased from roughly \$0.28 to \$0.34.

Figure 2.20: Top 10 Ports in the U.S.

Volume, Million Pounds				Value, Million Dollars			
	Port	2011	2012		Port	2011	2012
1	Dutch Harbor, AK	706	752	1	New Bedford, MA	\$ 369	\$ 411
2	Empire-Venice, LA	532	500	2	Dutch Harbor, AK	\$ 247	\$ 214
3	Aleutian Islands (other), AK	431	456	3	Kodiak, AK	\$ 182	\$ 170
4	Kodiak, AK	372	393	4	Aleutian Islands (Other), AK	\$ 129	\$ 119
5	Reedville, VA	414	389	5	Honolulu, HI	\$ 83	\$ 100
6	Intracoastal City, LA	327	345	6	Alaska Peninsula (Other), AK	\$ 138	\$ 99
7	Pascagoula-Moss Pt., MS	267	250	7	Empire-Venice, LA	\$ 99	\$ 80
8	Cameron, LA	227	228	8	Bristol Bay (Other), AK	\$ 86	\$ 79
9	Alaska Peninsula (other), AK	211	191	9	Naknek, AK	\$ 100	\$ 78
10	Astoria, OR	144	170	10	Galveston, TX	\$ 47	\$ 74

Source: [NOAA National Marine Fisheries Service, Office of Science and Technology](#).

Figure 2.21: Total Alaska Fisheries Value + Landings Trends



The Western Alaska Community Development Quota (CDQ) Program is a federally managed economic development program. Three of the six CDQ groups established by the program are in Southwest Alaska: the Aleutian Pribilof Islands Community Development Association (APICDA), the Bristol Bay Economic Development Corporation (BBEDC), and the Central Bering Sea Fisherman’s Association (CBSFA).

Table 2.8: CDQ Figures for Southwest Alaska CDQ Groups, 2006-2010

	APICDA	CBSFA	BBEDC	TOTAL
annual investments in fishery-related endeavors, 2006-2010	\$4,700,000	\$6,800,000	\$10,000,000	\$ 21,500,000
direct + indirect employment*, 2006	129	138	241	508
direct + indirect employment*, 2010	226	179	709	1114
jobs: % that go to member residents (2010)	39%	84%	95%	82%
*note: APICDA's employment numbers only include direct employment				
Source: Alaska DCCED: Decennial Review Reports , January 2013				

These three organizations represent 24 of the 65 communities under the CDQ umbrella (within a fifty mile radius of the Bering Sea coast). In 2013, Alaska’s Department of Commerce, Community and Economic Development (DCCED) released the decennial review of the CDQ groups, which

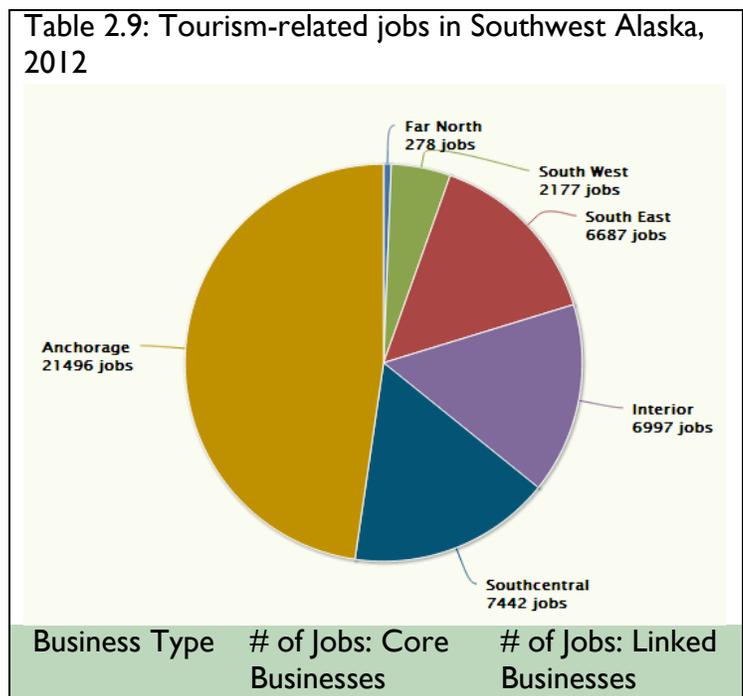
includes information from 2006-2010. Table 2.8 includes the highlights of the decennial review. According to DCCED’s reports, the CDQ groups invested a combined \$21.5 million dollars each year in the region over the five-year period. In 2010, the CDQ groups employed a combined 1,114 workers (direct and indirect), with an average of 82% of jobs going to member residents in the region. Nearly all jobs supported by BBEDC and CBSFA went to residents: 95% and 84% respectively, and 39% of jobs supported by APICDA went to member residents.

MINING

The Southwest region has rich mineral wealth due to its history of volcanism. However, much has remained inaccessible due to the harsh climate, high energy costs and limited transportation and infrastructure. Interest in the region’s minerals has increased over the past decade. According to a 2012 report by the Alaska Miner’s Association *The Economic Impacts of Alaska’s Mining Industry* In 2010, over half (52%) of mining expenditures in Alaska were made in the Southwest Alaska (\$137 million). Several mining projects, if developed, have the potential to increase the region’s employment over the next several years, including Donlin Gold (outside of SWAMC boundaries) and the Pebble Project.

OIL & GAS

The region has offshore oil and gas deposits in the North Aleutian Basin. Currently the US has decided not to pursue extraction, and the prospects have limited further with presidential designation to withdraw the North Aleutian Basin for potential oil and gas lease sales.



TOURISM

Compared with the rest of the state, tourism growth in Southwest Alaska is very modest. Higher costs, complicated travel logistics, and limited transportation infrastructure have limited visitation and tourism development in the region. However, recent interests and investment in tourism are encouraging. At a statewide level, the Alaska

Lodging	324	0
Attractions	44	0
Transportation	10	710
Retail	0	722
Dining	0	367
Info + Booking	0	0
TOTAL: 2177 jobs	378	1799
Source: The Alaska Partnership for Economic Development		

Partnership for Economic Development (APED) recognizes that tourism is a growing industry in Alaska with considerable potential for additional growth. Using 2012 Alaska Department of Labor data, APED compiled information on the tourism cluster, including the distribution of tourism jobs around the state. The report concluded that the tourism industry employs approximately 2,177 people in Southwest Alaska, which is about 5 percent of the total tourism sector employment for the state. Table 2.9 shows the approximate number of jobs per business type that are directly and indirectly related to tourism in the region.

The Alaska Department of Commerce, Community and Economic Development (DCCED)'s 2011 Alaska Visitor Statistics Program (AVSP) provides some interesting insights about tourism in Southwest Alaska. It should be noted that the AVSP report includes the Y-K region, which is not within the SWAM region. Table 2.10 shows that visitors to the Southwest region stayed on average over a week, longer than visitors to any other part of the state. Two-thirds of visitors to the region were visiting for Vacation or Pleasure. Figure 2.22 shows the amount of industry spending in the region during the 2011-2012, 2012-2013, and 2013-2014 seasons.

Out of State Visitors: Average Length of Stay by Region (days)			Southwest Region: Trip Purpose	
Southeast	5.7	5.5	Vacation/pleasure	66%
Southcentral	5.8	5.9	Friends/relatives	16%
Interior	4.3	4.2	Business Only	12%
Southwest	7.3	7.5	Business/pleasure	6%
Far North	6.1	5.7		
Source: Alaska Visitor Statistics Program (AVSP) VI -Summer 2011				

Figure 2.22: Visitor Industry Economic Impacts by Region, 2011-2012, 2012-2013, and 2013-2014

	2011-12 Impacts	2012-13 Impacts	2013-14 Impacts
Total Visitor Industry Spending	\$3.72 billion	\$3.93 billion	\$3.92 billion
Southcentral	\$1.97 billion	\$2.05 billion	\$2.06 billion
Southeast	\$1.00 billion	\$1.10 billion	\$1.09 billion
Interior	\$605 million	\$631 million	\$626 million
Southwest	\$116 million	\$120 million	\$121 million
Far North	\$29 million	\$30 million	\$30 million
Total Employment Impacts	37,800 jobs	39,000 jobs	38,700 jobs
Southcentral	18,900 jobs	19,200 jobs	19,200 jobs
Southeast	10,200 jobs	10,900 jobs	10,800 jobs
Interior	7,000 jobs	7,100 jobs	6,900 jobs
Southwest	1,400 jobs	1,500 jobs	1,500 jobs
Far North	300 jobs	300 jobs	300 jobs
Total Labor Income Impacts	\$1.24 billion	\$1.32 billion	\$1.31 billion
Southcentral	\$580 million	\$601 million	\$604 million
Southeast	\$370 million	\$407 million	\$405 million
Interior	\$240 million	\$251 million	\$246 million
Southwest	\$42 million	\$44 million	\$44 million
Far North	\$11 million	\$12 million	\$12 million

Source: [Alaska DCCED: Economic Impact of Alaska's Visitor Industry, 2013-2014 update](#)

While still only a fraction of the overall statewide impacts, spending increased from \$116 million to \$120 million and created an additional 100 jobs between the 2011-2012 and the 2012-2013 seasons. That increase leveled out in the 2013-2014 season, with jobs available remaining the same and the Southwest industry only seeing a \$1 million rise in revenue.

SUBSISTENCE

Subsistence, defined as the customary and traditional uses of wild foods and resources, is an important aspect of the economy of Southwest Alaska. Subsistence resources account for a substantial portion of all economic activity and value in many of the communities in the region. In some of these communities, opportunities for year-round employment in the cash economy are limited. Subsistence practices supplement any earnings from the cash economy serve as an alternative to public assistance, and mitigate the impact of the extreme seasonality. Unfortunately, subsistence data is limited and there is very little information available for Southwest Alaska.

INDUSTRY AND OCCUPATION TRENDS

As discussed above, the Southwest Alaska region's economy is largely based on seafood. Due to many factors including seasonality of employment, proprietary information of large single-owner processing facilities and the high numbers of self-employed individuals, creating an accurate

employment and industry profile of the region is challenging. Nonetheless, it is helpful to look at the available indicators to better understand the economy of Southwest Alaska.

In 2004, SWAMC published a report, *The Economic Geography of Southwest Alaska*, to evaluate the region’s contributions and economic value to the state of Alaska and the nation as a whole. While somewhat dated, the information still gives a helpful perspective on the importance of the region’s economy and the scale of the region’s fishing industry. According to the report, total industry output for the region represented about 6% of the total output of the state (\$2.2 billion out of \$38 billion for the state in 2004 dollars). Fish processing in the region accounts for 67% of statewide fish processing employment and 68% of fish processing output in Alaska.

Table 2.11 Southwest Alaska Employment Location Quotient by Sector (US = 1)

Industry	2008	2009	2010	2011	2012
Base Industry: Total, all industries	1.00	1.00	1.00	1.00	1.00
Natural resources and mining	-	-	-	-	-
Construction	-	0.34	-	-	-
Manufacturing	4.40	3.32	3.41	3.53	3.46
Trade, transportation, and utilities	0.70	0.68	0.70	0.68	0.69
Information	-	-	-	-	-
Financial activities	0.58	0.58	0.57	0.50	-
Professional and business services	-	0.19	-	-	0.19
Education and health services	-	-	-	-	-
Leisure and hospitality	0.53	0.49	0.48	0.47	0.46
Other services	0.57	0.56	0.58	0.54	-
Unclassified	-	-	-	-	-

Source: [US Dept. of Labor, Bureau of Labor Statistics](#)

The U.S. Department of Labor publishes Quarterly Census Employment and Wages (QCEW) data which includes the number of people employed in all industries for a particular region. The QCEW data for Southwest Alaska is limited because employment information for some of the largest employers is kept confidential. Table 2.11 uses location quotient calculations to compare the concentration of employees in various industries to the rest of the nation between 2008 and 2012. The U.S. is established as a baseline of 1; values above one indicate a higher concentration of industry employment in the SWAMC region, and values lower than 1 indicate a lower concentration of employment for that industry in the SWAMC region. Of the industries with available information, the manufacturing industry is the one with a location quotient higher than the U.S. This is

unsurprising because Manufacturing includes seafood processing, which is one of the largest sources of employment in the region.

Looking at non-employer statistics is a helpful way to understand the self-employment picture for the region. Non-employment data comes from IRS tax returns and includes data for all establishments with no employees. In 2011 there were 3,404 non-employer firms in the Southwest Alaska region that generated a combined \$183 million. Figure 2.23 shows the number of non-employer establishments for the top 12 industry classifications. In 2011 there were 1,906 non-employment firms in the agriculture, forestry, fishing and hunting classification. This is further evidence of the high number of individuals involved in the fishing industry in Southwest Alaska.

