



# St. Paul Island Comprehensive Economic Development Strategy: 2017-2022

St. Paul Island, Alaska

April 2017



# Acknowledgements

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- Residents of St. Paul Island, including the following organizations and groups:
  - St. Paul School middle and high school youth and teachers
  - St. Paul Church Council
  - Tribal Government of St. Paul Island
  - Tanadgusix Corporation
  - Central Bering Sea Fisherman's Association
  - City of Saint Paul
  - St. Paul Clinic
  - St. Paul School
- CEDS Committee Members (individuals with an asterisk\* were interviewed):
  - Amos Philemonoff, President, Tribal Council, Tribal Government of St. Paul Island\*
  - Aubrey Wegeleben, Behavioral Health Practitioner, Tribal Government of St. Paul Island\*
  - Biff Baker, CEO, Northstar Car Rental
  - Connie Newman, Superintendent (former), Pribilof School District\*
  - Elary Gromoff, Board Chair, Tanadgusix Corporation
  - Jason Bourdukofsky, President, Tanadgusix Corporation
  - Jeff Kaufman, CEO, St. Paul Fish Company
  - John Lyons, CEO, TDX Power\*
  - Monique Zacharof, St. Paul Health Center Manager, Southcentral Foundation\*
  - Phillip Lestenkof, President, Central Bering Sea Fishermen's Association
  - Phillip Zavadil, City Manager, City of Saint Paul (formerly Director, Community Safety Peace, Tribal Government of St. Paul Island)\*
  - Ron Philemonoff, CEO, Tanadgusix Corporation\*
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# Executive Summary

## St. Paul Island: Economic Vision

An Aleut community of healthy, resilient people working together to sustain a strong, fishing-based economy.

## St. Paul Island: Economic Development Goals

GOAL 1: Fisheries	Support, Protect, and Create New Fisheries Opportunities
GOAL 2: Research	Develop St. Paul Island Facilities and Workforce into a Leading Climate Change and Coastal Resilience Research Center
GOAL 3: Tourism	Grow St. Paul Island into a Culturally and Ecologically Unique Tourism Destination
GOAL 4: Strong Community Foundation	Strengthen Infrastructure and Services to Create a Healthy Foundation for Residents and Businesses to Thrive

## St. Paul Island: Priority Economic Development Strategies

*Preliminary leads for priority strategies identified in bold color below; leads and partners will be further refined over the 30-day comment period.*

- A. Complete the Vessel Repair and Supply Store (“VRSS”). (led by the Tribal Government of St. Paul Island [TGSPI])
- B. Explore feasibility of fishery expansion and diversification. (led by Central Bering Sea Fisherman’s Association [CBSFA], TGSPI, Tanadgusix Corporation [TDX] and the City of Saint Paul [City])
- C. Develop and implement a salmon hatchery. (led by TGSPI)
- D. Develop a Pribilof blue king crab hatchery. (led by the University of Alaska Fairbanks; National Oceanic and Atmospheric Administration (NOAA) Resource Assessment and Conservation Engineering (RACE) Division; and TGSPI)
- E. Conduct research to enhance understanding of unique St. Paul Island reindeer population; expand local harvests and export potential. (led by TGSPI)
- F. Expand existing research and monitoring capabilities on St. Paul Island. (led by TGSPI)
- G. Grow visitation and tourism on St. Paul Island. (led by TDX and City)
- H. Increase the range and quality of recreation and tourism activities for visitors. (led by the City, TDX and TGSPI)
- I. Achieve educational excellence at Pribilof Island Schools and related early childhood development opportunities. (led by the Pribilof School District and TGSPI)
- J. Develop and maintain a highly skilled, employment-ready workforce that supports and enhances the economic health of St. Paul Island. (led by TGSPI)
- K. Increase access to affordable, renewable energy and heating. (led by TDX and the City)
- L. Support capital improvement projects that provide critical infrastructure to the community’s economic development priorities. (led by the City and TGSPI)



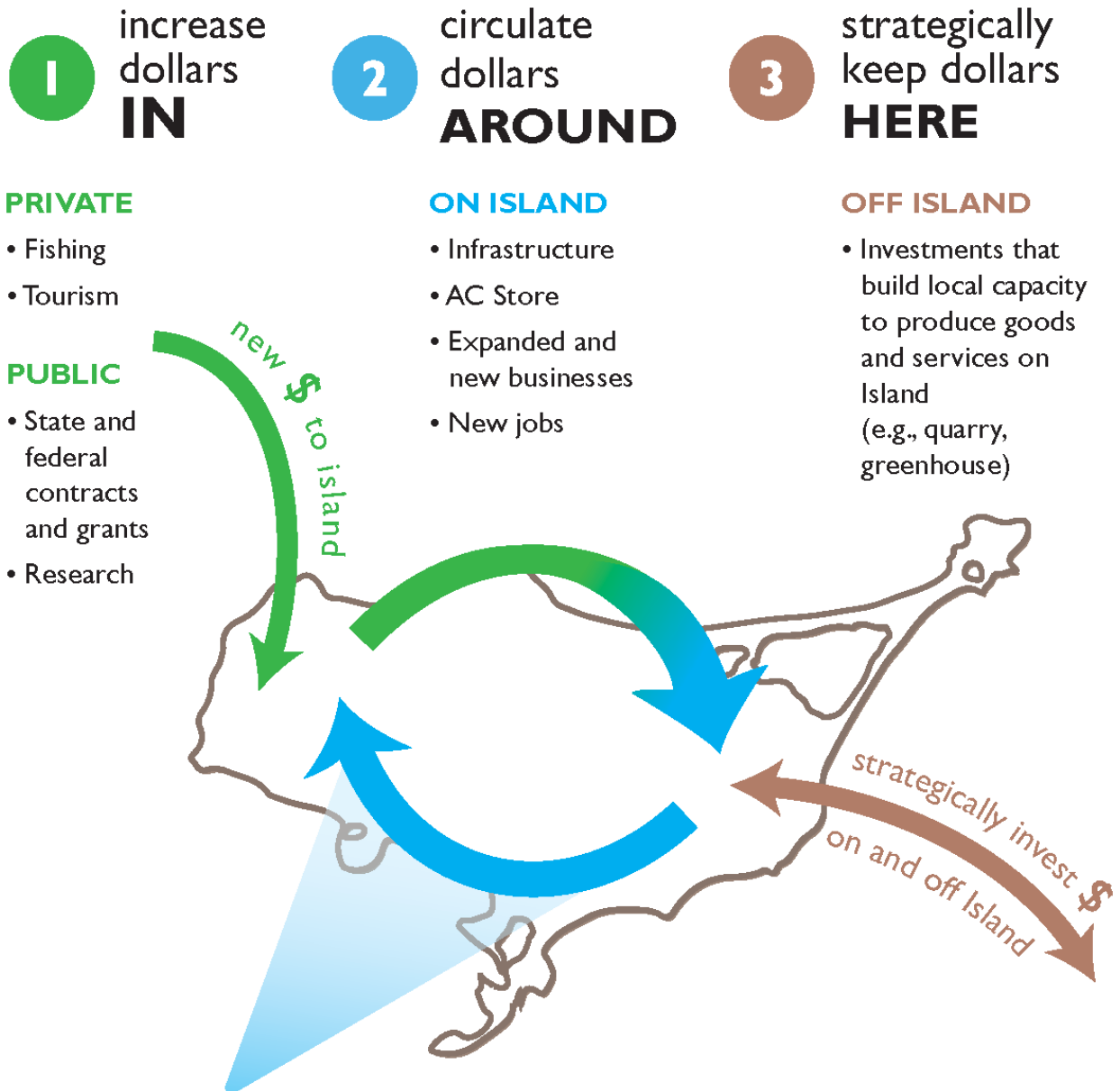
# What is Economic Development?

See the next page for a graphic on how to build a powerful rural economy and expand community wealth. An additional graphic – “What is the multiplier effect?,” is available in Appendix D.

- Economic growth happens when dollars come from off the Island into the community, either by exporting a product (such as fish) or selling a service (such as tourism).
- A "new" dollar has more impact, or a "multiplying" effect, than a "local" or "old" dollar does. The new dollar can have primary, secondary and tertiary impacts. For example, “new” money spent on fishing infrastructure creates jobs and increases the ability to create a product that can go off island and bring additional new money into the community. This is different than the dollar that is made by local employers and is then spent at a local café. That “local” dollar still has a positive impact, but not to the same degree as the new dollar. (see related graphic in Appendix D).
- More money coming in from off-island means more job opportunities, new and expanded businesses, and workforce development opportunities on St. Paul Island. Without a base economy that is supported by outside dollars coming in, the dollars simply circulate amongst residents on-island and do not "multiply" into other economic opportunity and community wealth, and the economy can slowly weaken as dollars leave the community when residents make off-island purchases for goods or services.
- Communities can also address economic development in limited ways by strategically reducing the leakage of money out of the community – for example, by manufacturing certain building materials out of local resources instead of purchasing off-island products.
- Successful economic development equals earning revenue by identifying, developing and selling a product or service. To be successful, the cost to develop a product should be less than the selling price, and there needs to be an interested and willing market for buying the product/service. For example, there is some demand for a private mechanic on St. Paul Island, but if only a small number of people are willing and able to pay for the service, a mechanic is not likely to be successful.
- A critical component to the “new” dollar concept and to successful, sustained economic growth, is a focus on attracting private sector investment. This could take the shape of co-financed and/or managed projects that leverage public dollars while taking advantage of private sector markets and financial tools. For St. Paul Island, this would be a significant shift, as the community has and continues to benefit from significant public sector investment. Today, local government is the largest employment industry, and federal and state grants and loans are the primary source of funding for local programs and services.
- Economic growth seeks to increase wages and job opportunities, which increases the spending power and overall wealth in a community. This in turn means residents have more money to spend at local businesses and to invest in new construction or projects. A thriving economy also brings in more money to the City through increased spending and the associated increase in sales tax revenue, which means the community can better maintain and invest in its infrastructure and services. In addition, communities with growth and employment opportunities typically attract more residents.



# 3 STEPS for BUILDING a **POWERFUL** LOCAL ECONOMY



**RESULT:** increased wealth on Island

## What is a CEDS?

A Comprehensive Economic Development Strategy (CEDS) is a tool for community based and regionally driven economic planning, with strategies and an implementation plan for creating stronger and more resilient communities and economies. CEDS are an important part of the U.S. Department of Commerce EDA programs, and are often required in order to be eligible for EDA and other federal and state funding opportunities.