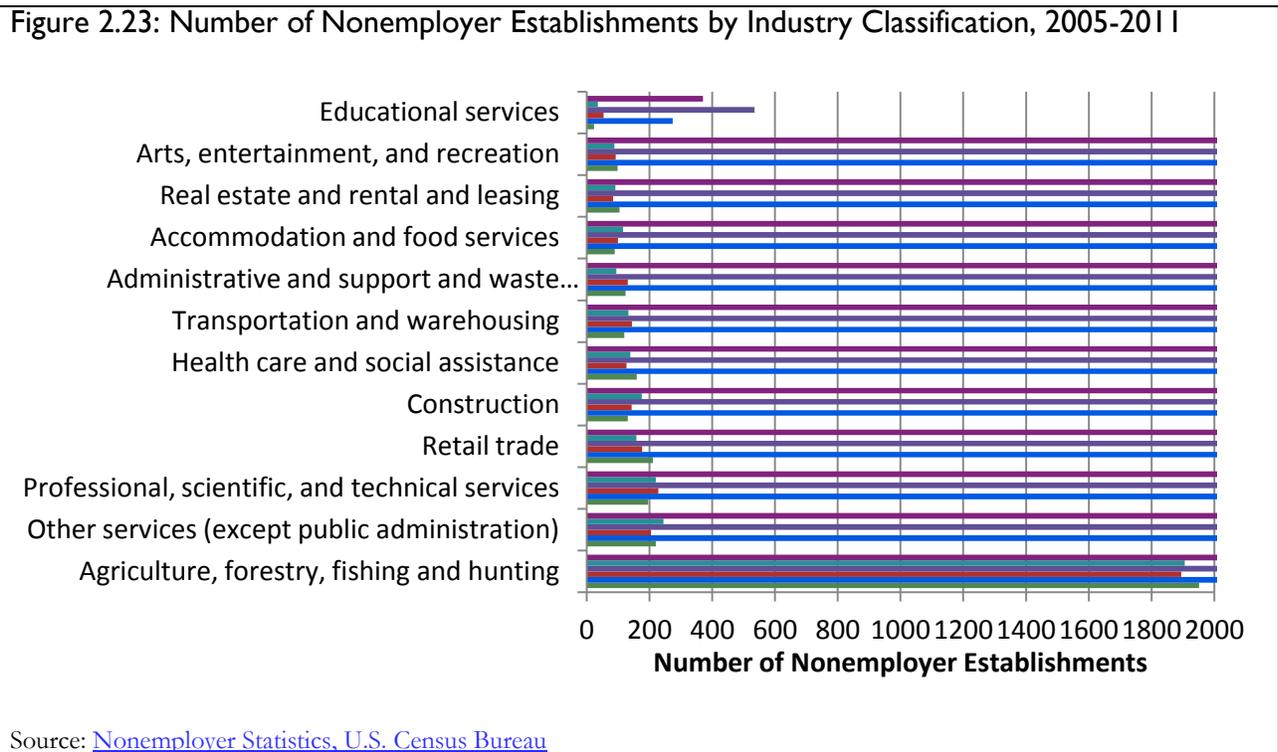


Table 2.12 shows the top occupations for the Southwest Alaska region between 2010 and 2012. This information includes Wade Hampton and Bethel Census Areas, which are not in the SWAMC region. The information comes from the Alaska Department of Labor and Workforce Development’s Occupational Database, which only includes occupational information for Alaska residents. It does not include federal workers, military individuals, the self-employed or nonresidents. Among residents employed in the region, the most popular occupation in 2012 was Meat, Poultry, and Fish Cutters and Trimmers with 1,024 individuals. This is a sharp increase from the year before, when there were 731 resident employees working in that occupation.

Table 2.12 Occupations, 2010-2012

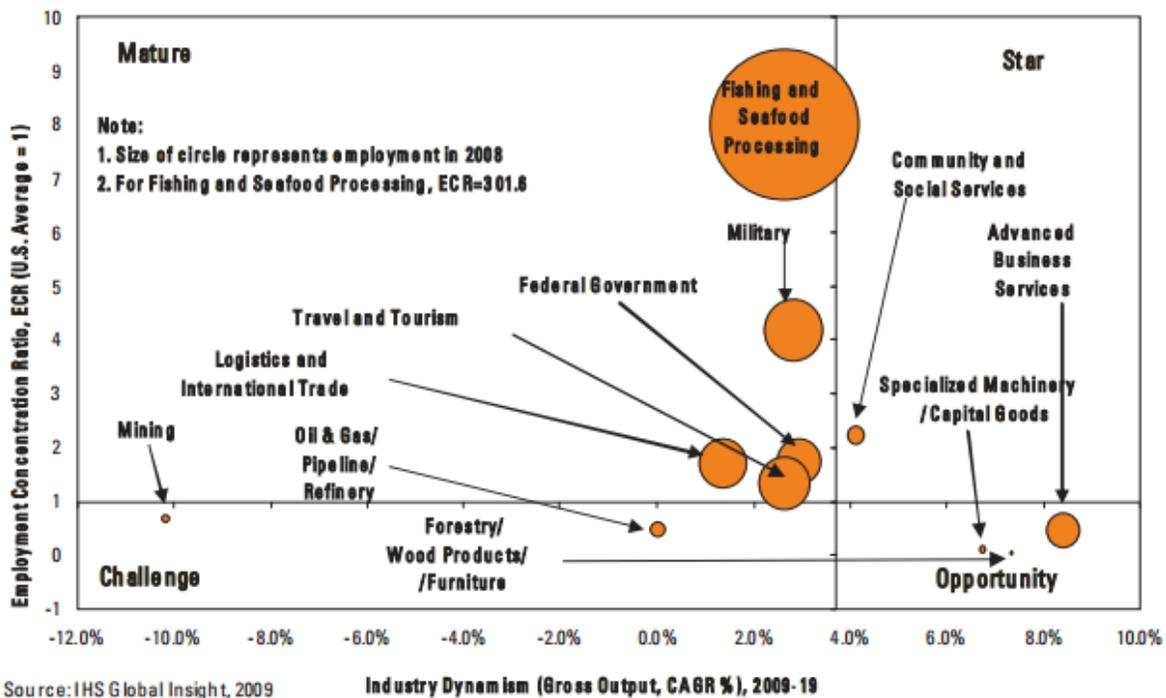
Job	2010	2011	2012
Meat, Poultry, and Fish Cutters and Trimmers	703	731	1,024
Teacher Assistants	855	922	869
Construction Laborers	939	933	851
Cashiers	539	598	583
Laborers and Freight, Stock, and Material Movers, Hand	559	583	533

Source: [Alaska Department of Labor and Workforce Development, Research and Analysis](#)

Another useful analytic tool for comparing the industry and sector performance of the region is through cluster analysis. A cluster is a geographic concentration of interconnected businesses, suppliers, services providers and institutions. The Alaska Partnership for Economic Development prepared a cluster analysis for the SWAMC region as a part of a statewide cluster analysis in 2010.

Figure 2.24 shows the results from the Southwest Alaska cluster analysis. While the data is from 2009 it still provides a useful overview of clusters in the region. The size of the circle indicates the relative size of employment for a particular cluster. The y-axis includes the employment concentration ratio, which is the same as a location quotient; a score of 1 is equal to the baseline U.S. level. The x-axis measures “Industry Dynamism, which the report defines as the relative growth rate. This figure is determined by adding up the real gross output of each industry along with the compound annual

Figure 2.24: Southwest Clusters



Source: The Alaska Partnership for Economic Development. Date comes from IHS Global Insight, 2009.

growth to forecast the long-term potential of a particular cluster. Notably the Fishing and Seafood Processing cluster has a location quotient of 301.6. The community and social services cluster, while small in comparison, has a location quotient of 2.2 times the national average and industry dynamism estimated to be 4.1 percent. Other clusters with location quotients higher than the national average include the Military cluster, Federal Government cluster, Travel and Tourism cluster and Logistics and International Trade cluster.

This CEDS document focuses primarily on the following existing and emerging clusters:

- Fishery, Seafood and Maritime Cluster
- Transportation, Shipping and Logistics Cluster
- Travel and Tourism Cluster
- Government Cluster

These clusters will be discussed in more detail in the following chapters.

CHAPTER 3: SWOT ANALYSIS

(STRENGTHS, WEAKNESSES, OPPORTUNITIES, THREATS)

INTRODUCTION

The key to increasing Southwest Alaska’s regional wealth and overall economic productivity is leveraging the area’s strengths (S), taking advantage of existing and future opportunities (O), while also mitigating the region’s weakness (W) and outside threats (T). A “SWOT analysis” helps determine what regional assets could be better leveraged to build local and regional capacity, support economic growth and develop strategic direction for the Southwest Alaska region. The strategic direction that develops from this process helps to outline programs, projects and activities towards achieving SWAMC’s economic development mission (see SWAMC Work Plan, Chapter 4); the analysis also highlight area’s where SWAMC must engage other regional, state and federal partners to be successful. The SWOT analysis also discusses Southwest Alaska’s economic resiliency, or ability to ensure long-term economic success, viability and durability; it highlights the ways in which the region is prepared and can be responsive to change. SWOT analysis categories are further explained below.

- **Strengths** – Existing relative competitive advantages. What is the state of the regional economy? What sectors and clusters are growing? What is driving these improvements? (Existing/Internal Advantages)
- **Weaknesses** – Existing relative competitive disadvantages. (Existing/Internal Disadvantages)
- **Opportunities** – Occasions for regional improvement or progress. How is the region positioned in the national and global economies? (External/Potential Advantages)
- **Threats** – Threats to regional improvement or progress. How is the region not positioned in the national and global economies? (External/Potential Disadvantages)

OVERVIEW

Southwest Alaska’s rich marine resources are the foundation of the region’s economy. As highlighted in the background in Chapter Two, the fishing industry is the region’s largest employer and contributor to the Southwest Alaska economy. At the same time, the public sector also employs many residents in the region, which provides steady income and benefits to Southwest Alaska. Despite its small population, the region also continues to secure both federal and state funding for many of the area’s projects and programs. This speaks to the region’s strong political will and ability to effectively advocate for local and regional level programs and projects. Adding to these strengths is the area’s natural landscape and abundant outdoor recreation opportunities. The potential for both consumptive and non-consumptive recreation activities include world-class wildlife viewing, hunting, fishing, boating, hiking, snowmachining – the options are endless for an experience at the edge of the Last Frontier.

Despite its strengths and potential opportunities, Southwest Alaska is still a relatively small population spread over a very large area (less than 30,000 people over 60,000 square miles⁵). As a result, the region has limited communication infrastructure, high energy costs and major transportation challenges. Declines in state and federal funding further threaten the region's economic resiliency. Add to these threats and regional weaknesses the fact that even when there are potential job opportunities outside of the region, a lack of proper training, substance abuse issues, non-competitive salaries, high cost of living, and numerous other barriers, make it difficult for residents to connect with job opportunities. Today, many entry-level jobs are left unfilled, or they are taken by an influx of nonresident or seasonal employees. This trend is most prevalent in the region's thriving fishing industry, although most of these jobs are held by nonresident workers. In recent years, statewide and regional efforts have begun to identify and address workforce development needs, especially in the fishery, seafood and maritime industry.

Outlined below is a detailed explanation of these various regional strengths, weaknesses, opportunities and threats, organized by key focus area including: workforce development, resources, energy, infrastructure and partnerships. This chapter, coupled with the SWOT graphic presented in the Executive Summary, set the stage and helps inform the Work Plan presented in Chapter Four. The SWAMC Board of Directors, Business Council, and Members informed SWOT development to identify goals, objectives and strategies that support the region's strengths and mitigate existing challenges and potential threats.

⁵U.S. Department of Commerce, *US Census Bureau State & County QuickFacts*. Retrieved on May 27, 2014 from http://quickfacts.census.gov/qfd/maps/alaska_map.html

STRENGTHS

Southwest Alaska is fortunate to have a diverse array of resources, partners and assets that support the regional economy. The area's abundant regional, state and federal partnerships and investment, combined with the region's marine animals, minerals, stranded energy potential, geostrategic location and natural environments comprise the base of Southwest Alaska's existing competitive advantage. Illustrative examples of these regional strengths follow.



“Unique beauty of the land, water, and cultural heritage.”

“Location and proximity to natural resources.”

“Working with a group of people who are used to looking outside of the box for answers to complex problems.”

- *SWAMC Business Council members,
"What is the primary advantage of doing
business in Southwest Alaska?"*

WORKFORCE DEVELOPMENT

There have been extensive recent efforts to identify and address the region's workforce needs. Southwest Alaska is well-positioned to expand and improve the residential workforce due to its young, trainable population. With increased training and the opportunity to develop a roadmap for connecting workers to these programs, there is potential to hire qualified local residents. Current efforts and potential SWAMC partners in the workforce development focus area include:

- **Job Growth** – Jobs are being created faster than people are moving to the region. The job growth to population growth ratio between 1997 and 2008 was 4.88, which is more than four times the national average of 0.93.⁶
- **SWAMC Labor Force** – The region's population is relatively young and the labor force has been slowly increasing since it dipped in the late 1990s (see Background chapter for trend information).
- **Training** – The University of Alaska's Fisheries, Seafood and Maritime Initiative (FSMI) was created in 2011. FSMI brings together business, academic, policy and community leaders who are working to identify workforce, economic and scientific needs related to Alaska's Fishery, Seafood and Maritime industries. FSMI will ultimately release recommendations on how to develop and sustain programs that fulfill the workforce development needs of Alaska.
- **Confronting Substance Abuse** – Partners in the region are working to develop strategies that address substance abuse concerns, one of the largest barriers to employing local

⁶ U.S. Commerce Department's Economic Development Administration (2010). *Innovation Index*. Retrieved May 20, 2014 from Stats America: http://www.statsamerica.org/innovation/innovation_index/region-select.html

residents, and keeping them employed. For example, the ‘A Team’ – a partnership between the Aleutian Pribilof Island Community Development Association, Aleut Corporation, Aleutian Housing Authority, Aleutians East Borough, Aleutian Pribilof Islands Association, held a substance abuse conference - Reclaim Alaska, focusing on support and prevention. SWAMC held a follow up component with all members of the region in coordination with the Annual Economic Summit and Membership Meeting based on stakeholder requests for information on this important and challenging subject.

- **SWAMC Programs** – SWAMC’s Science, Technology, Engineering and Math (STEM) Program explores developing human capital to take advantage of locally available resources that can support the regional economy over the long-term. As part of the SWAMC STEM Program, the organization’s Broadband Initiative promotes anchor institution use of technology and broadband internet to expand learning, working, collaborating and living, through access to communication technologies. This program supported the Kodiak Public Library in opening a new Innovation Center featuring advanced computer hardware and software to provide training opportunities to the local population. Other successes were participation in Kodiak and Bristol Bay *Science Night*, which highlights local providers of science-based careers and gets students excited about STEM opportunities in their communities; each attracted 200 attendees. The Kodiak event has become so popular that it is now an annual event, managed by the Kodiak School District. Additionally, SWAMC STEM Coordinators travel to regional communities in conjunction with Junior Achievement, a valuable program covering financial literacy and workforce skills, identified as critical gaps by private sector leaders. Programs currently under development include engagement with student and citizen scientists to collect baseline data for education as well as building foundations for future development projects, such as mariculture and renewable energy projects. Successes in the STEM program point to the need and interest of actively engaged citizens in areas important for developing local potential.
- **AKCIS** – The Alaska Career Information System (AKCIS) is an internet-based workforce development tool available to any Alaskan resident through the Alaska Commission on Postsecondary Education (ACPE). Many schools within the region already have access to the tool through their classrooms. However, a lack of training leads to underutilization of the software. A potential partnership with ACPE could allow for more thorough training and frequent use of AKCIS, which includes resume-building, interview preparedness, and workforce readiness assessments.

RESOURCES

The SWAMC region has an abundance of raw resources. In particular, the region boasts one of the most productive fisheries in the world. Southwest Alaska also has mineral, oil, and gas deposits, some of which are in development and others which are being considered for development. The region has intrinsic value, including beautiful landscapes, abundant wildlife, welcoming communities and strong cultural identities. Outlined below are key highlights of the area’s critical resource base, including current figures on how the region rates compared to other fishing regions of the world, and community/regional infrastructure that supports fisheries, and potentially other resource development industries (e.g., oil, gas, mineral development, tourism, etc.).

- **Strength of the Fishery** – The commercial fishing industry harvests 5.6 billion pounds each year from Alaska waters, equivalent to 54 percent of all US domestic harvest.⁷ The majority of Alaska landings occur in state and federal waters in the SWAMC region. According to NOAA’s Office of Science and Technology, in 2012 communities in the SWAMC region had six of the top ten ports in the United States in terms of value and four of the top ten ports in terms of volume (see Background chapter for the complete list of top ports).^{8,9}
- **Seafood Processing** –Eighteen communities offering land-based processing facilities, and 22 vessel based processors support the logistics of moving product from mobile vessels to global markets.¹⁰ Seafood processing in Alaska employs residents year-round. As stated by a SWAMC Business Council member: “When a processor opens a new facility, you have to hide if you don’t want to work.” Akutan is the self-proclaimed largest processing plant in North America, though confidentiality obscures this fact.¹¹ Saint Paul offers both the northernmost processing facility in the United States, as well the largest crab processing facility in the U.S.¹² Trident Seafoods employs thousands of workers in its many seafood processing facilities. According to Trident’s website, the Akutan shore plant is the largest seafood production facility in North America, processing over three million pounds of seafood daily and housing up to 1,150 employees.¹³ Saint Paul is home to the largest crab processing facility in the world, processing 500,000 pounds of crab daily and employing up to 400 workers in peak season.¹⁴ Unisea’s principal seafood processing facility on Amaknak Island in Dutch Harbor which processes Pollock, crab, halibut, cod and more, and employs up to 1,200 employees during the winter fishing season.¹⁵ Icicle Seafoods also has shore plant facilities in Egegik, Larsen Bay and Wood River, which collectively employ about 1,000 employees.¹⁶ Peter Pan Seafoods has major processing facilities in King Cove, Dillingham and Port Moller, employing 500, 320 and 140 people respectively during peak production periods.¹⁷ Kodiak Island has 13 state registered fish processing facilities, ranging in size from family owned boutique smokehouses to large scale industrial operations capable of processing

⁷ National Marine Fisheries Service. 2014. Fisheries Economics of the United States, 2012. U.S. Dept. Commerce, NOAA Tech. Memo. NMFS-F/SPO-137, 175p. Available at: <https://www.st.nmfs.noaa.gov/st5/publication/index.html>.

⁸ NOAA. (2012). *NMFS*. Retrieved May 22, 2014, from Leading Ports by Dollar Results: http://www.st.nmfs.noaa.gov/pls/webpls/MF_LP_PORT_YEAR.RESULTS

⁹ NOAA. (2012). *NMFS*. Retrieved May 22, 2014, from Leading Ports by Poundage Results: http://www.st.nmfs.noaa.gov/pls/webpls/MF_LP_PORT_YEARP.RESULTS

¹⁰ State of Alaska Division of Environmental Health. (2014). *Food Safety and Sanitation Program*. Retrieved May 22, 2014, from Land Based Processors: http://alaska.state.gov/alaska/seafood_listing.cfm?step=land-based

¹¹ Trident Seafoods. (n.d.). *Company*. Retrieved May 22, 2014, from Alaska Plants: http://www.tridentseafoods.com/company/plants_alaska.php

¹² Trident Seafoods. (n.d.). *Company*. Retrieved May 22, 2014, from Alaska Plants: http://www.tridentseafoods.com/company/plants_alaska.php

¹³ Trident Seafoods. (n.d.). *Company*. Retrieved May 22, 2014, from Alaska Plants: http://www.tridentseafoods.com/company/plants_alaska.php

¹⁴ Trident Seafoods. (n.d.). *Company*. Retrieved May 21, 2014, from Alaska Plants: http://www.tridentseafoods.com/company/plants_alaska.php

¹⁵ Seafood Business Magazine (June 2009). *Celebrating 50 Years of Seafood Processing*. Retrieved May 27, 2014 from

http://www.seafoodbusiness.com/uploadedFiles/SeaFoodBusiness/Site_Content/2009SFBJune_Alaska50thAnniversary.pdf

¹⁶ Icicle Seafoods (n.d.). Retrieved May 27, 2014 from <http://www.icicleseafoods.com/operations/>

¹⁷ Peter Pan Seafoods (n.d.) Retrieved May 27, 2014 from <http://www.ppsf.com/facilities/index.aspx>

1.5 million pounds of fish per day.^{18,19} In all, Kodiak Island employs 1,856 fish processor in peak season.²⁰ The floating Catcher-Processor Vessels that operate in the region are some of the most sophisticated commercial vessels in the world.

- **The Community Development Quota Program (CDQ)** – The CDQ Program brings money to coastal fishing communities throughout the region. These funds support economic development, education, fisheries, tourism, workforce development and other community development activities and facilities throughout the region. Three of these organizations operate in Southwest Alaska and contribute to in-region investments: Aleutian-Pribilof Islands Community Development Association (APICDA), The Bristol Bay Economic Development Corporation (BBEDC) and the Central Bering Sea Fishermen’s Association (CBSFA). Between 2006 and 2010, these three organizations spent a combined \$21.5 million dollars each year. In 2010, the CDQ groups employed a combined 1,114 workers (direct and indirect), with an average of 82 percent of jobs going to member residents in the region.²¹
- **Community Quota Entities (CQEs)** – In 2002, the North Pacific Fishery Management Council took action to address the decline of halibut and sablefish quota shares held by residents of small, coastal communities and the negative economic impacts of the decline. The council voted to allow 42 eligible remote, coastal communities with few economic alternatives to form non-profit corporations called Community Quota Entities. CQEs purchase catcher vessel quota shares and lease the resulting Individual Fishing Quotas to community residents on an annual basis.²² The Alaska Department of Commerce, Community and Economic Development provides loans of up to \$1 million to CQEs to purchase quota shares.²³ There are currently 14 SWAMC communities eligible to participate in the CQE program.²⁴
- **Geostrategic Location** – Located in the geostrategic location of the North Pacific between Asia, North America and the Arctic, air and marine supper highways direct the flow of commercial aircraft and vessels moving goods, services and people through Southwest Alaska to every major region of the world. Six airlines pass through airspace in the region daily. 4,443 vessels transit between Asia and America on an annual basis, and as the Arctic opens up, traffic through the Bering Sea reached 484, up 123 percent from 2008-2012.²⁵ The geospatial location of Southwest Alaska has been of increasing military importance lately as Asian

¹⁸ State of Alaska Division of Environmental Health. (2014). *Food Safety and Sanitation Program*. Retrieved May 22, 2014, from Land Based Processors: http://alaska.state.gogov.com/alaska/seafood_listing.cfm?step=land-based

¹⁹ Trident Seafoods. (n.d.). *Company*. Retrieved May 22, 2014, from Alaska Plants:

http://www.tridentseafoods.com/company/plants_alaska.php

²⁰ Alaska Department of Labor and Workforce Development. (2012). Retrieved June 24, 2014, from Reserach and Analysis: <http://live.laborstats.alaska.gov/odb/odb.cfm?a=000150>

²¹ Alaska Department of Commerce, Community and Economic Development (January 2013). *CDQ Program Decennial Review*. Retrieved May 22, 2014 from <http://commerce.alaska.gov/dnn/dbs/CDQInformation.aspx>.

²² North Pacific Fisheries Management Council. (2010, March). Retrieved June 24, 2014, from Review of the Community Quota Entity (CQE) Program: <http://www.npfmc.org/wp-content/PDFdocuments/halibut/CQEREport210.pdf>

²³ Alaska Department of Commerce, Community, and Economic Development. (n.d.). *Loan Programs*. Retrieved June 24, 2014, from Community Quota Entity: <http://commerce.alaska.gov/dnn/ded/FIN/LoanPrograms/CommunityQuotaEntity.aspx>

²⁴ National Oceanic and Atmospheric Administration. (2014, March 17). *Alaska Fisheries*. Retrieved June 24, 2014, from Eligible CQE Communities, Halibut IFQ Regulatory Area Location, Community Governing Body : <https://alaskafisheries.noaa.gov/rr/tables/tab121.pdf>

²⁵ Marine Exchange of Alaska. (n.d.). *Marine Exchange of Alaska*. Retrieved May 21, 2014, from Port Information - All Regions: http://www.mxak.org/ports/all_regions.html

Powers maneuver for geopolitical prestige, the Russian Empire flexes muscle and many nations jockey for access to the Arctic.^{26,27,28} Southwest Alaska is also biologically strategically positioned between the North Pacific and Arctic Oceans, where nutrient rich ecosystems are uniquely plentiful and diverse in marine fish, bird and mammal species. The Pribilof Islands of Saint Paul and Saint George are placed on important migration routes for nearly all fish, birds and mammals that populate the rich Bering Sea.

- **Mineral Development** – The SWAMC region has recently seen an increase in mining investment and exploration. According to a 2012 Alaska Miners Association publication, 52 percent of statewide expenditures in 2010 spent on mining exploration were made in Southwest Alaska.
- **Natural Environment** – Drastic mountains, vast and numerous fresh-water lakes and rivers, wetlands, forests, mysterious island archipelagos, volcanoes and productive ecosystems with abundant natural wildlife create demand for outside visitors to explore the region. The mountains, rivers, lakes, wetlands, forests, archipelagos, volcanoes and wildlife in the region also help shape the identity of communities and provide subsistence opportunities for many residents.
- **Tourism Development** – The area has three units in the national park system: Lake Clark National Park and Preserve, Katmai National Park and Preserve, and Aniakchak National Monument and Preserve. The region also has numerous national wildlife refuges, national historic landmarks and state parks, including the largest state park in the country: Wood-Tikchik State Park at 1.6 million acres.²⁹ These areas are open for public recreation and can be a big draw for visitors. While still modest compared to other areas of the state, tourism is one of the growing industries in the region. Between summer 2011 and 2012, total visitor industry spending increased from \$116 million to \$120 million and employment impacts went from approximately 1,400 jobs to 1,500 jobs.³⁰ In 2011, out-of-state to Southwest Alaska spent an average of \$1,514 per person, which is considerably higher than the average of \$941 among all Alaska visitors. This figure excludes the cost of transportation to enter/exit the state but does include travel costs within the state. The most popular activities for visitors to Southwest Alaska were wildlife viewing, fishing and cultural activities. Over half the visitors said they were likely to return to the state in the next five years, compared with 38 percent for visitors statewide.³¹

²⁶ U.S. Department of Defense. (April 1, 2014). *Defense Officials in Ukraine for Consultations*. Retrieved May 22, 2014 from <http://www.defense.gov/news/newsarticle.aspx?id=121949>

²⁷ U.S. Department of Defense. (2013). Annual Report to Congress: Military and Security Developments Involving the People's Republic of China, 2013. Retrieved May 23, 2014 from http://www.defense.gov/pubs/2013_china_report_final.pdf

²⁸ Joint Base Elmendorf-Richardson. (September 2013). *Alaskan Command*. Retrieved May 23, 2014 from <http://www.jber.af.mil/library/factsheets/factsheet.asp?id=5286>

²⁹ Alaska Department of Natural Resources. (2014). *Wood-Tikchik State Park*. Division of Parks and Outdoor Recreation. Accessed June 16, 2014 from <http://dnr.alaska.gov/parks/units/woodtik.htm>

³⁰ Alaska Department of Commerce, Community and Economic Development. (2012-2013). *Economic Impact of Alaska's Visitor Industry*. Retrieved April 18, 2104 from <http://commerce.alaska.gov/dnn/ded/DEV/TourismDevelopment/TourismResearch.aspx>

³¹ Alaska Department of Commerce, Community and Economic Development. (March 2012). *Alaska Visitor Statistics Program VI: Summer 2011*. Retrieved April 18, 2104 from <http://commerce.alaska.gov/dnn/ded/DEV/TourismDevelopment/TourismResearch.aspx>

ENERGY

Southwest Alaska has significant potential for renewable energy projects. Recent planning efforts and statewide programs have helped communities identify projects and tasks for addressing the high cost of energy.