## What is in a CEDS?

- A summary of demographic and economic data that showcases community and regional trends.
- A SWOT Analysis: an analysis of the strengths, weaknesses, opportunities and threats facing the St. Paul Island. This includes a discussion of the internal and external factors that support and contribute to the community's economic development, as well as the factors that limit and threaten the community's economy.
- A community vision, with goals and strategies that support the economic vitality of the community.
- A subset of “priority” strategies (programs, projects and activities) that leverage the community's strengths and potential opportunities, while also mitigating known challenges and potential threats to community and economic development activity.
- An action plan, which is a five-year roadmap with guidance on how to make progress on the priority strategies and projects. The action plan includes estimates on costs, number of jobs created and performance measures to track progress on the CEDS.

## Project Timeline



## Who has been involved?

The entire community and regional, state, federal and other community partners have participated in the CEDS process, including:

- Central Bering Sea Fisherman's Association (CSBFA)
- City of Saint Paul (“the City”)



- Educators from the St. Paul School, the Pribilof School District and UAF's Bristol Bay Campus
- Federal partners, including the National Marine Fisheries Service (NMFS), the National Oceanic and Atmospheric Administration (NOAA) and the National Weather Service (NWS)
- Private business owners
- Residents of St. Paul Island
- Southcentral Foundation
- St. Paul Island Church Council
- St. Paul Island Youth
- Tanadgusix Corporation (TDX) and subsidiary TDX Power
- Transportation-related partners such as PenAir, ACE Air Cargo and APUN
- Tribal Government of St. Paul Island (TGSPI)

TGSPI has overseen the CEDS process, with input from community leaders and entities, residents and off-island partners. The community and its partners will continue to work together to identify and support viable economic development strategies. CEDS development was guided by an advisory CEDS Committee; ultimate approval will be by the TGSPI Tribal Council. For a detailed list of the individuals involved, please visit the Acknowledgements page.

TGSPI has also been conducting tribal strategic planning in parallel with this CEDS effort to ensure the Tribe's priorities and actions align with and support communitywide economic development initiatives.



Agnew::Beck was hired to assist with the project, along with partner Northern Economics.



## Highlights from the Demographic Profile

- The St. Paul Island population has declined since its peak in 1990, with 427 residents in 2016. Population projections for the Aleutians West Census Area project a four percent decline for the region over the next 30 years, although senior sub-populations are expected to grow.
- St. Paul Island is predominantly Alaska Native, with 82 percent of residents identifying as American Indian and Alaska Native in the 2010 Census. This is a slight decrease from 86 percent Alaska Native in 2000 but a large increase from 66 percent in 1990.
- St. Paul Island has a young population, with almost a third of the population under 20. The population thins in the 20 to 40 age categories, suggesting middle age residents may leave the island to explore employment opportunities outside of the community. The male-female ratio is 53 percent male and 47 percent female, with a notable gender imbalance in the 20-49 age range, with 124 males and only 84 females. The median age on St. Paul Island is 34.5 years old, similar to the statewide median age of 34.1 years.

## Highlights from the Economic Development Profile

- The St. Paul Island economy is driven by the fishing industry, with smaller amounts of tourism, retail, mining and other services. On average, approximately 88 people each year are employed in the fishing industry (over one-third of all employed residents), and fishing is the primary source of revenue for the City of Saint Paul. The crab harvest and processing economic sector is the major contributor to the St. Paul Island economy. This heavy reliance on a single industry leaves the community vulnerable to changes in the marine environment, overfishing, bycatch and policy shifts.
- The closure and cutbacks in the 2016 / 2017 Total Allowable Catch (TAC) in the Bering Sea crab fishery was announced by the Alaska Department of Fish and Game in October 2016. The closures and cutback in the TAC is producing a major economic dislocation in all economic sectors of the St. Paul Island economy.
- St. Paul Island is located in a prominent fishing region: the Aleutians West Census Area is ranked second out of 3,221 nationwide counties/regional bodies for “Fishing and Fishing Products,” an analysis based on the relative concentration of export industries.
- Excluding self-employment (which includes many fishermen), “Local Government” is the largest industry employment category, with 98 residents employed in 2014, or almost 50 percent of all employed residents. This is much higher than “Local Government” industry employment in the Aleutians West Census Area (around 20 percent) and statewide (14 percent). Other top industry employment categories on St. Paul Island include “Professional and Business Services” “Trade, Transportation and Utilities” and “Education and Health Services.”
- Over the five-year period between 2010 and 2014, the average median household income for St. Paul Island was \$49,375. This number is smaller than the Aleutians West Census Area’s median household income of \$82,284 and the statewide median of \$71,829, and similar to the U.S. median of \$53,382.
- Poverty levels for both families (ten percent) and individuals (14.5 percent) are higher on St. Paul Island when compared with the Aleutians West Census Area and Alaska, and slightly lower than nationwide averages.
- The number of people seeking unemployment insurance has fluctuated over the past decade, with a peak at 68 in 2011. Since 2011, total claimants have dropped to a low of 37 in 2014, or 12 percent of

all residents over 16. Unemployment rates in Alaska and the Aleutians West Census Area are lower, at approximately seven percent. These numbers typically underestimate overall unemployment; for example, some people may choose not to apply or not know how to apply for unemployment insurance, while others may run out of benefits but remain jobless.

- As the community contends with a declining population and shrinking workforce, there is also a smaller percentage of residents who are working: as of 2014, 67 percent of residents over 16 were employed on St. Paul Island, compared with 81 percent for the Aleutians West Census Area and 61 percent statewide. Of the 210 employed St. Paul Island residents in 2014, 68 percent were employed all four quarters of the year, the highest it has been over the past decade, although still slightly lower than the Aleutians West Census Area (77 percent) and Alaska (72 percent).
- The St. Paul Trident Seafoods processing plant fluctuates between 30 and 300 employees depending on the season, with between one and six local residents employed at the plant at any given time.
- Enrollment at the St. Paul School has declined 38 percent over the past ten years. Today, many high school students in leave St. Paul Island to attend at schools in other Alaska communities, including but not limited to Mt. Edgecumbe High School in Sitka or schools in Anchorage.
- Educational attainment rates for St. Paul Island residents are lower than state and national averages, with a larger proportion of the St. Paul Island community not completing high school (21 percent) and a smaller number of residents with college degrees (9.6 percent) compared with statewide and national averages.
- St. Paul Island residents experience high costs of living, including expensive groceries, energy bills and high transportation costs to and from the island.
- Most residents lack access to start-up capital for small businesses, and many do not have adequate credit to be eligible for a loan. There are no banks or financial institutions on the Island.
- St. Paul's remote location and harsh weather limit access to markets. Shipping is expensive and slow; for example, fresh produce often expires before it ever reaches the grocery store shelves.
- There is very little coordination between local entities to develop the local workforce, and there are limited training opportunities for residents.
- Local employers find it difficult to recruit and retain qualified applicants, especially when positions require outside hire (e.g., schools, clinic, city manager) or are short term and low pay (like fur seal research or fish processing).
- The community has a shortage of housing.

# I. Introduction

A Comprehensive Economic Development Strategy (CEDS) is a tool for community based and regionally driven economic planning, with strategies and an implementation plan for creating stronger and more resilient communities and economies. The CEDS is updated every five years; this 2016-2021 CEDS builds upon the efforts of previous CEDS planning efforts.

The CEDS is the guiding document for economic development on St. Paul Island and seeks to align efforts between different community entities and businesses. The goals and priority strategies in this document provide community leaders, funders and partners with the background and direction they need for allocating funding and prioritizing efforts that support economic development in the region.

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

Many organizations, businesses and individuals contributed to the content and provided feedback on the CEDS, including the CEDS Committee, the St. Paul Tribal Council and the many individuals and organizations listed on the Acknowledgements page.

It is becoming increasingly apparent that regional economic prosperity is linked to an area's ability to prevent, withstand, and quickly recover from major disruptions (i.e., 'shocks') to its economic base....in the context of economic development, economic resilience becomes inclusive of three primary attributes: the ability to recover quickly from a shock, the ability to withstand a shock, and the ability to avoid the shock altogether.

Extract from the U.S. Economic Development Administration's *Comprehensive Economic Development Strategy Content Guidelines: Recommendations for Creating an Impactful CEDS*



# Development of the CEDS

The Tribal Government of St. Paul Island (“the Tribe”) is overseeing the CEDS process, with input from other community leaders and entities. The community worked together to identify and support viable economic development strategies. The CEDS development is guided by an advisory CEDS Committee, while ultimate approval of the CEDS is by the St. Paul Tribal Council.



The CEDS was developed with assistance from Agnew::Beck Consulting and Northern Economics, Inc. Outlined below is a summary of the efforts used to develop the St. Paul Island CEDS:

- Created a project overview introducing the project and schedule.
- Compiled background data on the community and the region from various local, state and federal data sources. To view the complete list of background documents, see Appendix B.
- Reviewed relevant community and regional planning documents, including the 2010 St. Paul Island CEDS.
- Conducted interviews with tribal administrators, stakeholders and community leaders. Overall, more than 40 interviews were completed during the planning process.
- Met with residents, students and community entities and shared project information in January 2016.
- Developed a preliminary list of emerging strengths, weaknesses, opportunities and threats and potential economic development projects and strategies
- Traveled to the community in March 2016 to share and discuss preliminary findings with the St. Paul Tribal Council, and to conduct additional interviews.
- Shared community data profile and collected feedback on the emerging strengths, challenges and priorities at the Aleut Community of St. Paul Island Semi-Annual Meeting in June 2016 through an engaging, interactive Family Feud game show-style format. For a copy of the presentation slides, see Appendix F.
- Traveled to the community in June 2016 to share preliminary strategies, conduct tribal strategic planning and meet with tribal staff, TDX Board Members and the City Council.
- Shared project information with the estimated 40 TDX shareholders, staff and board members at the annual TDX shareholder’s meeting in June 2016 and collected 26 responses to a short prioritization questionnaire.
- Facilitated a prioritization session with the St. Paul Island Tribal Council in October 2016 to confirm emerging priorities and solidify key industry sector priority areas.
- Traveled to the community in December 2016 to host additional conversations with the Tribal Council, the City Council, the Pribilof School District and to share preliminary findings and priorities





at the annual tribal meeting. Appendix G includes a copy of the CEDS update that went out in the annual tribal newsletter.

- Conducted follow-up conversations with community leaders and business partners to add action steps, job and cost estimates for priority strategies.

## Organization of the CEDS

This document is organized in the following sequence:

- Chapter One provides the reader with an overview of CEDS planning, the project area and the process used to develop this CEDS.
- Chapter Two includes a brief location, history and cultural overview, along with a demographic profile of the community. It also contains an economic profile with relevant trends related to business, industry, education and workforce development.
- Chapter Three offers a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis of the region. The focus of the SWOT is on making connections between the community's current status along with key trends to best tell the story of the St. Paul Island economy, including those factors that are a challenge and/or that support regional economic development efforts.
- In Chapter Four, we reintroduce St. Paul Island's economic vision and define community goals and objectives as well as priority programs, projects and activities. Each of the goals contains a discussion on why the goal is important and how it was selected as a priority for St. Paul Island.
- Chapter Five includes an implementation tool that defines a plan of action, which is followed by an evaluation framework with performance measures to evaluate progress of the action items.
- Chapter Six includes additional background information on infrastructure, community partners, environmental topics and health and wellness.



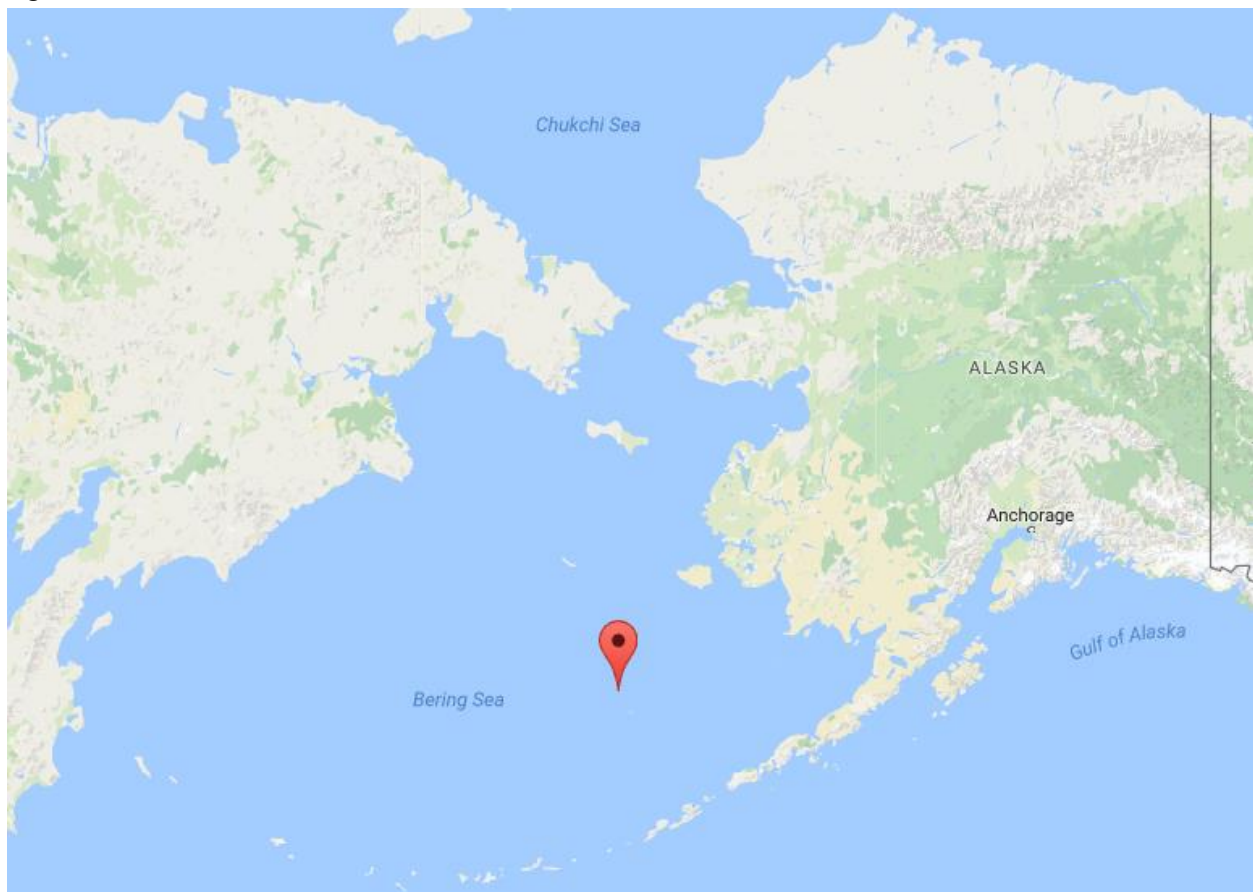
## 2. Summary Background

### Location Description

The Pribilof Islands region is in southwestern Alaska. The North Pacific Ocean lies to the immediate south of the islands and the Bering Sea to the north. The five Pribilof Islands are characterized by their remote location, rugged terrain, absence of trees, high winds, cool temperatures and volcanic origins. Access to communities in the region is limited to air or sea transport. (Source: 2010 CEDS).

The community of St. Paul Island is located on a peninsula on the southern tip of St. Paul Island, the largest of five islands in the Pribilofs. St. Paul Island has a total area of 43 square miles. St. George Island is 47 miles to the south, and mainland Alaska is approximately 300 miles to the west. St. Paul and St. George are both located within the Aleutians West Census Area, which includes most of the Aleutian Islands. (Source: Aleutian Pribilof Islands Association).

**Figure 1: Location of St. Paul Island**



Source: Google Maps, 2016

## History of St. Paul Island<sup>1</sup>

St. Paul Island is home to the largest Aleut community in the world. The Aleut people have continuously occupied the Aleutian Islands chain and Pribilof Islands geographic region of Alaska for centuries. The St. Paul Island community has a complex history; the bullets below outline some of the key events, disruptions and changes on St. Paul Island over the past 250 years.

- In 1786, Russian fur traders discovered the Pribilof Islands.
- In 1788, the Russian American Company enslaved Aleuts from Siberia, Atka and Unalaska and brought them to the Pribilofs to hunt fur seals. The Pribilof Aleuts are descendants of these fur seal hunters.
- In the late 1800s, the United States (U.S.) government awarded a lease to the Alaska Commercial Company to provide housing, food and medical care to the Aleuts in exchange for seal harvesting. The State of Alaska official seal has a fur seal and fur seal pup on the left hand side, a tribute to the importance of the fur seal industry during Alaska's early years as a state.
- In 1910 the Fur Seal Act was passed, which ended private leasing on the islands and placed the community under the U.S. Bureau of Fisheries. Living conditions on the islands were poor and racial segregation was practiced during this time.
- During World War II, the entire Aleut population of the Aleutian Chain and Pribilof Islands was evacuated to federal internment camps at Funter Bay on Admiralty Island in southeastern Alaska. Internment had both short term and long term consequences for the Pribilof residents, including deaths, disease, family disintegration, economic losses, destruction of entire villages, resettlement in nontraditional villages and the loss and destruction of religious buildings and artifacts.
- In 1979, the Aleut community on St. Paul Island received \$8.5 million in partial compensation for the unjust treatment they were subject to under federal administration between 1870 and 1946. The community continues to struggle with ongoing impacts from historical trauma and decades of economic marginalization.
- The federal government oversaw activities and managed the community until the early 1980s. In 1983, responsibility for providing community services and management of the fur seals was transferred to local entities. Twenty million dollars was provided to help develop and diversify the Pribilof Islands economy – \$12 million to St. Paul Island and \$8 million to St. George.
- Commercial harvesting on St. Paul Island ceased in 1985 due to a sharp drop in fur seal population, and the economy shifted to focus on commercial seafood harvest. The community received some transition money to develop a fishing economy. Most of this money went toward upgrading community infrastructure, including significant upgrades to the harbors.
- Today, the economy of St. Paul Island continues to be dominated by the commercial fishing sector.

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<sup>1</sup> This section summarizes information from the following sources:

*Preserving the Legacy of the Pribilof Islands*. National Oceanic and Atmospheric Administration and the Alaska State Historic Preservation Office. Updated June 2008; available here: [http://docs.lib.noaa.gov/noaa\\_documents/NOS/ORR/TM\\_NOS\\_ORR/TM\\_NOS-ORR\\_17/HTML/Seal\\_Islands.htm](http://docs.lib.noaa.gov/noaa_documents/NOS/ORR/TM_NOS_ORR/TM_NOS-ORR_17/HTML/Seal_Islands.htm)

*Island History*. National Oceanic and Atmospheric Administration. Updated August 2013. Available here: <http://pribilof.noaa.gov/island-history.html>

*Tribes: St. Paul - History*. Aleutian Pribilof Islands Association. Available here: <http://www.apiai.org/tribes/st-paul/>

## Demographic Profile

This section and the following section identify compelling data, trends and indicators that help define the economy of St. Paul Island. When possible, community-level data is used (generally colored orange), along with regional (blue) and statewide (green) comparative information. In this document, the term “region” generally refers to the Aleutians West Census Area. When community-level data is not available, we have used the Aleutians West Census Area to demonstrate regional trends.

There are some limitations to this data:

- The most recent 2010 decennial census data is six years old and does not necessarily capture the Island’s current demographic profile.
- More recent information based on American Community Survey 5-year estimates have high error margins, thereby making it difficult to make conclusions from the data.
- Information about the Aleutians West Census Area is statistically more accurate and can help determine regional trends, but it aggregates eight different communities and is therefore not entirely representative of the conditions on St. Paul Island alone.
- Many important local economic activities such as commercial fishing and subsistence are not captured in standard economic indicators such as employment or income data.

Key highlights from this demographic profile include:

- The St. Paul Island population has declined since its peak in 1990, with 427 residents in 2016. Population projections for the Aleutians West Census Area project a four percent decline for the region over the next 30 years, although senior sub-populations are expected to grow.
- St. Paul Island is predominantly Alaska Native, with 82 percent of residents identifying as American Indian and Alaska Native in the 2010 Census. This is a slight decrease from 86 percent Alaska Native in 2000 but a large increase from 66 percent during the 1990 Census.
- St. Paul Island has a young population, with almost a third of the population under 20. The population thins in the 20 to 40 age categories, suggesting middle age residents may leave the island to explore employment opportunities outside of the community. The male-female ratio is 53 percent male and 47 percent female, with a notable gender imbalance in the 20-49 age range, with 124 males and only 84 females. The median age on St. Paul Island is 34.5 years old, similar to the statewide median age of 34.1 years.