- **Stranded Energy Potential** –The Alaska Energy Authority’s Renewable Energy Atlas of Alaska identifies many Gigawatts of power potential – Wind, Tidal, Ocean, River, Hydro, Geothermal, Biomass and to a lesser extent Solar – available to Southwest Alaska,³² far in excess of the 2.2 Gigawatts of currently installed power available to the entire State of Alaska.³³ The convergence of the North Pacific and Bering Sea creates massive potential for ocean and tidal energy in Southwest Alaska. Likewise, the Aleutians are the epicenter of many North Pacific storm systems that move eastward along the Aleutians, hitting Bristol Bay and Kodiak regions, providing an amazing source of wind power. The collision of the Pacific and North American Plate, which formed much of the regional geography including Kodiak, Aleutian Range and the Aleutian Islands, also creates geothermal energy. See “Opportunities” below for more details related to the region’s stranded energy.
- **SWAMC Energy Planning** – Under contract with AEA, SWAMC is assisting the State with an energy gaps analysis/needs assessment for Southwest Alaska communities, through the Regional Energy Planning process. This work will help the State in identifying the region’s energy needs and will help them prioritize energy projects. Through this process, SWAMC can also help the State and other partners in identifying those communities that are well positioned for new, innovative energy technologies. Facilitated by SWAMC, this collaborative project is currently identifying multiple resources to address a wide range of energy issues from home-owner energy audits, to community-wide efficiency upgrades, to region-wide energy supply projects.
- **Attractive for Emerging Energy Projects** – When energy prices are low, new projects are not always feasible because the slight savings from the new project do not offset the cost of development. With rising energy costs, new energy projects become more feasible because the savings are significant enough to offset the initial development costs. Furthermore, there is public incentive to support investments in regions with excessive costs of living. Regional examples of emerging energy projects are the ocean tidal power project in False Pass, in-river hydrokinetic in Igiugig and waste-to-heat/power incinerators in Dillingham and Egegik. When successful, these projects reap big rewards. For example, cheap renewable power in Kodiak allows investments to stay in-region and low-cost. This creates a competitive advantage for companies, especially natural resource companies that have large energy demands, and cost advantages for citizens that have more disposable income.
- **Strategic Location for Energy Distribution** – Unalaska, which has the westernmost container terminal in the state, serves as the staging area for supplies and fuel to the Bering Sea marine fleet, and also for many communities in Western Alaska. In 2006, the Port of

³² Alaska Energy Authority. (April 2013). *Renewable Energy Atlas of Alaska*. Retrieved May 23, 2014 from <http://www.akenergyauthority.org/PDF%20files/2013-RE-Atlas-of-Alaska-FINAL.pdf>

³³ Fay, Ginny, Alejandra Villalobos Meléndez, and Amber Converse. (June 2012). *Alaska Energy Statistics 1960-2010*. Retrieved May 23, 2014 from http://www.iser.uaa.alaska.edu/Publications/2012_06-EnergyStatSummaryHighlights_2010.pdf

Dutch Harbor saw almost 1.2 million short tons of freight move through the Port, which includes both foreign and domestic receipts and shipments.³⁴

- **Balancing the Cost of Energy** – Alaska Energy Authority’s Power Cost Equalization (PCE) program provides significant relief to rural communities with high residential energy costs, reimbursing up to 70 percent the cost of energy in some communities.³⁵

INFRASTRUCTURE

Southwest Alaska is comprised of geographically separate, but geostrategic, industrialized communities with good harbor, air and communication infrastructure, with capacity to supply services. For example:

- **Marine Infrastructure** – The marine infrastructure of Southwest Alaska supports one of the richest fisheries ecosystems in the world. Strategically located ports, capable of supporting harvesting and processing of fisheries resource, spread from Kodiak Island to Adak, St. Paul and Bristol Bay. This includes ports of refuge every few hundred miles. In addition to providing the lifeline to the area’s fisheries, the marine infrastructure supports other vital community services ranging from basic supply of food, shelter, fuel, marine supplies to specialized services. Some community-specific detail is outlined below:
 - Community infrastructure supports a fleet of 1,487 boats, each of which serves as an individual business, albeit mobile, moving between communities.³⁶
 - Twenty-two communities offer harbor facilities capable of servicing and supporting harvest vessels, and offering supply stations for food, fuel, gear and all aspects of support necessary to effectively execute the commercial fisheries of the Western Gulf of Alaska, Aleutian Islands and Bering Sea. The port of Kodiak offers export facilities and staging areas for transport to domestic markets, and transshipment to international markets.
 - The Port of Dutch Harbor is the only International port in Alaska and moves 752 million pounds of product on an annual basis. The Port of Dutch Harbor is also a deep draft, year-round ice-free port, a designated “Port of Refuge,” providing a suite of services to vessels in the Bering Sea region. The port is capable of receiving catcher boats from small 32 foot catcher vessels to the most sophisticated catcher/processor vessels and 800 foot cargo ships, making it one of the most important domestic and international cargo ports in the United States. With fuel storage of 20 million gallons, 37 and annual marine sales of 70 million gallons, Unalaska supports communities and commercial activity throughout the Bering Sea and North Pacific. Unalaska has long served as the staging area for a range of activity throughout the Bering Sea and Arctic coasts, including Outer Continental Shelf Arctic hydrocarbon exploration.

³⁴ City of Unalaska. (April 2009). *Port and Harbor Ten-year Development Plan*. Retrieved May 27, 2014 from http://www.ci.unalaska.ak.us/sites/default/files/fileattachments/Ports%20and%20Harbors/page/503/port_and_harbor_10-year_development_plan.pdf

³⁵ Alaska Energy Authority and UAA’s Institute for Socioeconomic Research. (November 2012). *Residential Energy Costs + PCE Reimbursements, CA 2011*. Retrieved December 2013 from http://iser.uaa.alaska.edu/Publications/2012_11-AlaskaEnergyStatisticsCY2011PreliminaryTables.xlsx

³⁶ Alaska Commercial Fisheries Entry Commission. (2012). *CFEC Public Lookup Database*. Retrieved April 18, 2014 from <http://www.cfec.state.ak.us/plook/>

³⁷ Alaska Department of Environmental Conservation. (2010, July). Retrieved May 23, 2014, from Total Maximum Daily Loads (TMDLs) for Petrochemical Hydrocarbons in the Waters of Dutch Harbor and Iliuliuk Harbor in Unalaska, Alaska: http://www.epa.gov/waters/tmdl/docs/DutchHarbor_Final%20TMDL_7-28-10.pdf

- Kodiak is home to the largest Coast Guard institution in the Pacific Area and serves as the headquarters for marine safety with a jurisdiction of over four million square miles in the Bering Sea, North to the Arctic, West to the Russian border and east to Central Gulf of Alaska.³⁸ The community supports the largest diversified fishing fleet in Alaska, including harvesting and processing of all commercially viable fisheries, domestic shipping and services to meeting the needs of all vessels up to 150 foot, and basic support for other vessels of any size, including 1,000 foot cruise ships. Two boat lifts, a small one for boats up to 50 feet, and a large one for boats up to 150 feet, increase the community's capacity to service marine vessels, with expanding capacity of specialty service firms.
- St. Paul is surrounded by 250 miles of ocean in every direction, and thus serves as natural refuge for any vessels transiting the Bering Sea. While ice does engulf the island, it is generally new ice, which vessels can pass, allowing nearly year-round ice-free ports in the North Pacific.
- Bristol Bay communities sit at the headwaters of the most productive sockeye salmon run in the world, and provide the necessary infrastructure to harvest, process and move up to 100 million pounds of salmon annually.
- Communication infrastructure in Southwest Alaska has expanded substantially in recent years. Adequate communication infrastructure is critical for successful natural resource management, educational advantages and better connection to domestic and global networks of family and friends; with an overall effect of more opportunity and a better quality of life. Advanced fiber optic cable connects Kodiak, home to 40 percent of SWAMC's regional population, with the Bristol Bay receiving a hybrid fiber/micro-wave system linked into the global backbone, reaching another 40 percent of the SWAMC population; the Alaska Peninsula, Aleutian and Pribilof Islands are serviced by satellite service. Expanded communication infrastructure has enhanced and improved the productivity of the region to create new businesses, increase the speed of information transfer. For example, while still somewhat limited, internet connectivity has begun to revolutionize life in rural Alaska. GCI's recent TERRA project upgraded several Bristol Bay communities to a new microwave network and expanded a new high speed fiber optic network into several Lake and Peninsula communities³⁹. Residents of Port Alsworth, for example, now have access to download speeds of up to 6.0 Mbps⁴⁰. The increasing availability of the internet has opened up access to shopping and business opportunities. For example, Amazon Prime has become a frequently used means of shipping inexpensive globally available supplies.
- **Air Transportation** – Air transportation is the primary means of regional travel; all communities in the SWAMC region have capabilities to receive air service, ranging from dirt runways to some of the largest runways in Alaska (e.g., Cold Bay at 10,180 ft., Adak at 7,790 ft., Shemya at 10,004 ft., King Salmon at 8,901 ft. and Kodiak at 7,880 ft.).⁴¹ These runways provide occasional emergency landing services for the airline superhighway over the North Pacific. On October 30, 2013, Delta Flight 208 made an emergency landing in Cold Bay in

³⁸ U.S. Department of Homeland Security. (September 2013). *Air Station Kodiak*. United States Coast Guard. Retrieved May 22, 2014 from <http://www.uscg.mil/d17/airstakodiak/>

³⁹ GCI. (n.d.). *GCI TERRA*. Retrieved June 10, 2014, from TERRA Southwest: <http://terra.gci.com/maps-locations/terra-southwest>

⁴⁰ GCI. (2014). Retrieved June 10, 2014, from Residential Internet Plans: <http://www.gci.com/internet/plans>

⁴¹ Federal Aviation Administration. (2014). NFDC. Retrieved May 27, 2014 from National Flight Data Center: <https://nfdc.faa.gov/xwiki/bin/view/NFDC/WebHome>

route from Tokyo to San Francisco. Additionally, a service industry for supporting and maintaining small aircraft exists in Dillingham, King Salmon, Cold Bay and Kodiak.

- **The Kodiak Launch Complex** – The Alaska Aerospace Corporation (AAC) maintains the Kodiak Launch Complex (KLC) on Kodiak Island. AAC works with both national and commercial organizations, primarily doing satellite launches. The Launch Complex brings direct and indirect benefits to the region through local contracting, local hire and increased visitation to the region. The Kodiak Launch Complex offers the advantage of location, with a wide-open southern launch corridor and an unobstructed down-range flight plan over relatively open-ocean. The location is ideal for launching expendable launch vehicles with payloads requiring low-Earth polar or sun-synchronous orbits.⁴²
- **Military Strategic Location** – Shemya Alaska offers a military strategic location. It currently houses the COBRA DANE L-band large phased array radar system, monitoring activity throughout the Pacific Ocean.⁴³

PARTNERSHIPS

Southwest Alaska is fortunate to have an interconnected network of businesses, organizations and communities that work closely with one another to achieve shared goals and to improve the economy of the region.

- **State and Federal Presence in the Region** – New money is constantly entering the region through salaries, contracts and transfer. The large federal and state presence in the region, in the form of land ownership and major facilities, precipitates that public employees oversee and manage these resources; salaries of which inject new cash into the economy. Government funding employs regional residents directly and brings in additional funds through grants, infrastructure funding, statewide programs and more. Many of the federal and/or state infrastructure projects inject new capital into the region and are often followed by new support businesses to help address contractor needs (e.g., building materials and equipment, housing, food, gas, etc.). There is also an inflow of government transfers tied to Alaska Native corporate dividends, as well as federal subsidies that go to residents that fall below the poverty line.
- **Regional Workforce Development Collaborative** – Bristol Bay Native Association (BBNA) is working with regional partners, such as Southwest Alaska Vocational and Education Center (SAVEC), to implement a \$405,023 Rural Jobs Innovation and Accelerator Challenge project. As noted in the BBNA 2012 Annual Report: “The project builds a fishing industry cluster that is designed to return jobs to the region and reverse trends caused by a decrease in resident-owned limited entry permits and the decrease in raw fish markets.”⁴⁴ The project aims to build SAVEC’s capacity, as one of the main regional training centers, to deliver fisheries training. The long-term goal is to increase local participation in Southwest Alaska fisheries.
- **SWAMC as a Convener/Coordinator/Facilitator** – SWAMC’s key strength is to coordinate resources and to pursue shared interests within the region and between regional

⁴² <http://www-pao.ksc.nasa.gov/kscpao/nasafact/kodiak.htm>.

⁴³ Missile Defense Agency. (2013, October 21). Retrieved May 22, 2014, from COBRA DANE Upgrade: <http://www.mda.mil/global/documents/pdf/cobradane.pdf>

⁴⁴ Bristol Bay Native Association. (2012). *Annual Report 2012*. Retrieved April 18, 2014 from <http://www.bbna.com/annual/BBNA%202012%20Annual%20Report%20Web.pdf>

and non-regional partners. SWAMC acts as a mediator between people, businesses, institutions, communities and government. Specifically, SWAMC:

- Maintains a network of over 115 members, and an additional 75 associates pursuing shared interests, maintaining individual networks for Energy, Infrastructure, Basic Sector Resources, Tourism, Natural Resources, Fisheries, Workforce Development and Economic Development. A complete list of SWAMC members and associates is listed on the organizational website, www.swamc.org.
- The SWAMC Business Council, who convened for the first time in December 2013, is intended to help guide SWAMC's economic development efforts while also establishing a forum for business leaders in the region to network with one another and identify shared opportunities. According to Business Council Members, local municipalities, as well as the State of Alaska, are both very supportive and willing community and economic development partners. See the introductory chapter and appendices for a detailed description of the Business Council.
- SWAMC acts as a liaison between communities and the Alaska Energy Authority (AEA). SWAMC currently has contracts with the AEA for conducting Energy Planning in the three sub-regions of Southwest Alaska. Though the Energy Planning process SWAMC connects with local governments, utilities providers, CDQ's, Tribal groups, and local development interests to open dialogue on energy issues and priorities for communities in the region. In addition to SWAMC's energy planning, SWAMC plays an active role in identifying and helping to enact community energy projects such as the tidal project in False Pass.

WEAKNESSES

Many of the same regional strengths are also inherent weaknesses. The vast and rugged environment, coupled with the extreme weather and swings in seasonal abundance, creates difficult transportation linkages, increasing costs to mobilize capital, with high costs to develop and maintain infrastructure. Together, these challenges yield low population levels and difficult economic development conditions. The primary economic engine in the region is based on a fully capitalized resource, fisheries; this resource is constrained from value-added activities by the cost of energy. Illustrative examples of these regional weaknesses follow.



“The cost of living drives wages up and makes it difficult to retain qualified employees.”

“Small markets. Economies of scale are hard to find.”