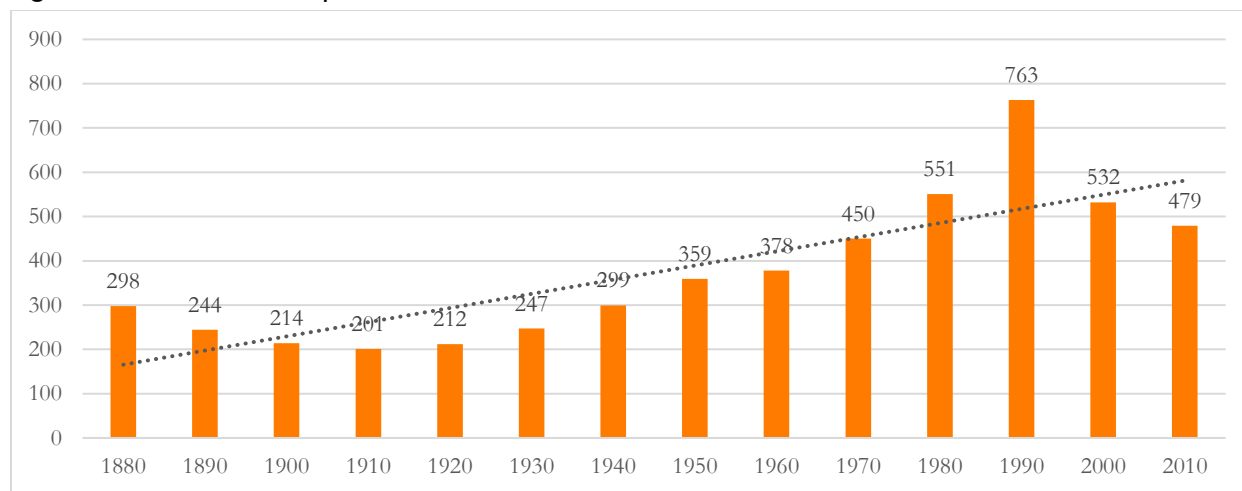


## Population

### Population Trends

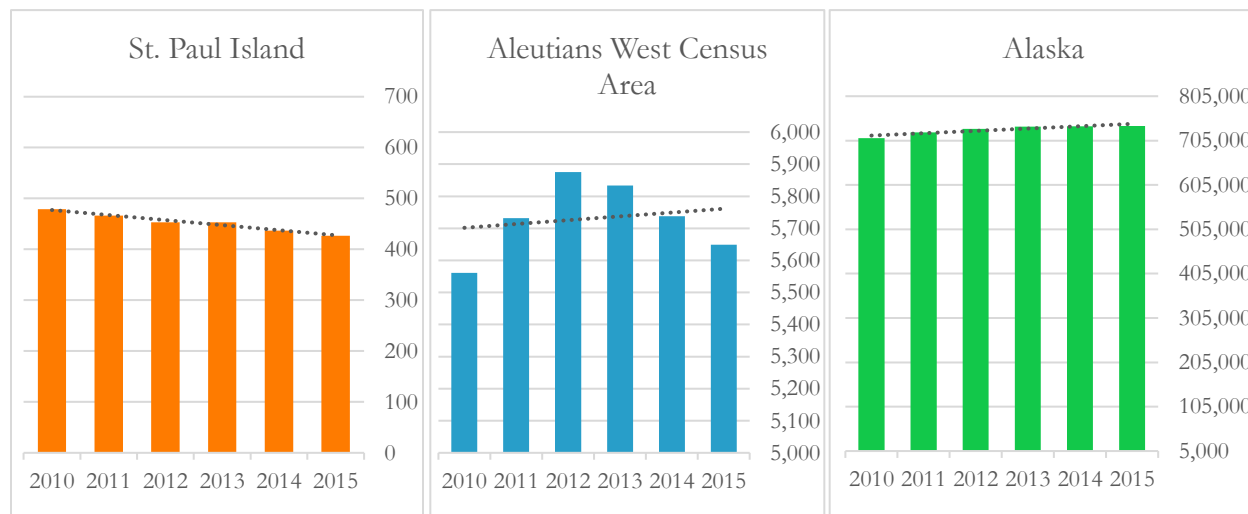
According to the Alaska Department of Labor and Workforce Development, the 2016 population of St. Paul Island is 427. The community's population grew from 201 in 1910 to a high of 763 in 1990, declined sharply to 532 in 2000, with a smaller decline between 2000 and 2010 (Figure 2). Many residents attribute the large decline in the late 1990s to the crash of the snow crab fishery. Over the past five years, population has continued to decline slowly, with an 11 percent decline since 2010. Over the same five-year period, population in the Aleutians West Census Area stayed relatively stable with a two percent increase and Alaska's population experienced a four percent increase (Figure 3).

**Figure 2: St. Paul Island Population, 1880-2010**



Source: U.S. Census as reported in the Alaska Department of Commerce, Community and Economic Development Community Database Online. Accessed January 2016.

**Figure 3: Population for St. Paul, Aleutians West Census Area and Alaska, 2010-2015**



Trend lines show the linear average (line of best fit) across the date range. Please note the y-axis population scale varies between graphs.

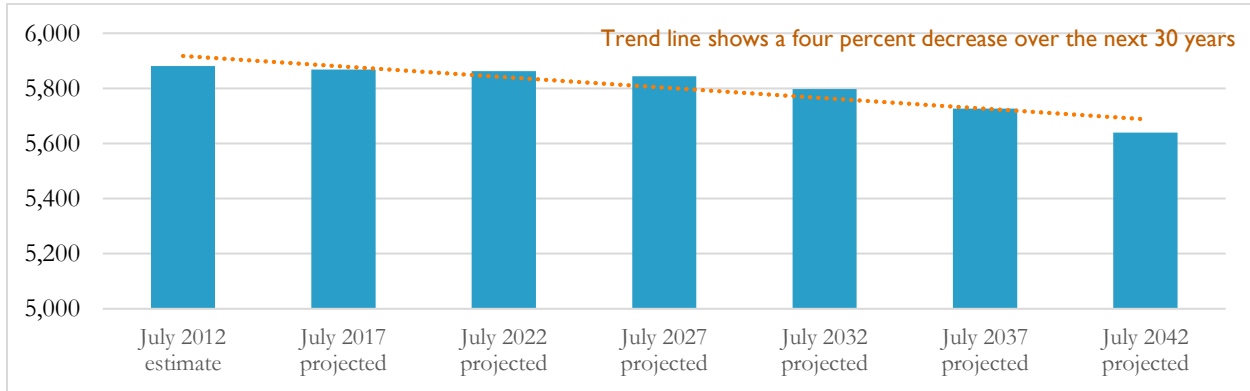
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section. Accessed January 2016.



## Population Projections

The Alaska Department of Labor and Workforce Development releases population projections with estimates for the next 30 years. These projections are available at the borough/census area level. The forecasts project a four percent decline in population for the Aleutians West Census Area between 2012 and 2042, from 5,881 to 5,639 people. Note, these projections are for the entire region, not just St. Paul Island.

**Figure 4: Aleutians West Census Area: Projected Population Change 2012-2042**

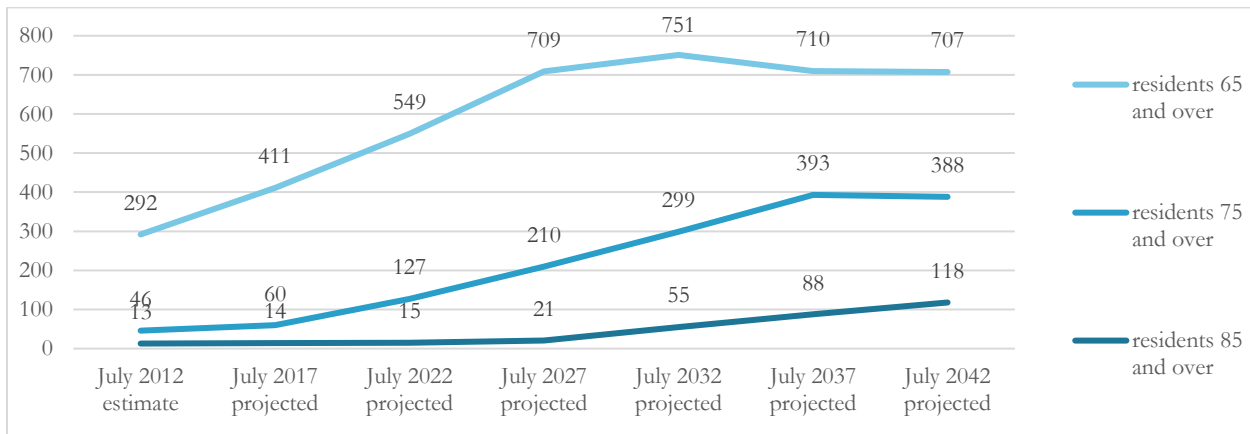


Source: Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section. Accessed January 2016.

The population projection data also includes a breakdown of the components of change that explain how the state arrives at its estimates. The projection estimates show a higher birth-to-death ratio, meaning more babies are expected to be born than population lost due to deaths. However, largely due to a projected net outmigration from the region, the forecast predicts an overall population decline for the region.

While the projections estimate an overall decline in population for the Aleutians West Census Area, the segment of older persons is projected to increase as the baby boomer generation ages. Residents age 65 and older are projected to increase from 292 in 2012 to a forecasted high of 751 in 2032, while residents age 75 and older are forecast to increase eightfold from 2012 to 2042. Residents age 85 and older are projected to be nine times larger. As populations age, communities, including St. Paul Island, must prepare for an increased demand for senior housing, including assisted living and related services.