“High transportation and energy costs.”

- *SWAMC Business Council,
What is the primary challenge of doing
business in Southwest Alaska?*

WORKFORCE DEVELOPMENT

Businesses and organizations note the difficulty of training and maintaining a stable, qualified, reliable workforce in Southwest Alaska. Many businesses hire out-of-state employees because local residents are either not qualified and/or uninterested in the jobs available. Unemployment remains high while job positions remain vacant. The high costs of living and challenges found in remote communities can add additional barriers. Specific examples of these and other barriers are outlined below.

- **Lack of Education, Training**— A 2012 FSMI Education and Training Gap Analysis of the Fisheries, Seafood and Maritime Workforce noted statewide: ⁴⁵
 - Technical skills are in short supply;
 - Access to information and training is difficult;
 - There is a lack of exposure to industry skills and opportunities at a young age; and,
 - In general, it is difficult to find qualified people in rural regions.
- **Flat Population Growth and Aging of the Fleet** — The population of Southwest Alaska has remained relatively stagnant and has experienced slower growth than the rest of Alaska. Additionally, many residents in the fishery, seafood and maritime industry are nearing retirement age. There is a perceived “graying” or aging of Alaska’s fishing fleet, and what is understood to be a small pool of younger fisherman to take their places. A more definitive assessment of this perceived problem is being assessed by researchers at the University of

⁴⁵ University of Alaska (May 2012). *Education and Training Gap Analysis for the Fisheries, Seafood, Maritime Workforce*. Retrieved April 28, 214 from <https://www.alaska.edu/files/fsmi/FSMFinalReport5-14-12.pdf>

Alaska Fairbanks and the Alaska Marine Conservation Council. The project, titled “Graying of the Fleet in Alaska’s Fisheries: Defining the Problem and Assessing Alternatives”, is funded by the North Pacific Research Board. The project started in August of 2013; research results are anticipated for release August of 2016.⁴⁶

- **Communication Infrastructure** – This list echoes many of the concerns that were voiced by Business Council representatives at their December 2013 meeting. Many Business Council members stated they frequently have trouble finding interested and qualified candidates in rural communities. Explanations range from a lack of training, subsistence activity conflicts, and substance abuse with local residents, to lack of interest from workers outside of the region due to remoteness, lack of housing and high costs of living. As stated by one Business Council member: “When I have employees in a town who can’t function because email, voicemail or cell phones don’t work, it can be very difficult to do business. If it takes three hours to get ahold of someone and they’re sitting in Dutch Harbor with a \$1,000-an-hour tug, that’s a big lost cost to me.”
- **Technology and Training** – Additional concern related to education and training opportunities is the relatively expensive and slow communication technologies available in many parts of Southwest Alaska. Training institutions in the region, like SAVEC, and the UAF Bristol Bay and Aleutian campuses, that would like to expand their offerings with cost effective and more elaborate digital training courses are unable to do that with existing communication infrastructure.
- **Non-Resident Employment** – Many jobs in the region are filled by non-residents. For example, the number of Southwest Alaska residents employed in the fish processing workforce is less than 20 percent, with some variation across regions: two percent in Bristol Bay, 16 percent in the Aleutians/Pribilof Islands and 51 percent in the Kodiak Region.⁴⁷
- **Data Gaps** – The lack of relevant participation data, especially with commercial fishing crew, is a data gap which presents difficulties collecting baseline data to improve conditions for the largest single labor force in the region. Another good example – there is no workforce development database for tracking employment opportunities, training opportunities and skilled laborers in the region. The information that is available is scattered and difficult to find.

RESOURCES

The SWAMC region has an abundance of raw resources. However, many of these resources are difficult to access and take energy and infrastructure to transport, process, and add value to them, optimally moving them up the value chain to become more profitable end products. Following are some of the specific regional barriers to increasing the value of Southwest Alaska’s resources.

- **Extreme Weather** – While Southwest Alaska is relatively warm by Alaska standards, high winds are prevalent throughout the region, with the highest winds in the Aleutians and Gulf Coast. The low pressures that generate wind also create a prevalence of low cloud cover, fog and precipitation. This combination of wind and obstructed visibility from precipitation

⁴⁶ North Pacific Research Board Project Browser, <http://project.nprb.org/view.jsp?id=daf3ebce-77df-48fc-9e4d-5f677ff9c14c>.

⁴⁷ Alaska Department of Labor and Workforce Development. (2012). *Research and Analysis Section*. Retrieved May 20, 2014 from <http://laborstats.alaska.gov/seafood/seafoodaleutians.htm>; <http://laborstats.alaska.gov/seafood/seafoodbristol.htm>; <http://laborstats.alaska.gov/seafood/seafoodkodiak.htm>

(often rain), places additional strain on the transportation networks, reducing service and increasing costs of operation.

- **Resource Fluctuation** – Seafood, which is the essential driver in the region, is subject to natural fluctuations. These fluctuations happen on natural biological and economic cycles, subjecting the regional economy to constant uncertainty. Halibut stocks are currently experiencing a biological fluctuation, where Pacific Biomass has dipped considerably from the high of 22,500,000 metric tons that occurred in the mid-90s.⁴⁸ Salmon markets experienced economic fluctuation, when ex-vessel value peaked at around \$2.30 in 1988 and fell to \$0.60 in 2000.⁴⁹
- **Seasonality of Resource Utilization and Employment** – Many of the key industries and employment in Southwest Alaska are seasonal in nature, including fishing, tourism, mining and construction. This means that unemployment rises in the fall and winter months. In Aleutians East Borough, for example, between 2011 and 2013 the average unemployment rate was eight percent in July and rose to 26 percent in December.⁵⁰
- **Adding Value to the Resource** – Alaska’s fisheries resources are fully utilized, and because the resource is managed for long-term returns, the short-term extraction is effectively capped. Over the long-term, new commercial fisheries resources are not expected to proliferate, which leaves only two means of incorporating new money into the regional economy: increased ownership, which allows resource rents to flow back to the region, and increasing value for each unit produced. Due to the maturity of the fishery, and high costs of entry, vastly increasing local ownership opportunities is limited. Fish permits are prohibitively expensive for younger fishermen, making it difficult for the next generation to enter the industry. When permits are owned by nonresidents they contribute less to the regional wealth as that revenue generally leaves Southwest Alaska. Due to the high costs of energy for operations, including capital mobilization, utilization, and transportation, value added processes are limited.
- **Potentially Conflicting Resource Development** – Abundant resources can lead to conflict as to best use, and concerns for trading one resource for another. The North Pacific Fisheries Management Council manages primarily for the long-term sustainability of the fisheries; they also balance allocation of rights to different groups, within the fishing industry. The Pebble Mine claims to be one of the biggest of its kind in the world, and brings the potential to diversify the regional economy, although concerns from the fisheries sector about developing mines at the expense of fish (and culture) has left the project’s future uncertain.

ENERGY

High energy costs in the region lead to higher costs of doing business. Some larger businesses and processing sites have elected to generate their own power because local utilities are either unable to

⁴⁸ Trends in Groundfish Biomass and Recruits per Spawning Biomass. (2014). Boldt, Jennifer. Retrieved May 27, 2014 from NOAA: <http://access.afsc.noaa.gov/reem/ecoweb/html/ecocontribution.cfm?id=33>

⁴⁹ Trends in Alaska and World Salmon Market. (2013). Knapp, Gunnar. Retrieved May 27, 2014 from http://www.iser.uaa.alaska.edu/Publications/presentations/2013_02_07-GK_TrendsInAlaskaSalmonMarkets-HouseFisheriesCommittee.pdf

⁵⁰ Alaska Department of Labor and Workforce Development. (2013). *Alaska Local and Regional Information*. Retrieved April 18, 2014 from <http://live.laborstats.alaska.gov/alari/details.cfm?yr=2012&yr=2011&yr=2010&dst=01&dst=03&dst=04&dst=02&dst=06&r=6&b=0&p=0>.

provide sufficient levels of power at an affordable costs. Specific barriers to economic development caused by lack of local access to cheap, renewable energy are outlined below.

- **High Cost and Logistics** – Many communities struggle to import energy due to high costs and the logistical challenge of bringing fuel into remote locations. High costs of energy act as a tax on the disposable spending power of local populations, and an increased cost of doing business for firms.
- **Access to Stranded Renewable Energy Sources** – The cost and technological ability to access abundant stranded energy supplies prevents many local sources of energy from entering the local economy.
- **Lack of Comprehensive Planning** – A comprehensive energy plan is still in development. Energy investments in the region is sporadic and does not always include appropriate analysis and foresight. While some intertie and strategic planning has been done on a small scale in Southwest Alaska, the region as a whole does not currently have an energy plan to guide investment.
- **Need for Public-Private Partnerships** – Entities with the capacity to develop their own power often do, forgoing partnerships with small capacity communities that could benefit from greater integration between the largest users. In some communities where the public utility simply does not have the capacity to provide consistent, reliable, cheap power to big processors, some public-private partnerships have been forged. Within the last five years, the City of Unalaska partnered with Unisea and other large processors in the community to assess the potential for a natural gas supply that could meet the needs of community residents while also satisfy high energy demands of large processing and storage facilities.

INFRASTRUCTURE

Communication, transportation, housing and other infrastructure is essential to life and the economic viability of the region. However, the harsh environment, small populations, distant communities and poor transportation linkages contribute to the difficulty and expense of maintaining infrastructure in rural Southwest Alaska.

- **Geography and Connectivity** – The lack of overland connectivity limits transportation options to air and sea, raising the cost of moving goods, services and people. Vessels are an efficient means of moving goods, although scaling capabilities to meet needs in small, and variable sized communities creates further inefficiencies. While vessels are well equipped to move a large quantity of any one item, using vessels to serve communities with many different needs provides for inefficient designs that would be otherwise more capable. The ocean south and east of the Aleutians is ice-free year-round, although sea fast ice forms in Bristol Bay, as far south as Egegik⁵¹, including the Pribilof Islands, completely eliminating marine transportation. An alternative, and often the primary means of transportation for most communities is flying. Flying is fast and flexible, although it is also very expensive, and does not effectively move bulk goods. Air services also is constrained by economies of scale, with often long distances servicing a small population, with limited community infrastructure,

⁵¹ Source: Alaska Center for Climate Assessment and Policy using the Sea Ice Atlas Tool created by the IARC, viewing Feb 2013.

Retrieved 27 May 2014. Sea Ice Atlas Tool: <http://seaiceatlas.snap.uaf.edu/explore>

Project description located at: <https://accap.uaf.edu/?q=project/digital-sea-ice-atlas-alaska-waters>

allowing for only small aircraft to service the community. There is no probability of an overland route being established to the Southwest Alaska region in the foreseeable future.

- **Capital Mobilization and Maintenance** – The limitations to regional transportation linkages precipitate that moving, establishing and maintaining infrastructure is relatively expensive and slow in comparison to most other regions. Further complicating projects, are the projected tightening of public budgets which are a primary source of infrastructure funding in the region. As projects are delayed, the cost increases, and infrastructure becomes more strained and aged with time, which further reduces the efficiency of maintaining existing and new capital projects. Many facility and/or industry-specific projects are privately funded, primarily associated with specific types of resource development. Many Southwest Alaska coastal communities have aging port facilities in need of repair, infrastructure that would normally help facilitate private investment weighs on, potentially reducing private investment.
- **The Alaska Marine Highway** – The Alaska Marine Highway System currently services Southwest Alaska with the M/V Tustumena, the oldest vessel in the State fleet. The ferry has been in service since 1964 will likely be retired in another 5-10 years. The Tustumena spent almost a year out of service starting in October 2012, removing one of the primary channels of transportation for Southwest Alaska while repairs were underway. According to a Reconnaissance Report by the Alaska Marine Highway System, the State has preliminary plans in place to replace the ferry.⁵² The State of Alaska has begun the redesign process for this vessel with a series of public meetings throughout Southwest Alaska to assess community need. A redesign of the vessel was presented at SWAMC's 2015 Economic Summit and Membership Meeting, and plans to begin construction are already underway. Although, with an expected total replacement costs of \$200 million, and a period of declining budgets, completion is far from certain.
- **Limited, Unreliable, Costly Air Service and Poor Infrastructure** – Southwest Alaska has a small number of airline operators serving many communities; in some communities there is only one commercial operator providing flight services. Flights are expensive and increasing in cost; service is often unreliable. Typical flights to Adak, Unalaska and Saint Paul cost between \$500 and \$1,000 per one-way flight.⁵³ For less money, individuals can sometimes purchase one-way tickets from Anchorage to Paris (\$812), London (\$609), or Honolulu (\$358).⁵⁴ In a recent series of land use planning community meetings and stakeholder interviews in Unalaska, one of the most repeated statements was: “Extend our runway and bring in new air carriers.” Airport infrastructure is limited and inadequate in many communities. Of the 66 airports in the region, many have runways that are insufficient in length or width to handle cargo and/or more than eight passengers. For communities that are considering processing plants as economic development projects, insufficient runway length and surfaces are an issue.
- **Poor Communication Infrastructure** – Cell phone reception is limited throughout the Southwest region. In some locations the issue is contractual: certain carriers hold exclusive coverage rights to communities. Internet connectivity in the region is also variable and often

⁵² Alaska Department of Transportation and Public Facilities: Alaska Marine Highway System. (March 2014). *M/V Tustumena Replacement Vessel: Reconnaissance Report*. Retrieved May 20, 2014 from http://www.dot.state.ak.us/amhs/tusty_replace/doc/tusty_recon_report.pdf.

⁵³ Bureau of Transportation Statistics, Research and Innovative Technology Administration. (2013). *Average Domestic Airline Itinerary Fares by Origin City*. Retrieved April 18, 2014 from <http://www.transtats.bts.gov/AverageFare/default.aspx>

⁵⁴ Prices from a search of flights on kayak.com, conducted on May 16, 2014.

inadequate.⁵⁵ 90 percent of Kodiak Island Borough households have access to download speeds of over 10 Mbps⁵⁶. In contrast, the fastest available residential internet access in the Aleutians clocks in at 1 Mbps.⁵⁷ In some communities, faster network connection services are available but the costs are prohibitively high for many businesses and households.