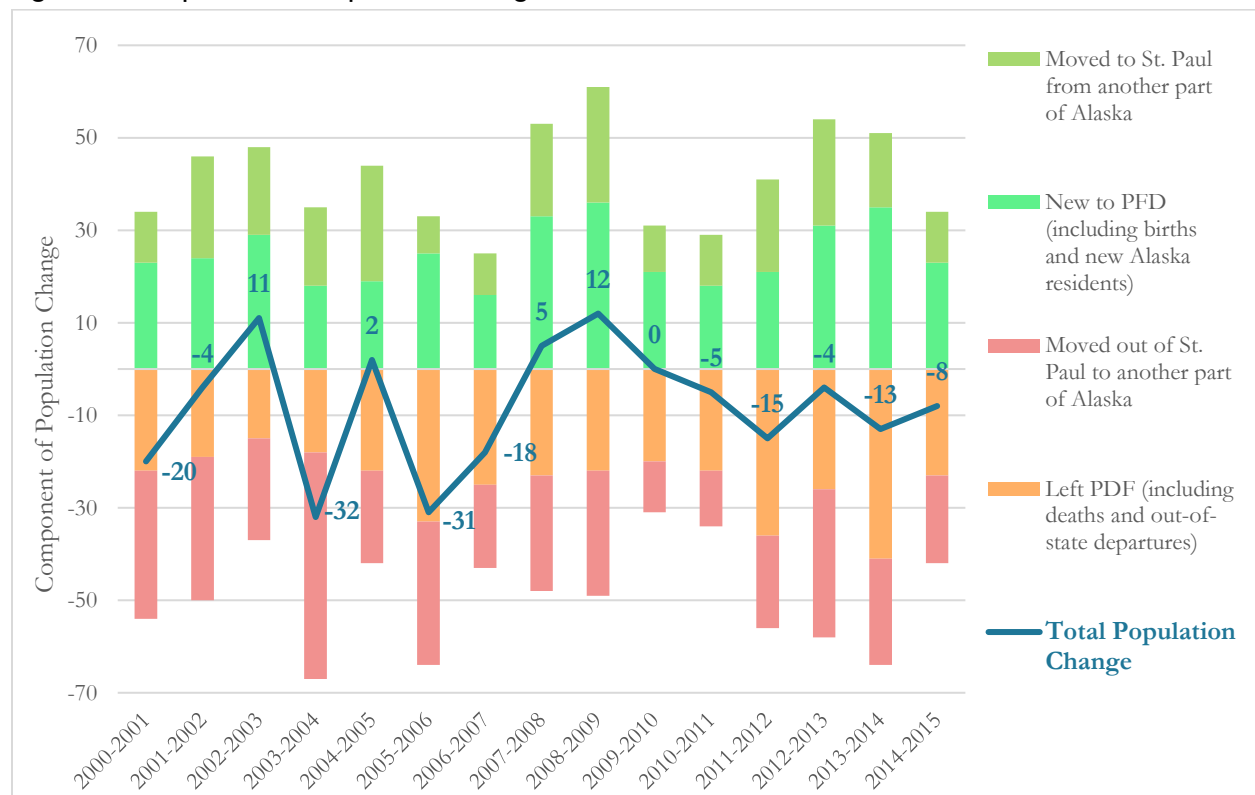
**Figure 5: Aleutians West Census Area Population Projections, Ages 65 and Older, 2012-2042**



## Migration Information

The State of Alaska also tracks the overall migration trends of residents around the state using Permanent Fund Dividend (PFD) information. This data shows the number of people moving to and from a community each year, and also the number of new applicants to the PFD (including births and new Alaska residents) and those who did apply for a PFD (including deaths and out-of-state departures) for each community. The numbers are a helpful tool to understand what is driving changes in a community's population. Over the past 15 years, St. Paul Island has experienced an overall loss of residents, although some years do show a slight increase. The biggest increases occurred between 2001 and 2002 (net increase of 11 people) and between 2008 and 2009 (net increase of 12 people). The two time periods with the largest drop in population were between 2003 and 2004 (net loss of 32 people) and between 2005 and 2006 (net loss of 31 people). Figure 6 shows the components of change for St. Paul Island between 2000-2015. Green bars show gains in population, red and orange bars show losses and the blue line shows total population change.

**Figure 6: Components of Population Change for St. Paul, 2000-2015**

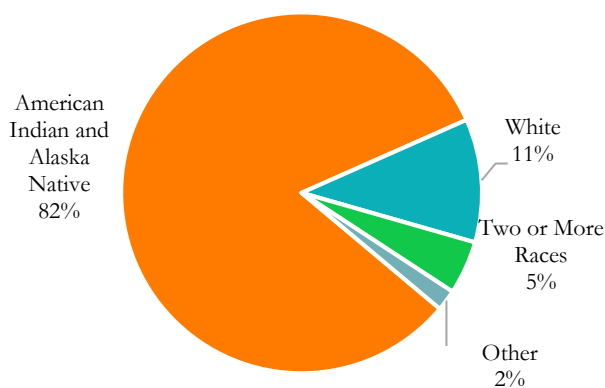


Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section based on Permanent Fund Dividend (PFD) data

## Race

St. Paul Island is predominantly Alaska Native, with 82 percent of residents identifying as American Indian and Alaska Native in the 2010 Census. Eleven percent of the population is white, and five percent of residents responded they identify with two or more races. This is similar to the 2000 Census, with 86 percent of the population identifying as American Indian and Alaska Native, but a shift from the 1990 census, when only 66 percent of the community identified as American Indian and Alaska Native. The lower percentage of American Indian and Alaska Native residents in the 1990 Census may have been due to higher fish processing employment at the time. Fish processing employment peaked in St. Paul Island in the 1990s and typically attracted non-Alaska Native residents to the island from outside. The impact of fish processing employment on the US Census demographic data would have been especially pronounced if the 1990 Census count was conducted on St. Paul Island during peak processing season.<sup>2</sup>

Figure 7: St. Paul Distribution by Race, 2010 Census



Source: 2010 Census

## Age and Gender

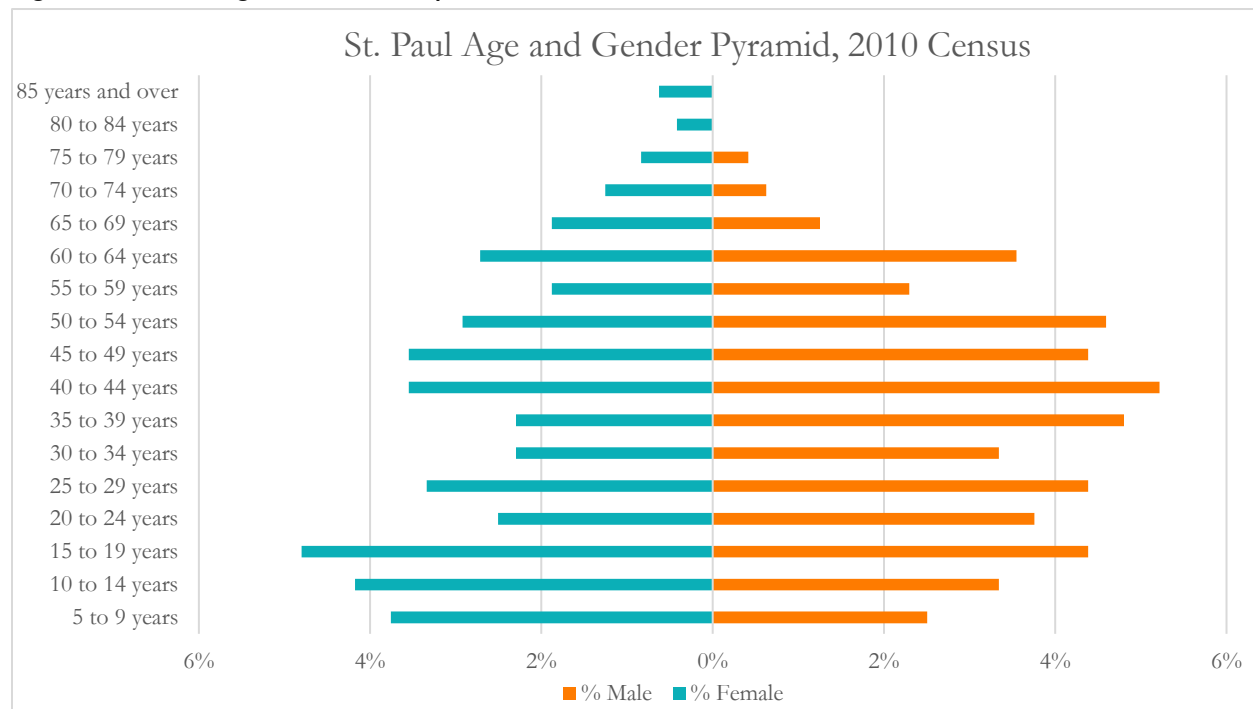
During the decennial U.S. Census, age and sex data is collected for all residents. This information describes the current population and is also useful for anticipating future population characteristics. The age and gender pyramid depicted in Figure 8 gives a visual summary of the distribution of population from the 2010 Census. In this case, the community of St. Paul Island has a young population, with almost a third of the population under 20. The population thins in the 20 to 40 age categories, suggesting middle age residents may leave the island to explore employment opportunities outside of the community. The male-female ratio is 53 percent male and 47 percent female, with a notable gender imbalance in the 20-49 age range, with 124 males and only 84 females. The 2010 pyramid closely resembles the 2000 Census pyramid, suggesting the community's population and gender dynamics have remained somewhat stable. The median age in St. Paul Island is 34.5 years old, which is similar to the statewide median age of 34.1 but lower than the Aleutians West Census Area of 40.7

"We are lucky to have elders here. We could learn a lot from them."

- St. Paul Island community member

<sup>2</sup> *Fishing Community Profiles, Chapter 4*. North Pacific Research Board and the North Pacific Fishery Management Council. June 2008.

Figure 8: St. Paul Age and Gender Pyramid, 2010 Census



Source: U.S. Census, 2010

## Economic Profile

St. Paul Island is situated in the center of a productive ocean environment, with high concentrations of fish and marine mammals. Historically, the federally-controlled fur seal industry dominated the economy of the Pribilof Islands; today, the fishing industry serves as the pillar of the community economy. This section provides information on key industries, employers, income and workforce characteristics for St. Paul Island and the surrounding region. Key findings from this section include:

- The St. Paul Island economy is driven by the fishing industry, with smaller amounts of tourism, retail, mining and other services. On average, approximately 88 people each year are employed in the fishing industry (over one-third of all employed residents), and fishing is the primary source of revenue for the City of Saint Paul. This heavy reliance on a single industry leaves the community vulnerable to changes in the marine environment, overfishing, bycatch, quota (TAC) cutbacks and closures, and policy shifts.
- St. Paul Island is located in a prominent fishing region: the Aleutians West Census Area is ranked second out of 3,221 nationwide counties/regional bodies for “Fishing and Fishing Products,” an analysis based on the relative concentration of export industries.
- Excluding self-employment (which includes many fishermen), “Local Government” is the largest industry employment category, with 98 residents employed in 2014, or almost 50 percent of all employed residents. This is much higher than “Local Government” industry employment in the

“The fishing industry is the economic engine of the community. The better we can manage the fisheries, the healthier our community.”

- St. Paul Island community member

Aleutians West Census Area (around 20 percent) and statewide (14 percent). Other top industry employment categories on St. Paul Island include “Professional and Business Services” “Trade, Transportation and Utilities” and “Education and Health Services.”

- Over the five-year period between 2010 and 2014, the average median household income for St. Paul Island was \$49,375. This number is smaller than the Aleutians West Census Area’s median household income of \$82,284 and the statewide median of \$71,829, and similar to the U.S. median of \$53,382.
- Poverty levels for both families (ten percent) and individuals (14.5 percent) are higher on St. Paul Island when compared with the Aleutians West Census Area and Alaska, and slightly lower than nationwide averages.
- The number of people seeking unemployment insurance has fluctuated over the past decade, with a peak at 68 in 2011. Since 2011, total claimants have dropped to a low of 37 in 2014, which equates to 12 percent of all residents over 16. Unemployment rates in Alaska and the Aleutians West Census Area are lower, at approximately seven percent. These numbers typically underestimate overall unemployment; for example, some people may choose not to apply or not know how to apply for unemployment insurance, while others may run out of benefits but remain jobless.
- As the community contends with a declining population and shrinking workforce, there is also a smaller percentage of residents who are working: as of 2014, 67 percent of residents over 16 were employed on St. Paul Island, compared with 81 percent for the Aleutians West Census Area and 61 percent statewide. Of the 210 employed St. Paul Island residents in 2014, 68 percent were employed all four quarters of the year, the highest it has been over the past decade, although still slightly lower than the Aleutians West Census Area (77 percent) and Alaska (72 percent).
- The St. Paul Trident Seafoods processing plant fluctuates between 30 and 300 employees depending on the season, with between one and six local residents employed at the plant at any given time.
- Enrollment at the St. Paul School has declined 38 percent over the past ten years. Today, many high school students in leave St. Paul Island to attend at schools in other Alaska communities, including but not limited to Mt. Edgecumbe High School in Sitka or schools in Anchorage.
- Educational attainment rates for St. Paul Island residents are lower than state and national averages, with a larger proportion of the St. Paul Island community not completing high school (21 percent) and a smaller number of residents with college degrees (9.6 percent) compared with statewide and national averages.
- St. Paul Island residents experience high costs of living, including expensive groceries, energy bills and high transportation costs to and from the island.
- Most residents lack access to start-up capital for small businesses, and many do not have adequate credit to be eligible for a loan. There are no banks or financial institutions on the Island.
- St. Paul’s remote location and harsh weather limit access to markets. Shipping is expensive and slow; for example, fresh produce often expires before it ever reaches the grocery store shelves.
- There is no current plan or strategy for developing the local workforce, including limited training opportunities for residents.
- Local employers find it difficult to recruit and retain qualified applicants, especially when positions require outside hire (e.g., schools, clinic, city manager) or are short term and low pay (like fur seal research or fish processing).
- The community has a shortage of housing.



## St. Paul Island Employers and Industry Clusters

This section summarizes key industry trends on St. Paul Island and provides background on the primary industry clusters in the community. The following section provides information on regional industry trends within the Aleutians West Census Area in order to create a broad picture of how St. Paul Island fits into the regional economy.

The State of Alaska collects industry employment data through the Department of Labor and Workforce Development's occupational database, shown in Figure 9. Unlike the previous sections which only contain information at the census area level, this data is available for St. Paul Island. The numbers are based on the residency location of the worker, not the location of the job itself. For example, if a St. Paul Island resident commutes to the North Slope every few weeks, they will be counted in the table under "Natural Resources and Mining," whereas an employee working at the St. Paul Island Trident Seafoods plant (herein referred to as "Trident") will not be counted unless St. Paul Island is their primary residence.

Between 2004 and 2014, local government has remained the largest industry employment category on St. Paul Island with almost 50 percent of all employed residents in this category in 2014, although the number of people employed in "Local Government" declined from 144 in 2004 to 98 in 2014. This category includes the Pribilof School District teachers and staff, the Tribe and the City of Saint Paul. In fact, nearly half of the workers in the "Local Government" category are employed by the Tribe. In addition to its standard departments, the Tribe has a number of business-like tribal enterprises that bring in revenue, including construction, bulk fuel, a bar, a liquor store and miscellaneous contracting services for federal projects. While "Local Government" is the largest industry—more than twice as large as the second biggest industry, according to the data—employment numbers in this category are unlikely to increase due to a combination of factors, including shrinking student enrollment and sufficient staffing levels at the city and Tribe.

Other top employment categories include "Professional and Business Services" with 38 people employed in 2014, "Trade, Transportation and Utilities" with 25 people and "Education and Health Services" with 20 people. Two categories experienced significant drops over the ten-year period: "Financial Activities" and "Construction." The reason for these declines is not immediately apparent, since the data is not available at an individual employer level. However, possible declines could be due to business closures or re-categorization of businesses into different industry groups.

**Figure 9: Workers by Industry, St. Paul Island, 2005-2015**

Industry Group (sorted highest to lowest by 2015 numbers)	2005	2010	2015
	# of workers % of labor force	# of workers % of labor force	# of workers % of labor force
<b>Local Government</b> <i>Tribe, City, Pribilof School District administrators and teachers</i>	117 43%	109 49%	110 54%
<b>Professional and Business Services</b> <i>Includes TDX staff, research, administrative support, business management</i>	39 14%	5 2%	28 14%
<b>Trade, Transportation and Utilities</b> <i>Includes retail (AC Store), PenAir, radio station, TDX Power employees</i>	22 8%	22 10%	25 12%
<b>Educational and Health Services</b> <i>Includes Southcentral Foundation employees at the clinic, Aleutian Pribilof Islands Association staff</i>	22 8%	20 9%	10 5%
<b>Other</b>	7 3%	12 5%	15 7%

<i>Includes employment by other industries not included on the list, or industry is unknown</i>			
<b>Manufacturing</b> <i>Manufacturing of seafood products (e.g., locals working at Trident), textiles, transportation equipment, etc.</i>	12 4%	18 8%	8 4%
<b>Natural Resources and Mining</b> <i>Includes agriculture, fishing, hunting, mining, and residents who commute to the North Slope</i>	0 0%	0 0%	4 2%
<b>Financial Activities</b> <i>Includes financial services, insurance, real estate</i>	22 8%	26 11%	2 1%
<b>Leisure and Hospitality</b> <i>Includes arts, entertainment, hotel, food service</i>	1 <1%	1 <1%	2 1%
<b>State Government</b> <i>Includes state employees such as Dept. of Transportation, Fish and Game or Health and Social Services</i>	1 <1%	2 1%	1 <1%
<b>Construction</b> <i>Includes employees who work for privately-owned construction companies</i>	26 10%	12 5%	0 0%
Total Residents Over 16	344	324	302
Total Residents Employed	269	227	205
Total Percentage of Residents Employed	78%	70%	68%
NOTE: this table excludes federal staff (including military), employees who are not residents of St. Paul Island (such as most Trident employees) and self-employed individuals (such as fishermen). Residents are only counted once, so if someone works multiple jobs across different industries, it only captures their highest-wage job.			

Source: Alaska Department of Labor and Workforce Development - Research and Analysis Section. Accessed November 28, 2016.

Figure 9 does not include self-employed individuals, and therefore it excludes a large segment of the St. Paul Island population that fishes. According to estimates from CBSFA, the local halibut fishery employs approximately 88 people annually. The table also excludes fish processing employees at the Trident plant, who are not considered full-time residents of St. Paul Island. Fish processing staff at Trident can range from 30 during halibut season to 300 during peak crab harvesting season.

### Fishing

St. Paul Island is home to a commercial fishing fleet that fishes for halibut and crab. In 1989, Trident Seafoods built a shore-based seafood processing facility on the island. The plant relies primarily on crab, including opelion and king crab caught by vessels in the waters surrounding St. Paul Island and delivered and sold to Trident. Central Bering Sea Fisherman's Association (CBSFA) also contracts with Trident to process local halibut catch. For more information on CBSFA, see the "Community Partners" section toward the end of the document.



Employment at the processing plant peaks at around 300 people during snow crab season from January through March, with a smaller workforce the rest of the year. Almost all of the Trident workforce comes from outside the St. Paul Island community. Additional fish processors operate offshore and are serviced out of St. Paul Island. The island also hosts a small commercial fishing fleet, most of whom fish for halibut during the day and return to the harbor each evening.

The halibut fishery is managed jointly by the North Pacific Fishery Management Council (NPFMC), the National Marine Fishery Service (NMFS), and the International Pacific Halibut Commission (IPHC). The

IPHC determines the annual catch limits (Fishery Constant Exploitation Yield, or FCEY) for each of the halibut management areas. In Alaska, the FCEYs are then subdivided between the various user groups including individual fishing quota (IFQ) and commercial development quota (CDQ). The split between CDQ and IFQ was determined by the NPFMC and NMFS during approval and implementation of the Halibut IFQ program in 1995. St. Paul residents participate in the halibut fishery by fishing CDQ allocation or by owning IFQ.<sup>3</sup>

CBSFA is the management organization for St. Paul Island under the Western Alaska CDQ Program. The purpose of the CDQ Program is to provide eligible western Alaska villages with the opportunity to participate and invest in fisheries in the region, to support economic development and to provide economic and social benefits for residents of western Alaska. CBSFA supports the local fishing economy in many important ways, including through advocacy, purchasing quota for different species and overseeing subsidiaries that produce and market seafood products.

As a part of this planning effort, Northern Economics, Inc. prepared a St. Paul Island Fisheries Economic Profile to better understand and evaluate the current status of St. Paul Island fisheries, including economic value to the community, resident participation and potential expansion opportunities. Highlights of the profile are summarized below.

“There are a lot of costs associated with operating a commercial fishing vessel, even a small one. Every vessel is required to have a raft and safety equipment, which has to be inspected and repacked each year. For small vessels there are many restrictions, too. For example, we are limited by how far offshore we can fish, while the big boats get to go out and collect larger harvests.”