- **Limited Affordable, Quality Housing** – Some communities are experiencing housing shortages and have limited land availability for constructing new homes. In Dillingham Census Area, 18 percent of occupied units are overcrowded, followed by 13 percent in the Lake and Peninsula Borough and nine percent in the Kodiak Island Borough.⁵⁸ These numbers are significantly higher than the state and nationwide rates of six and four percent, respectively. In recent interviews of Unalaska residents for a community land use project, one newcomer to the community had moved four times in one month in search of available, affordable housing. In that community, and many others in the region, there are developable lands for housing, however, the cost of construction and lack of collaborative fundraising have been barriers to constructing new housing developments.⁵⁹
- **Aging Industry Facilities** – The commercial fish processing industry in Southwest Alaska has some of the oldest plants in the state, many are decades old. Aged infrastructure adds costs to updating processes that could be more easily implemented in new builds. An assessment of Dutch Harbor processing facilities, while some of the most sophisticated manufacturing plants in the state, were not as efficient with energy use as could be with diesel as the main source of energy. They were constructed in a period of low diesel prices; energy efficiency was not a concern or priority. As the price of energy rises, the cost of efficiency becomes more important.
- **Sustainability of The Kodiak Launch Complex** – The Alaska Aerospace Corporation (AAC) maintains the Kodiak Launch Complex (KLC) on Kodiak Island. KLC is not launching enough rockets to be sustainable – they need at least one or two additional launches a year. As a public corporation of the State of Alaska, its continued funding might be at risk unless the Complex is able to increase annual launch numbers.

PARTNERSHIPS

Local, regional, state and federal – public and private – partnerships and collaborations are key to the success of any project. In Southwest Alaska, there continue to be some challenges with forging new and expanding old business partnerships. There is continued tension and a perceived lack of understanding with federal partners. Perhaps because of the size of the area, and the challenging communication infrastructure, there are still not enough regional partners working together, across subregions, to address common issues. Specific examples are outlined below.

⁵⁵ Connect Alaska. (October 2013). *Borough Profiles*. Retrieved April 18, 2014 from <http://www.connectak.org/mapping/state>

⁵⁶ Connect Alaska. (2014, May). *Facts and Figures*. Retrieved June 10, 2014, from Estimated Availability of Broadband Service by Borough, Census Area and Municipality: http://www.connectak.org/sites/default/files/facts-figures/files/ak_may_2014_table_5.pdf

⁵⁷ Dave Goggins, TelAlaska, personal communication, July 29, 2014

⁵⁸ Wiltse, N., Madden, D., Valentine, B., Stevens, V. (2014). 2013 Alaska Housing Assessment. Cold Climate Housing Research Center. Prepared for: Alaska Housing Finance Corporation. Retrieved April 18, 2014 from <http://www.cchrc.org/2013-alaska-housing-assessment>.

⁵⁹ Wiltse, N., Madden, D., Valentine, B., Stevens, V. (2014). 2013 Alaska Housing Assessment. Cold Climate Housing Research Center. Prepared for: Alaska Housing Finance Corporation. Retrieved April 18, 2014 from <http://www.cchrc.org/2013-alaska-housing-assessment>.

- **Communication with Federal Partners** – Communication between the business community and local/state government entities is mostly positive and productive. In contrast, interactions with federal government agencies can be strained and frustrating for Southwest Alaska business owners and leaders. Different federal agencies have different rules and procedures, making permitting and licensing processes confusing, expensive and difficult to navigate. As one Business Council member put described: “It’s important that we’re all good stewards and operators but it’s getting to be where it’s harder and harder to get through the day because of the levels of redundant paperwork. A lot of it is redundant. You’d think the different agencies could get together. For example, why should my captains have to carry three different picture IDs for three different agencies?” Additionally, recent federal regulatory changes have made the business climate in the region more challenging. Many of these regulations address issues that are not applicable in Alaska but that are enforced here. From one Business Council member: “The federal government increased the mandatory rest time that pilots need. We had to hire 25 new pilots. Pilots are the most expensive employees on my payroll. We also recently saw a 30 percent cost in the increase in the costs of our health care.”
- **Inconsistent Regional Collaboration** – Despite some existing partnerships between regional workforce development entities and the region’s educational institutions, there are still limited training and education opportunities to train residents for the necessary technical and specialized skills.
- **Lack of Support for Local Business Community** – Dillingham and Kodiak are the only two communities in the region with a Chamber of Commerce office. Chambers support economic development and promote business interests.

OPPORTUNITIES

Stranded and underutilized resources offer the best opportunity for future growth in Southwest Alaska. The stranded wind, geothermal, hydraulic and tidal energy resources in the region contain immense energy potential. Business leaders interested in currently inaccessible arctic resources and other deep-sea minerals will likely utilize Southwest Alaska’s infrastructure as a launching point for future resource development. The institutional strengths of the region’s CDQs and Alaska Native Corporations, and their ability to access new partners, resources, and economic development opportunities, is a promising starting point for increasing the region’s wealth.



“Southwest Alaska has tremendous potential to grow and ultimately, looking out 50 to 100 years become a key area globally for arctic development and transportation.”

The region is virtually unexplored for hard rock mineral resources. It’s a real frontier where we may find a mineral deposit ultimately worth billions.”

- *SWAMC Business Council*

WORKFORCE DEVELOPMENT

While there are extensive workforce development needs in the region there are many efforts underway to address the issue and find solutions, including increased partnerships between regional entities and public and private partners outside of the region. These efforts are bringing together businesses, governments, Alaska Native Corporations and educational institutions.

- **Public and Private Investment in a Skilled, Trained Workforce** – As described earlier in “Strengths”, existing and potentially increased investment by the region’s Alaska Native Corporations and CDQ groups, as well as continued investment by the University of Alaska, in providing scholarships, training opportunities, comprehensive programming, learning facilities, and multiple modes for taking coursework, is key to providing the necessary and appropriate education and training for Southwest Alaska’s future workforce. In May 2014, the University of Alaska’s Fisheries, Seafood and Maritime Initiative (FSMI)’s multidisciplinary team released the Alaska Maritime Workforce Development Plan. This plan contains actionable directions and strategies to strengthen Alaska’s maritime sector.⁶⁰ The Alaska Commission on Post-Secondary Education is also training local educational groups on using the new workforce development tool Alaska Career Information System (AKCIS) effectively.

⁶⁰ University of Alaska. (May 2014). *Alaska Maritime Workforce Development Plan*. Retrieved May 22, 2014 from http://www.alaska.edu/files/fsmi/AK-Maritime-Workforce-Dev-Plan_Low-Res_5-6-14.pdf

- Maturation of the Cluster Model of Economic Development, and success in similar markets, such as recent successes in Iceland, provide a future model that Alaska may follow to coordinate workforce and economic development.

RESOURCES

Increased local resource ownership, value-added activity, Arctic expansion and expanding tourism activities are the best opportunities to contribute to the long-term health of the regional economy. Specific examples include:

- **Resource Ownership** – Regional proximity and associated knowledge with coastal marine resources provides local populations with a competitive advantage for utilizing marine resources. While outside populations may consider spending a disproportionate time in Southwest Alaska an inconvenience, the local population may be more willing to commit to long-term execution of fisheries in the region. Given the special knowledge and lower costs, local residents are well positioned to become resource owners over time. Limited access to capital, the largest barrier to becoming permit holders or owners, could be overcome through management and financial policies. For example, Bristol Bay Economic Development Corporation currently offers a permit buy-back program to increase the number of locally owned permits.⁶¹
- **Increased Demand for Seafood Products** – According to a presentation on Alaska Salmon Market trends, ex-vessel value for salmon has seen a dramatic increase in the last decade. World demand for salmon has increased, and Alaska salmon is growing in popularity in Europe.⁶²
- **More Processing in the Region** – Only a proportion of seafood processing happens in the region. Typically the first round of processing (initial filleting and freezing) doubles the value of the resource, while the second round (preparation, packaging) doubles it again. If more of this value-added processing is done in Southwest Alaska, more money will come back into the region as a result of the raw resource; moving up the value-chain.
- **A Place for Eco and Adventure Tourism** – The vast and dramatic landscape that creates difficulties for transportation linkages, add to the region’s remoteness, mystique, abundant natural wildlife and overall natural beauty and are a tourism draw, especially for recreational fishermen, adventurers and travelers looking for ecotourism opportunities. Growing classes of newly wealthy are looking for new and exciting adventures, and may be willing to spend extra money for a unique experience.⁶³ Adventure tourism is growing as well – the market rose 65 percent between 2009 and 2012.⁶⁴ Southwest Alaska’s abundance of public lands and

⁶¹ Bristol Bay Economic Development Corporation. (n.d.). *Permit Loan Program*. Retrieved May 22, 2014 from http://www.bbedc.com/?page_id=187

⁶² Knapp, Gunnar. (April 2012). *Trends in Alaska Salmon Markets*. University of Alaska’s Institute of Social and Economic Research. Retrieved April 28, 2014 from http://www.iser.uaa.alaska.edu/Publications/presentations/2012_04_12-TrendsInAKSalmonMarkets.pdf

⁶³ Rising Global Per Capita Wealth, 2013 Global Wealth Report by Credit Suisse Research Institute: *Global Wealth Reaches New All-Time High* retrieved from: <https://www.credit-suisse.com/us/en/news-and-expertise/research/credit-suisse-research-institute/news-and-videos.article.html/article/pwp/news-and-expertise/2013/10/en/global-wealth-reaches-new-all-time-high.html>

Note particular surge of growth in Chinese tourism, Presidential support noted on May 23, 2014 at: <http://www.forbes.com/sites/kenrapoza/2014/05/23/obama-opens-floodgates-to-chinese-tourists/>

⁶⁴ Concurrent growth occurring in adventure tourism, retrieved from: <http://www.adventuretravelnews.com/new-adventure-tourism-report-reveals-263b-market-up-65-per-annum-since-2009>

proximity to national and state parks also make it a desirable location for U.S. and international travelers.

- **Increase in Mining Activity** – The region has seen an increase in mining exploration as multiple mine sites in Southwest Alaska are considered. The mining exploration process brings employment and investment to the region; in 2010, \$137 million was spent on mining expenditures in Southwest Alaska.⁶⁵ Future mining development would employ residents and bring in new energy and infrastructure investments to the region.
- **Arctic and OCS Resources** – Nearly all year-round, deep-sea ports available for accessing arctic and Outer Continental Shelf (OCS) resources in the Arctic and North Pacific Ocean are found in the Aleutians and Southern Gulf of Alaska. The Arctic and OCS represent some of the least understood environments on earth, and thus a great opportunity for new resources and exploratory possibility. The impetus for this development will be driven by private organizations and federal interest with capabilities and incentive to invest in regional communities.

ENERGY

Southwest Alaska has an abundance of renewable energy options that have the potential to offset the current high costs of energy. Recent efforts to coordinate energy planning have been successful; further expanding these efforts could greatly benefit communities experiencing high energy costs.

- **Stranded Energy Potential and Supporting New Models**– Improving renewable energy technology means that energy investments are becoming more feasible. The success of pilot projects from around the world can offer additional information to guide future investments. As described earlier, regional examples of emerging energy projects are the ocean tidal power project in False Pass, in-river hydrokinetic in Igiugig and waste-to-heat/power incinerators in Dillingham and Egegik.
- **Bulk Fuel Programs** – Bulk fuel purchases are the opportunity to be an effective means of lowering energy costs. The formation of regional purchasing groups can increase purchasing power and help lower fuel prices.
- **Energy Efficiency Programs** – There are a number of statewide energy efficiency programs available in Alaska, including Alaska Housing and Finance Corporation (AHFC)'s Weatherization Assistance Program and the Home Energy Rebate Program. As a whole, these funds have historically been underutilized. This is likely due to a combination of a lack of access to capital for upfront improvement costs, potential tax liability, limited program outreach and limited availability of vendors to conduct assessments. While most of Southwest Alaska has seen high participation rates in these programs, some areas have low homeowner participation rates such as Aleutians West Census Area and Kodiak Island Borough (four percent and 16 percent, respectively).⁶⁶ Homeowners in these areas could benefit from the cost savings of these energy programs. Low participation rates in Aleutians West Census Area and Kodiak Island Borough represent an opportunity for SWAMC to work with AHFC to do

⁶⁵ Alaska Miner's Association. (January 2012). *The Economic Impacts of Alaska's Mining Industry*. Retrieved May 22, 2014 from http://www.alaska.edu/files/bor/120412Ref04_AK_Mining_Industry_Economic_Impacts.pdf

⁶⁶ Wiltse, N., Madden, D., Valentine, B., Stevens, V. (2014). 2013 Alaska Housing Assessment. Cold Climate Housing Research Center. Prepared for: Alaska Housing Finance Corporation. Retrieved April 18, 2014 from <http://www.cchrc.org/2013-alaska-housing-assessment>.

direct outreach to homeowners and business facility owners that could benefit from these and other energy efficiency programs.

- Alaska natural gas development has the potential to bring lower cost energy to rural Alaska.⁶⁷ Unalaska is investigating a LNG through a pilot project to begin next year.

INFRASTRUCTURE

The opportunities to expand and improve Southwest Alaska's communication, housing, transportation and other infrastructure are dependent on the willingness to invest by both regional and external partners. In some cases, the return on investment is years off, as may be the case with arctic development and transport. In other instances, such as the housing and water/sewer projects described below, the direct benefits of cash investment are or will be realized by improved community infrastructure and lower costs of living in rural communities. In all cases, SWAMC plays a key role in bringing together creative, innovative groups that can brainstorm, research, invest, and potentially implement new infrastructure in Southwest Alaska. These innovative projects and investments have the potential to create new jobs, businesses and overall regional wealth. Specific examples include:

- **Arctic Transport** – A new book released by the University of Calgary Press addresses the recent increase in activity in the Arctic and discusses potential opportunities.⁶⁸ The book concludes three emerging opportunities: resources, security and science. While Arctic shipping has long been a topic of discussion, the book concludes that Arctic shipping is unlikely to become a widely used transportation medium over the next few decades due to seasonal restrictions, lack of infrastructure and the need for expensive ice-breaking cargo carriers. However, the region is seeing slight increases in traffic. For example, a Norwegian Carrier is planning to stop in Dutch Harbor on its way back to South Korea this July to pick up seafood and carry it over the pole for delivery.
- **Arctic and OCS Infrastructure Support** – Infrastructure for early exploration of potential resource development of the Arctic and Outer Continental Shelf (OCS) is currently available in the Southwest Region. Future well development and/or production will require specialized equipment and the construction of shore-side support infrastructure. The impetus for this development will likely be driven by private organizations and federal interest with capabilities and incentive to invest in regional communities.
- **Housing and other Community Infrastructure** – Research groups around the world are engaged in helping populations in remote, rural communities identify new technologies and systems for driving down the cost of living and improving quality of life. Two recent efforts include the Aleutian Housing Authority's "Living Aleutian Home Design" competition and the State of Alaska's Department of Environmental Conservation's Water and Sewer Challenge.⁶⁹ In both cases, consultants, including architects, housing experts, engineers, and planners from around the globe have been invited to submit and test their best ideas for

⁶⁷ White, Bill. (March 2014). *Guide to Alaska Natural Gas Projects*. Office of the Federal Coordinator: Alaska Natural Gas Transportation Projects. Retrieved May 28, 2014 from <http://www.arcticgas.gov/guide-alaska-natural-gas-projects>.

⁶⁸ Zellen, Barry Scott. (June 2013). *The Fast-Changing Arctic: Rethinking Arctic Security for a Warmer World*. University of Calgary Press. Accessed May 16, 2014 from <http://uofcpress.com/books/9781552386460>

⁶⁹ Living Aleutian Home Design announcement, <http://www.akbizmag.com/Alaska-Business-Monthly/May-2012/Spanish-Team-Wins-Living-Aleutian-Home-Design-Competition/>; and, the State of Alaska Water and Sewer Challenge website, <http://watersewerchallenge.alaska.gov/>.

designing, creating and constructing creative, affordable housing and community water and sewer systems for Alaska's most remote communities.

- **Expanding Communication Infrastructure** – Recent investments in microwave and fiber optic networks are slowly bringing increasing levels of network service to Southwest Alaska.

A particularly large project, the Quintillion Arctic Fibre cable, plans to link Anchorage and Seattle to a cable extending up to Alaska's North Slope. As seen in a preliminary map of the project, the proposed cable will pass by the tip of the Aleutian Islands. There is no current plan for a spur cable to service Southwest Alaska, although the cable may

Figure 3.1 Proposed Route for Arctic Fiber Optic Cable



Source: Arctic Fibre.

provide opportunities for expanding service in the future. Marine surveys for the project began the summer of 2014.⁷⁰ Survey activities are expected to continue through the 2015 summer as soon as Quntillion Networks and Arctic Fibre select a new submarine cable system supplier. In the meantime Quintillion is currently evaluating Unalaska and Dutch Harbor as a possible landing site for future construction.⁷¹ If the zone is selected as a landing site, fiber optic internet connections would be available within the near future.

PARTNERSHIPS

Southwest Alaska is comprised of many partners working together toward shared goals. Many of these partnerships, especially the newly-formed partnerships, have potential to grow and expand.

- **ANCs and CDQs** – The region's three Community Development Quota (CDQ) organizations and three Alaska Native Corporations (ANCs) are well funded, organizationally sound and committed to developing regional capacity. Leaders from all six groups sit on the SWAMC Business Council.
- **Southwest AKs Geostrategic Location** – Over the past five years there has been a national geopolitical shift with an increased interest in strategy and security to the Asia-Pacific region. Southwest Alaska is strategically positioned and may benefit from increased federal infrastructure, investment and resources as a result of its strategic position.

⁷⁰ Smith, Matthew F. (May 30, 2014). *Arctic Subsea Fiber Optic Cable Project Begins Summer Marine Surveys*. KNOM Radio Mission. Accessed June 16, 2014 from <http://www.knom.org/wp/blog/2014/05/30/subsea-arctic-fiber-optic-cable-project-to-begin-summer-marine-surveys/>

⁷¹ Quintillion Networks, personal communication, May 7, 2015.

- **Fisheries Workforce Development** – FSMI’s collaborative mix of public and private sector participants continue to facilitate conversations and move forward on workforce development strategies that address fishery, seafood and maritime industry needs.
- **SWAMCs Increased Role as Convener/Networker/Liaison** – SWAMC recently compiled a regional map and associated database that includes contact information for members and nonmembers, organized by region and by sector. This interactive tool will be available on SWAMC’s website as a resource. The networking map can be used to chart out the areas SWAMC is involved in. Additionally it can be used to see the connections between private and municipal entities. The newly-formed SWAMC Business Council also brings together business leaders for meetings and conversations that encourage cooperation and coordination between Southwest Alaska private, public and non-profit partners. Council and other SWAMC members have stated that these networking opportunities have been helpful and worthwhile; reaping rewards in the form of new partnerships, strategies, and economic development projects.

THREATS

Conditions and trends occurring outside the region pose challenges to the economic viability of Southwest Alaska. Increased cost of living due to increased energy and transportation costs, could limit economic opportunities for business expansion and retention, making it more difficult for the region's young people to secure career-oriented jobs. A warming climate is also predicted to shift fisheries resources north, threatening the region's fisheries-dependent coastal communities. Public budgets that have historically supported the bulk of community and regional infrastructure projects may no longer be available. Long-term economic planning for resilient communities, a resilient region, can be challenging with this uncertain future. Understanding threats to the region's economic viability is one step toward anticipating issues and developing strategies that can buffer and mitigate the harmful effects of potential threats. Specific threats by focus areas are outlined below.



“The cost of living negatively impacts all business as it contributes to not being able to put a competitive product on the market whether that is healthcare, fish or financing.”

“As a region we're still seeing outmigration so the business climate is getting worse.”

“The two biggest problems we face stem from substance abuse and awful transportation.”

- *SWAMC Business Council*

WORKFORCE DEVELOPMENT

Effective workforce development is dependent on the stability of the market to provide people with opportunity to find gainful employment and employers some ability to employ productive members of the team that contribute to the overall good of the organization. Outward migration and high costs of living threaten to undermine recent efforts to support workforce development in Southwest Alaska.

- **Net Outward Migration** – A globally connected world provides greater exposure to outside opportunities. Outward migration and high costs of living threaten to undermine recent efforts to support workforce development in Southwest Alaska. The effect of an outward draw from rural communities can be very damaging to their competitiveness and ability to meet future workforce needs. While total population is holding steady due to a higher number of births than deaths, the region is experiencing a net outward migration. Between 2011 and 2012, there was a net migration loss of 300 individuals; Aleutians West Census Area was the only region that saw a net gain, with a net gain of 41 individuals.⁷² Anecdotal evidence suggests that some tribal offices are relocating out of rural communities to Anchorage. If the

⁷² Alaska Department of Labor and Workforce Development. (August 2013). *Alaska Local and Regional Information*. Retrieved May 27, 2014 from <http://live.laborstats.alaska.gov/alari/>

costs of living continue to rise, it will become even more difficult to attract and retain a qualified workforce, and increase the cost of doing business in the region. Additionally, most organizations have offices and conduct business in Anchorage, making it challenging for local businesses who do not have a presence outside of Southwest Alaska.

- **Changing Resource Base** – When a particular resource base shifts the opportunities arising from that resource base will change, and a new dynamic will be required to train and mobilize the workforce. Changing climatic conditions may already be forcing fish population biomass north.⁷³ In order to meet these changing conditions, employers may ultimately shift their workforces to new locations, thus threatening employment in communities where the availability of seafood resources are decreasing.
- **Reduction in Public Training Funds** – Many workforce development and training workshops are covered through a mix of fee for service, but also offset by public funds to make the courses affordable.

RESOURCES

Resources form the economic base for Southwest Alaska, and are subject to changes in behavior, stock distribution and overall abundance. These changes are based on the complex interaction of environmental factors.

- **Impact of Climate Change on Southwest Alaska Fisheries** – A 2013 Ocean Acidification Risk Assessment by the Alaska Center for Climate Assessment and Policy, UAF, NOAA and other partners concluded that out of the entire state, the Southwest Alaska region is at the most risk for negative impacts of ocean acidification due to the region's high levels of subsistence and commercial fishing, combined with the region's heightened socioeconomic vulnerability (based on economic stability, food accessibility, job diversity, educational attainment).⁷⁴ For a map showing the scores and ranking by region, see the Appendices. A 2015 published study revealed that it is the region's commercial dependency on salmon, king crab, and tanner crab that pose risk to the economic well-being of Southwest Alaska. The study determined that salmon and crustacean species will most immediately be negatively affected by ocean acidification, impacting profits for fisheries in the region. The study urged communities in the region to increase their adaptive capacity to respond to a potential decline in fish stocks⁷⁵. No current measures to respond to ocean acidification in Southwest Alaska are underway at this time.
- **Competing Producers** – Farmed salmon competes with wild salmon in the world market.⁷⁶ Demand for salmon has been increasing and many consumers are willing to pay a premium for the cost of wild salmon.⁷⁷ However, continued expansion of salmon farming has the potential to reduce the overall market value of salmon.

⁷³ National Oceanic and Atmospheric Administration. (July 2012). *Climate & Fish Sticks*. Retrieved May 23, 2014 from <http://www.climate.gov/news-features/climate-and/climate-fish-sticks>

⁷⁴ Alaska Center for Climate Assessment + Policy, University of Alaska Fairbanks, National Oceanic + Atmospheric Administration et al. (December 2013). *Ocean Acidification Risk Assessment for Alaska's Fishery Sector*. Retrieved May 20, 2014 from <https://accap.uaf.edu/?q=project/ocean-acidification-sensitivity-index-oasi>

⁷⁵ Ocean acidification risk assessment for Alaska's fishery sector. *Prog. Oceanogr.* (2015). Mathis, J.T., et al., <http://dx.doi.org/10.1016/j.pocean.2014.07.001>

⁷⁶ Trends in Alaska and World Salmon Market. (2013). Knapp, Gunnar. Retrieved May 27, 2014 from http://www.iser.uaa.alaska.edu/Publications/presentations/2013_02_07-GK_TrendsInAlaskaSalmonMarkets-

⁷⁷ Trends in Alaska and World Salmon Market. (2013). Knapp, Gunnar. Retrieved May 27, 2014 from http://www.iser.uaa.alaska.edu/Publications/presentations/2013_02_07-GK_TrendsInAlaskaSalmonMarkets-

- **Environmental Protections Limit Resources Development** – While often necessary, efforts to protect the natural environment and the region’s flora and fauna can put additional burdens on local industry. For example, the Steller sea lion was listed as an endangered species in 1990 under the Endangered Species Act. Since its listing, various restrictions and regulations on fishing have had a negative impact on the region’s fishing industry.⁷⁸
- **Bycatch** - Ineffective use of resources leads to lost economic potential. While very few stocks in Alaska are classified as overfished, and the general consensus is that Alaska manages stocks for long-term sustainability, resource conflicts still arise as is evidenced in periods of low abundance, and further conflicted by the presence of bycatch. Continued conflict over best use of the resource will perpetuate ineffective use of the resources.⁷⁹
- **Impacts of Mining on Fisheries Unknown** – Existing and potential mining projects have the potential for large-scale spills or accidents, with the potential to affect natural resources such as fish supply.
- **Increased Competition for Adventure and Eco-Tourism** – Southwest Alaska is contending in what is becoming an increasingly competitive international market for adventure travel and outdoor activities. Simultaneously, other adventure destinations in locations such as Chile, Ecuador, Japan and Iceland are growing in popularity.⁸⁰

ENERGY

Energy prices in rural Alaska are volatile and continue to rise. High energy costs result in higher costs of doing business and increase outward migration as residents leave due to increases in the cost of living. Many residents of Southwest Alaska identify the price of energy as the single greatest risk to the long-term sustainability of communities in the region.

- **No Cheap Alternatives** – Current technology is generally not able to provide the energy needs of Southwest Alaska at a cheaper delivered cost of power than existing energy systems. If no alternative energy system replaces existing non-renewable supplies of energy, prices will likely rise further, potentially to the point that the viability of some communities are compromised.
- **Reduced Public Investment** – To date a great deal of public expenditure has been diverted to investments in solving regional energy needs, which may not be the case if public budgets tighten.

INFRASTRUCTURE

The infrastructure in Southwest Alaska is vulnerable to a number of environmental and political factors. Climate change is already affecting coastal communities, and the region experiences frequent earthquakes and occasional volcanic eruptions. The region’s heavy reliance on federal and state funds for the construction and maintenance of infrastructure leaves communities particularly vulnerable to reductions in the availability of public funds.

⁷⁸ Hui, T.C.Y. (2011). *Stellar sea lions and fisheries: competition at sea?* University of British Columbia, Vancouver.