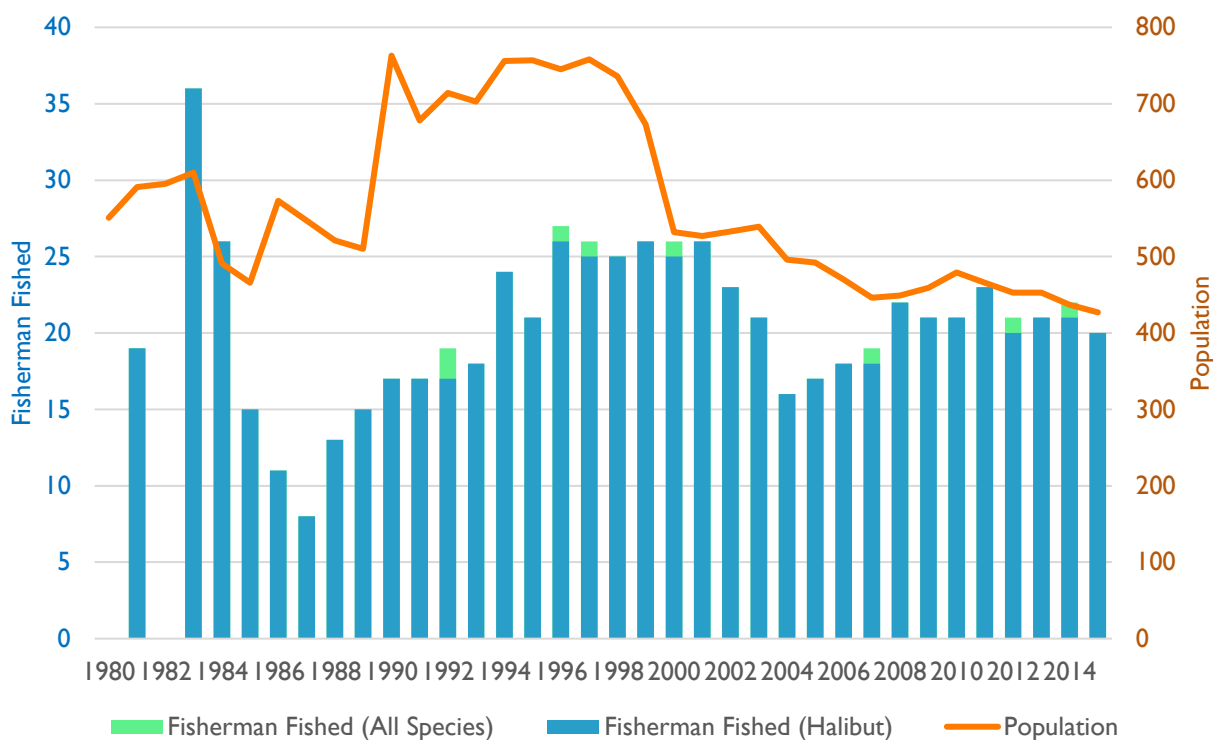
- St. Paul Island commercial fisherman and community member

- **Resident participation in the fishing industry** – Since the early 1980s, nearly all St. Paul Island residents who participate in the fishing industry fish for halibut (Figure 10). This includes residents who have quota allocated to them by CBSFA, and residents who own individual fishing quota (IFQ) in the directed halibut fishery. Fishery participation has remained relatively consistent since 2008. The St. Paul halibut fishery (collectively the IFQ and CDQ fisheries) employed between 58 and 110 residents annually between 2003 and 2015 - averaging 88 residents annually. This includes skippers, crew members, and on-shore baiters associated with the harvest of halibut, but does not include small boat harbor staff, fuel dispensers or Trident processing plant employees.

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<sup>3</sup> Northern Economics Inc. For more details refer to the *St. Paul Island CEDS Fishery Profile*.

Figure 10: Active St. Paul Island Resident Fishermen, 1980-2015



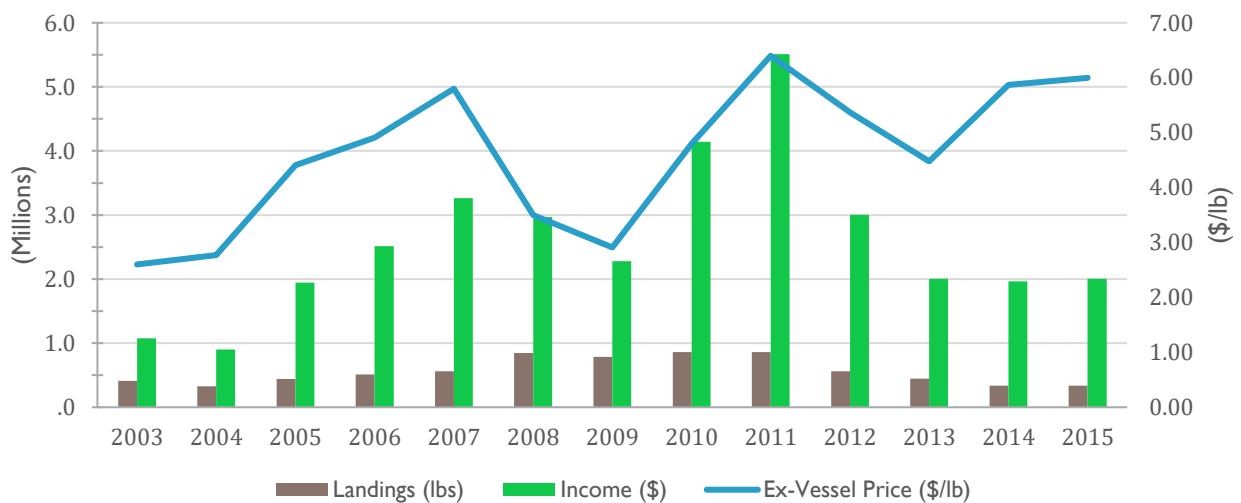
Source: CFEC (2016) Note: Data unavailable for 1980 and 1982.

- Local fishing fleet** – St. Paul Island is home to 17 fishing vessels (up from 12) privately owned by local residents. Five larger locally owned vessels have entered the 2017 fishery due to construction progress on the vessel repair and marine supply facility. The number of local vessels in the St. Paul fishing fleet remained consistent through 2014, but experienced noticeable declines in 2015 and 2016, from 18 in 2014 to 12 in 2016 and increased to 17 in 2017. All privately owned vessels in the fleet are less than 50 feet, which is typical of a local fleet owned by community residents. The Central Bering Sea Fishermen’s Association (CBFSA) and its subsidiary own and operate 7 large fishing vessels that engage in the crab, groundfish, salmon, and halibut fisheries. (Note: Photos of CBFSA and resident vessels are included in the appendix). The average age of the fleet has dropped slightly in recent years, and is likely the result of the retirement of older vessels. Aluminum hulled vessels remain proportionately more common, with only two vessels in 2016 with fiberglass or plastic hulls. No vessel in the resident privately owned vessels in the fleet reported refrigeration capabilities in 2015 or 2016, which is characteristic of day-trip fisheries where most vessels return to port each evening.

- Local vessel landings and income** – Total local vessel landings in the St. Paul halibut fishery ranged between 325,707 pounds and 863,359 pounds, while income generated ranged between \$902,211 and \$5,510,131 between 2003 and 2015. The landings, income and ex-vessel price trends are all available in Figure 11. Local vessel landings were highest in 2010, although income peaked in 2011 due to a combination of high landings and a high ex-vessel price of \$6.40 per pound. Over the same time period, the St. Paul halibut fishery averaged over 560,000 pounds of harvest and over \$2.5 million dollars in income annually. The resulting ex-vessel price of halibut paid to harvesters ranges between \$2.60 and \$6.40, and averaged \$4.60.



Figure 11: St. Paul Island Halibut Landings, Income and Ex-Vessel Price, 2003-2015



Source: Ray Melovidov, CBSFA (2016)

- CDQ halibut allocations** – Since 2003, CBSFA has received 85 percent of the CDQ allocated to the surrounding region, IPHC area 4C. CBSFA harvests virtually all of its allocation each year. While the percentage of halibut allocated to CBSFA has remain unchanged in recent years, declines in halibut catch limits means actual allocations have been decreasing, with the 2016 catch limit at only 43 percent of the 2011 limit. These declines equate to less income for both CBSFA and for local fisherman.
- IFQ halibut allocations** – Residents who own halibut IFQ are entitled to a proportion of the annual halibut allocation, with varying amounts depending on the number of quota shares. Between 2012 and 2015, the amount of local 4C IFQ caught averaged around 84,000 pounds.
- CBSFA allocations** – CBSFA receives annual allocations of Bering Sea/Aleutian Island (BSAI) Management Area groundfish, halibut, and crab. By volume, pollock represents the largest species allocation—representing nearly half of CBSFA’s CDQ allocation. Pacific cod represents the second



largest species allocation to CBSFA, accounting for nearly 18 percent of CBSFA's CDQ allocation. Other species allocations include flatfish/Atka mackerel (24.8 percent), crab (5.5 percent), halibut (1.5 percent) and sablefish (0.4 percent). While halibut, crab, and sablefish represent some of the smallest allocations, they are the highest valued fisheries (between \$2.55 and \$8.05 per pound). Conversely, groundfish and Pacific cod provide much larger volumes, but fetch much smaller prices (between \$1.06 and \$2.05 per pound). The BSAI crab fishery contributes significantly to St. Paul not only through the harvest of allocations, but also through the delivery and processing to the Trident seafood processing plant on the Island and the associated sales tax to the City of Saint Paul. Revenues generated from CBSFA's various crab assets fund many programs and projects in the community.

- **Crab and City Finances** – The City of Saint Paul is almost entirely dependent on crab for revenue, using a sales tax levied on crab delivered to and processed by floating processors within three nautical miles of the Island. In 2016, the City created a community development tax incentive that will reduce the sales tax for delivery of non-Class A shares of crab, which are crab not explicitly designated for processors in the St. Paul region. The lower sales tax levied on non-Class A shares is designed to help make St. Paul more competitive and attractive as a port of delivery to crab harvesters with those shares and/or participate in other underutilized or newly reopened crab fisheries. Vessels under 46 feet are exempt from the sales tax, which includes almost all locally-owned fishing boats.
- **Fishery expansion opportunities** – The Fisheries Profile explored the viability of diversifying and/or expanding a range of potential seafood species for fishing and/or harvesting on St. Paul Island. Diversification and growth could include fishing for new species such as cod or new types of crab, or could include expanding the market share of existing species such as halibut. Unfortunately, the fishing industry offers limited growth potential because most species with commercial value are already being harvested, and there are limited opportunities to break into new markets due to barriers such as expensive quota purchases, policy limitations and costly equipment upgrades. Species that were considered but which were ultimately decided to be less feasible due to high entry costs or policy restrictions include Atka mackerel and yellowfin sole, pollock, sablefish, rockfish, skates, sculpins, sharks, squids and octopuses.

## Tourism

St. Paul Island has a small tourism industry, with most tourism-related activities and facilities owned and operated by subsidiaries of TDX Corporation. The Pribilof Islands are world-renowned for bird-watching, and are sometimes referred to as the “Galapagos of the North.” According to a 2011 Alaska Dispatch News article, approximately 250 birders travel to the island each year and represent approximately 70 percent of all tourists on the island.<sup>4</sup> Most birders travel to the community between May and September, with the highest level of activity in June and July. Annual visitation was apparently higher in the early 2000s (estimated to be above 400 annually) but

“Birds are a big deal. There was a rare owl spotted here from Asia, and a guy chartered a flight from Nome to come see it.”