⁷⁹ Food and Agriculture Organizations of the United Nations. (2011). *Review of the State of World Marine Fishery Resources*. Retrieved May 23, 2014 from <http://www.fao.org/docrep/015/i2389e/i2389e.pdf>

⁸⁰ George Washington University and the Adventure Travel Trade Association. (December 2012). *Adventure Tourism Development Index: 2011 Report*. Retrieved May 27, 2014 from http://cdn.adventuretravel.biz/wp-content/uploads/2012/11/atdi_2011_report.pdf

- **Natural Environmental Changes** – Southwest Alaska’s location along the Pacific Ring of Fire means the region is subject to relatively frequent earthquakes and occasional volcanic eruptions. According to the U.S. Geological Survey and the Alaska Volcano Observatory, 36 of the 41 active volcanoes in Alaska are in Southwest Alaska.⁸¹ According to the Alaska Earthquake Information Center (AEIC) there are over 200 earthquakes with magnitude 4 and greater per year in the region from Kodiak Island westward through Attu Island.⁸² There were about 60 earthquakes with magnitude seven and greater in that region in the past 100 years. While eruptions and earthquakes with magnitudes large enough to cause damage are infrequent, large events do have the potential to negatively impact the region’s economy.
- **Climate Change Impact on Existing Infrastructure** – Climate change threatens many coastal communities in Southwest Alaska. Some communities are already struggling with erosion, melting permafrost and flooding as a result of climate change.
- **Decline in Private Investment** – Diminishing federal and state investments in public infrastructure may reduce private investment in the region.
- **Postal Services** - Potential cuts to postal services and rural mail delivery would be catastrophic to the region’s economy.
- **Alaska Marine Highway System** - Reduced funding for the Alaska Marine Highway will mean less revenue from tourism for cities usually visited frequently over the summer. Maintenance on the M/V Tustumena in the summer of 2013 caused a dramatic drop in visits to Southwest Alaska towns (see figure 2.16). Reduced service has been already scheduled for 2015, due to State budget shortfalls.

PARTNERSHIPS

Currently, the only real threats to Southwest Alaska’s growing regional, state, federal partnerships are recent and anticipated budget cuts and increased federal regulation and oversight. SWAMC, in partnership with regional, state and federal partners must strategize how to effectively grow, diversify and sustain the region’s economy, as well as be an effective advocate for effective regulations that protect resources without financially burdening local and regional businesses.

- **Overbearing Government Regulation** – As described by the SWAMC Business Council, government regulations are overbearing and cost private business money and difficulty of doing business, which translates into lower regional economic potential. Rural Alaska generally has increased costs of doing business, and the effect of onerous regulations may create an outsized burden for industry in the Southwest Region.
- **Reliance on Public Funding** – Currently, the region is heavily reliant on public funds for employment and infrastructure; Southwest Alaska’s economy is vulnerable to federal and state funding cuts. As competition increases for a limited and dwindling pool of federal and state resources, SWAMCs role as convener, coordinator and regional advocate will be become increasingly vital to the long-term success of the region.

⁸¹ U.S. Geological Survey. (September 2000). *Historically Active Volcanoes in Alaska – A Quick Reference*. Retrieved May 22, 2014 from <http://www.avo.alaska.edu/pdfs/usgsfs118-00.pdf>

⁸² Natalia Ratchkovski, Ph.D., Seismologist, Alaska Earthquake Information Center, Personal communication, June 19, 2003

CHAPTER 4: SWAMC WORK PLAN

SWAMC VISION

Vibrant and livable communities for Southwest Alaska.

SWAMC MISSION

Support the collective interests of Southwest Alaskans, businesses, and communities and promote long-term economic opportunities through improved quality of life and responsible development.

1) Goal: Support Regional WORKFORCE DEVELOPMENT Initiatives

Objective 1: Training and Education – Promote professional development that prepares Southwest Alaska residents to contribute to the region’s economic development potential.

Objective 2: Applicable Training – Promote workforce training that is closely aligned with needed skills.

Strategies – Programs, Projects, Activities

- Coordinate shared interests and concerns across the region through active engagement with SWAMC membership to align private sector goals with institutional training curriculum.
- Make use of Alaska Career Information System (AKCIS) job maps that identify career paths, highlighting skills needed for associated employment opportunity and pay scale.
- Coordinate business needs with learning institutions to align goals and facilitate communication, relevant to job training, job seeking and skills for the types of work that are available in the region.
- Maintain SWAMC's Workforce Development programs and facilitate awareness of meaningful and available local employment opportunities.

2) Goal: Support Access to and Development of RESOURCES

Objective 1: Fisheries Development – Promote fisheries that provide a sustainable income base to the communities, businesses, and residents of Southwest Alaska.

Objective 2: Tourism Development – Promote awareness and opportunity of the region’s intrinsic natural value, access to unique experiences and abundant wildlife.

Objective 3: New Resource Development – Promote mineral and other resource development activities that increase regional wealth, are responsibly managed, and account for the greatest long-term benefit to the region.

Strategies – Programs, Projects, Activities

- Collect and analyze baseline data to maintain a regional data library to better understand the economic development trends and needs of the region.
- Attend regulatory and policy meetings and monitor their effects on the regional resources.
- Advocate for policies, management, and environmental initiatives that promote a healthy business environment and community livability.
- Advocate public investments that facilitate private sector resource activity.
- Investigate regionally competitive valued added economic development activities.
- Research marketing activities that increase the value of resources.
- Maintain a strategic plan for access and development of resources.

3) Goal: Support INFRASTRUCTURE Improvements

Objective 1: Strategic Infrastructure Investments – Promote infrastructure that facilitates and supports the region’s social, cultural, and economic development needs.

Objective 2: Community Planning – Promote long-term visions, goals, and plans for sustainable community development.

Strategies – Programs, Projects, Activities

- Advocate for regional transportation projects and vital transportation links, including runway and harbor investments that ensure vital air and marine transportation linkages.
- Advocate for improved communication infrastructure and research opportunity for commercial and community usability of available technology.
- Research information infrastructure solutions that meet national standards and offer applications which improve the utility of new communication infrastructure for businesses and communities.
- Assist communities with programs, grants and loans to help expand their infrastructure.
- Represent Southwest Alaska interests in the Southwest Alaska Transportation Plan.
- Advocate services that reduce transportation costs and improve community livability and economic development opportunities.
- Maintain an economic geography dataset for Southwest Alaska that recognizes Southwest Alaska’s contribution to statewide economic wealth and identifies key capital investments for improving regional competitiveness.

4) Goal: Support ENERGY Infrastructure that Reduces the Delivered Cost of Power and Increases Regional Efficiency

Objective 1: Energy Efficiency – Promote energy systems that stabilize or reduce the long-term cost of power, by increasing the efficiency of every unit used.

Objective 2: Ownership of Energy Systems– Promote local ownership of energy planning, decision-making, and projects.

Objective 3: Supply of Low-Cost Power – Promote projects that supply low-cost power.

Strategies – Programs, Projects, Activities

- Research cost competitive, renewable, and local sources of energy that increase livability and economic development activity in the region.
- Investigate new sources of cheap energy.
- Advocate emerging energy prototype systems in regions where existing high prices offer a price advantage capable of offsetting initial development costs.
- Coordinate stakeholder feedback to aggregate best practices, local priorities, and other local knowledge to improve energy systems.
- Collect and distribute energy data to better inform energy system decisions.
- Assist communities with technical and economic analysis of energy projects.
- Continue with strategic energy planning, including direct assistance to communities.
- Encourage the development of a statewide energy plan through incorporation of the Alaska Energy Authority's Regional Energy Planning process.
- Investigate co-op development and other organizational means of achieving economies of scale for providing cheaper power.
- Encourage and facilitate a plan, with technical feedback from program providers, with direction from community stakeholders to improve efficiency of buildings and infrastructure.

5) Goal: Support REGIONAL PARTNERSHIPS

Objective 1: Regional Economic Planning – Promote a regional Comprehensive Economic Development Strategy, with sub-regional and local planning efforts.

Objective 2: Communications – Promote partner networks and activities of the organization, region, state, and federal interests.

Objective 3: Advocacy – Promote local, regional, state and federal policies that benefit the region, its communities, businesses, members and key partners.

Objective 4: Organizational Effectiveness – Maintain leadership from a Board of Directors, representative of regional interests, who guide activities of a productive staff, manage a financially secure organization, and pursue regionally collective interests.

Strategies – Programs, Projects, Activities

- Continue to offer forums and events that bring stakeholders together, especially SWAMC's Economic Summit and Membership Meeting, which assembles regional stakeholders together for face-to-face discussion and exchange.
- Expand networking opportunities to reach more stakeholders.
- Continue engagement with local, state and federal institutions.
- Advocate for Southwest Alaska interests to Alaska's Legislature in Juneau and congressional delegates in Washington, D.C.
- Advocate for more local decision-making.
- Maintain a Comprehensive Economic Development Strategy that is updated annually and rewritten every five years.

- Coordinate regional economic planning efforts and research the economic needs and challenges of Southwest Alaska.
- Maintain and distribute an organizational map of partners pursuing similar development and community goals, complete with partners' contact information.
- Collect and maintain an Asset Map of new and existing development activity.
- Identify and encourage areas of regional competitiveness which could lead to new business opportunities.
- Conduct strategic planning efforts to coordinate multiple partners pursuing similar objectives.
- Maintain personal communication between communities, businesses, members, partner organizations, and the general public to build understanding about the region, its economy, and the needs of its residents.
- Engage municipal and associate members in leadership assignments to help guide policies.
- Increase membership investments and participation in SWAMC.
- Conduct Business Retention & Expansion (BRE) interviews to gain further understanding of business operator needs in the region.
- Follow-up on insights gained from BRE interviews to advocate for businesses.
- Develop a Manufacturing Extension Partnership Program with other regional partners to strengthen the manufacturing base of Southwest Alaska.

PRIORITY STRATEGIES (PROGRAMS, PROJECTS, ACTIVITIES)

- Support Youth Mentorship and Skills-Gap Training Programs
- Strengthen and Diversify Alaskan Manufacturing
- Understand Operating Environment and Resource Needs of Business
- Promote Energy Planning and Infrastructure Development
- Maintain a Data Library and Publish Economic Trends
- Host SWAMC Economic Summit and Membership Meeting

CHAPTER 5: SWAMC ACTION PLAN

Focus Area	What - Action Item and Steps	Why	Estimated Impact	Who (Potential Partners)	FTE Jobs Creation
<i>Workforce Development</i>	<p>Support Youth Mentorship and Skills-Gap Training Programs</p> <ul style="list-style-type: none"> • Develop workshops that support soft skills, including resume writing, interviewing and career planning • Develop workshops with Kodiak College, UAF-Interior Aleutians Campus, UAF-Bristol Bay Campus, and School Districts utilizing Alaska Career Information System (AKCIS) for job-preparedness in coordination with local businesses • Maintain calendar of activity to match needs and providers • Host STEM events, like Science Night to highlight local careers • Represent Southwest Alaska interests in statewide Industry-University driven Alaska Maritime Workforce Development Plan objectives to increase skilled maritime occupations 	SWAMC membership identifies abundant local STEM opportunities and concerns in workforce readiness skills	\$75,000	Industry partners; Foundations (Alaska Community Foundation); Kodiak College, UAF-Interior Aleutians Campus, UAF Bristol Bay Campus; School Districts;	2
<i>Manufacturing</i>	<p>Strengthen and Diversify Alaskan Manufacturing</p> <ul style="list-style-type: none"> • Establish Manufacturing Alaska Extension (MAKE) • Develop partnerships for National Institute of Standards and Technology requirements of Manufacturing Extension Partnership Grant to support manufacturing businesses • Partner with Alaska Fisheries Development Foundation to investigate feasibility of mariculture and kelp farming as a manufacturing industry in Alaska 	Alaska is only US State without an active MEP; MAKE can help build Alaska's manufacturer base	\$400,000	Marine Advisory Program, Southeast Conference, Industry Partners; SWAMC Membership; Alaska Fisheries Development Foundation; UA Center for Economic Development, Anchorage Economic Development Corp	8
<i>Business Retention and Expansion</i>	<p>Understand Operating Environment and Resource Needs of Business</p> <ul style="list-style-type: none"> • Establish Southwest Alaska Business Retention & Expansion (BRE) Program • Develop local partnerships to conduct outreach • Coordinate business Interviews in communities, with a target of 50 interviews for Southwest Alaska annually • Match 20% of businesses interviewed with funding, training, or other support, using empirical data to advocate resources to address business needs 	Regional Businesses support a diversified and dynamic economy, strengthen the quality of life and career opportunities	\$75,000	Business; Communities; SWAMC Membership; State of Alaska, Department of Commerce	2

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<i>Infrastructure Support</i>	<p>Promote Energy Planning and Infrastructure Development</p> <ul style="list-style-type: none"> • Host three Regional Energy Committees in the Aleutians, Bristol Bay and Kodiak to outline energy priorities and outlining a roadmap of tasks to complete projects • Advocate for priority infrastructure in the Southwest Alaska Transportation Improvement Plan critical to minimizing cost to communities • Advocate infrastructure that maximizes the value of marine and coastal resources abundant in the region • Advocate for communication technology that are a necessity for modern business and communities 	Expensive energy and transportation increase the cost of living and create barriers to expanding business, including the fisheries cluster	\$150,000	Communities, Alaska Energy Authority, Alaska Department of Transportation	3
<i>Southwest Alaska Economic Geography</i>	<p>Maintain a data library and publish economic trends</p> <ul style="list-style-type: none"> • Grow baseline data library and publish printed and digital material to highlight economic trends • Grow awareness for key trends and analyze how those trends affect business and communities • Advocate the Statewide and National positive economic impact of Southwest Alaska • Market the intrinsic value of Southwest Alaska as a tourist destination, including available unique experiences 	Good data drives good decision making, particularly the importance of Southwest Alaska to the overall wellbeing of the State	\$50,000	Public data providers, Alaska Legislature, Communities, Businesses, Northern Economics	1
<i>Economic Summit and Membership Meeting</i>	<p>Host SWAMC Economic Summit and Membership Meeting</p> <ul style="list-style-type: none"> • Achieve 5% growth in attendance by highlighting the importance of Southwest Alaska and SWAMC service • Conduct workshops to incorporate attendee feedback into strategic operations and draw focus to active projects • Improve feedback and networking opportunity 	Meeting regional representatives is important, and the annual conference is the largest gathering of Southwest Alaskans, and best opportunity to network	\$200,000	SWAMC Supporters & Members	4
Total Estimated Impact			\$950,000		20

APPENDICES

APPENDIX A: ENERGY

APPENDIX B: GEOGRAPHIC DATA

APPENDIX C: WORKFORCE DEVELOPMENT

APPENDIX D: INFRASTRUCTURE

APPENDIX E: OTHER ECONOMIC INDICATORS