- St. Paul Island community member

<sup>4</sup>Alaska Dispatch News. June 21, 2011. “Birding is booming business on St. Paul Island” by James Mason. Accessed 5/27/16 from <http://www.adn.com/alaska-travel/article/birding-booming-business-st-paul-island/2011/06/22/>

decreased when Reeve Aleutian Airlines went out of business and decreased its large passenger service to the island, as well as the nationwide dip in tourism following the September 11, 2001 terrorist attacks.<sup>5</sup>

Travelers also come to see the marine mammals that travel to Pribilof Islands, which include fur seals, Stellar sea lions and occasionally walruses and whales. The Pribilof Islands boast the largest fur seal rookeries in North America. For more information on the Pribilof fur seals, see the Natural Resources section of this chapter. The island also has a local population of Arctic fox.



TDX operates simple hotel accommodations for travelers, hosting an estimated 150-200 visitors each year. The 18-room King Eider Hotel is connected to the airport facility, with shared dormitory-style rooms and communal bathrooms. The airport is located approximately three miles outside of town, so hotel guests have limited opportunities to interact with and walk around the community. There is no restaurant in town, so most visitors eat meals at the Trident facility. Most birding trips utilize the guiding services of St. Paul Island Tours, a subsidiary of TDX. For more information on TDX tour packages, visit <http://www.alaskabirding.com/>. Tours typically include round-trip airfare from Anchorage to St. Paul, ground transportation, a tour guide and accommodations and cost between \$2,000 and \$4,000 depending on the travel outfit and the length of stay. TDX's tourism operations generate about five million in revenue each year, with between \$50,000 and \$100,000 in profits annually.

Cruise ship passengers also occasionally stop for short layovers in route to Nome. Ships typically come once or twice a year and bring approximately 200 people to the community, each time for about four hours.

Other attractions include:

- Guided and independent duck hunting trips, which mostly occur in fall.
- Visitors interested in the show *Deadliest Catch*, which follows crab fishermen in the Bering Sea and includes footage on St. Paul Island and of St. Paul Island fishermen.
- Local gatherings with dancers and craftsmen sell handmade items and food at the recreation center; this typically only happens when large tour groups (e.g., cruise ships) are passing through the community.
- A small museum housed within the TDX offices on St. Paul Island with artifacts showcasing the community's Russian Orthodox history, Alaska Native crafts, and biological specimens.
- The Island is home to the Russian Orthodox Saint Peters and Paul church. Custom tours of the church are available.

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<sup>5</sup> As reported in Appendix A of the BSAI Crab Rationalization Five-Year Review, Final Social Impact Assessment, prepared for the North Pacific Fishery Management Council by AECOM, Inc. in December 2010.

## Mining

St. Paul Island has gravel, sand and scoria resources on the island. TDX owns three quarries, which were previously owned by the federal government and transferred to TDX<sup>6</sup>. The Tribe owns equipment at the TDX quarry sites and uses it to extract and sand and gravel material for roads and to sell to contractors for construction projects. The Tribe is exploring options to produce scoria blocks, which are insulating and durable. Scoria blocks could provide significant cost savings if used for residential housing and other construction projects by reducing the amount of supplies that need to be purchased and shipped to the island.



## Other Retail and Services

As of January 2016, there are 13 active business licenses on St. Paul Island, along with 12 expired and ten inactive licenses.<sup>7</sup> Many of these are small, resident-owned businesses, including a car rental service, a cab service and a sound recording studio. Some residents have skills and interest in food preparation such as baking, cooking and owning a restaurant, although there are currently no formal food service options on St. Paul Island. The Island is also home to various artists who bead, weave and practice other crafts. Many artists and craftsmen use a private *Buy Share Trade* group page on Facebook to market their goods. The group page is also used to sell and trade berries and fish.

“You blink and the weather changes... products can sit in Anchorage waiting for non-windy, non-foggy days and pass expiration. It’s hard to provide a quality product.”

—Regional partner

<sup>6</sup> Per the Alaska Native Claims Settlement Act (ANCSA), the subsurface areas under tribal and village corporation lands are typically owned by the regional corporation. In this case, however, the subsurface rights of the quarries were transferred directly from the federal government to the village corporation, TDX.

<sup>7</sup> Source: Alaska Dept. of Commerce, Community and Economic Development: Corporations, Business and Professional Licensing. Accessed January 2016 from <https://www.commerce.alaska.gov/CBP/Main/CBPLSearch.aspx?mode=BL>.

One of the largest businesses on the Island is the grocery store. The store is owned by the Tribe and operated by AC, a statewide distribution company with a network of rural stores. According to the store manager, maintaining a supply of healthy, fresh produce is difficult due to weather delays and other delivery challenges associated with St. Paul Island's isolated location. He estimates the store throws away between \$2,000 and \$3,000 of produce each month that goes bad before it arrives on the store shelves. As a result, the store places small shipments for produce, which means residents have less selection and the options that exist are expensive. The AC Store's Director of Sales and Operations says that of its 28 stores, the St. Paul Island store is one of the most logistically challenging store to supply with products. The Tribe is working toward taking over the management and operations of the AC Store starting in fall 2017, in the hope that tribal management could better meet the health and supply needs of residents and to provide an additional source of income for the Tribe.



The Tribe also oversees a suite of enterprise operations on St. Paul Island that generate revenue. The Tribe operates a liquor store in the basement below the AC Store. The Tribe also employs a resident to manage a greenhouse on the ground floor of the AC Store. The greenhouse provides a supply of fresh local vegetables for residents, which helps address the AC Store's challenge of meeting community demand for fresh, affordable produce. The greenhouse has been successful and the Tribe hopes to scale up its operations. In summer 2016, the Tribe also established an outdoor garden to supplement local produce. The Tribe is also supporting a group of St. Paul Island youth in their efforts to write a business plan for a youth-operated coffee shop, which may be included in one of the Tribe's under-used facilities.

There is a local bar in the tribal services building, which is owned and operated by the Tribe. The bar is open in the evenings and caters to both residents and visitors, with a local band who plays most Fridays. The bar has a commercial kitchen but does not currently offer food.

[As a small business owner] I feel really supported by the community.”

“I get to operate under my rules, get to be my own boss. I control my own destiny. I have made it 30 years in the fishing industry and have seen and done a lot.”

“If you want to start a business, where do you go? How do you start? No one here knows how to write a business plan.”

“I stopped operating my small business for a combination of reasons. My services were needed but people did not want to pay. I was happy to help people out but it was really hard to make money.”

“Businesses fail on St. Paul because people have not figured out the right pricing for their services and goods. Plus the cost of shipping supplies places a big burden on the small business owner.”

—St. Paul Island small business owners

## Regional Clusters and Employers

The U.S. Bureau of Labor Statistics publishes a Quarterly Census of Employment and Wages (QCEW), with data about occupation and industry by census area. The QCEW data can be analyzed and configured in many ways to better understand regional trends and to look at comparative data between regions. Below are two different methods of viewing the QCEW data to understand the regional economy. The data includes St. Paul Island as well as seven other communities in the Aleutians West Census Area (Adak, Atka, Attu Station, Eareckson Air Station, Nikolski, St. George and Unalaska); as such, the QCEW information helps identify the regional economic environment and overall industry cluster trends of the greater area around St. Paul Island.

The U.S. Cluster Mapping Project uses QCEW data to rank counties, boroughs and census areas throughout the United States based on the relative size and concentration of traded industries. Data for the Aleutians West Census Area (AWCA) is in Figure 12. Of the traded clusters in the region - clusters that include an export component - two clusters stand out. In 2013, the most recent year for which data is available, the Aleutians West Census Area ranked second out of 3,221 counties, or in the top 0.1 percent of the country, in “Fishing and Fishing Products.” In that year, 3,511 people in the AWCA were employed in the fishing and fishing product trade cluster. This demonstrates that the St. Paul Island economy, which is primarily driven by the fishing industry, aligns with one of the strengths of the regional economy. The region also ranked high, within the top 2.8 percent of the country in “Water Transportation,” with 540 people employed in that trade cluster. This is likely attributed to the port of Dutch Harbor, which is a major marine transportation hub for cargo and fishing. Vessel traffic in the region has been growing and is expected to continue to grow as Arctic shipping traffic increases due to reduced sea ice. According to stakeholder interviews, St. Paul Island may also benefit in the long term from this increase in Arctic traffic due to an increased demand for supportive services such as vessel maintenance, fuel supply, emergency response and other services. Other regional trade clusters in the top 50 percent of the nation include “Electric Power Generation and Transmission” (top 26.7 percent) and “Downstream Metal Products” (top 35.1 percent).



Figure 12: Traded Clusters in the Aleutians West Census Area by Industry Employment, 2013

Traded Cluster Name	2013 Employment	National Rank (out of 3221 counties)	Percentile ( <i>green</i> = top 50%, <i>red</i> = bottom 50%)
<b>Fishing and Fishing Products</b>	<b>3511</b>	<b>2</b>	<b>0.1%</b>
<b>Water Transportation</b>	<b>540</b>	<b>90</b>	<b>2.8%</b>
Distribution and Electronic Commerce	120	2231	69.3%
Hospitality and Tourism	90	1879	58.3%
Transportation and Logistics	70	1740	54.0%
Downstream Metal Products	60	1130	35.1%
Financial Services	10	2503	77.7%
Electric Power Generation and Transmission	10	860	26.7%
Nonmetal Mining	10	1842	57.2%
Business Services	10	3013	93.5%
<b>Aleutians West Census Area Totals</b>	<b>4431</b>		
Source: U.S. Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School. Available at: <a href="http://www.clustermapping.us/region/county/aleutians_west_census_area_ak">www.clustermapping.us/region/county/aleutians_west_census_area_ak</a>			

The Innovation Index, a collaborative partnership between the U.S. Economic Development Administration, the Purdue Center for Regional Development, the Indiana Business Research Center and other researchers, also produces a cluster analysis.<sup>8</sup> Their tool evaluates the relative concentration and specialization of industries in a specific region based on the number of establishments, the number of people employed and annual total wages in each industry cluster. Cluster data for 2012, the most recent year for which data is available, is in Figure 13. For each cluster, there is an associated location quotient (LQ), which indicates the relative strength and specialization of that cluster compared with the rest of the United States. Location quotient scores over “1” indicate a higher degree of cluster concentration and specialization than the rest of the country, while scores under “1” indicate less cluster concentration and specialization compared with the rest of the country. In this analysis the two clusters with the highest location quotient numbers in the Aleutians West Census Area are “Transportation and Logistics” and “Mining.” Note, these industries are not necessarily the largest employers or wage generators in the region, just the industries are relatively more developed or concentrated in the region compared with similar sized regions around the country. For example, “Business and Financial Services” is the second largest cluster in the region in terms of total annual wages, but has a small location quotient score because the industry is comparatively less developed than other parts of the country. “Mining” is smaller than other clusters from a wage and employment perspective, although the industry is comparatively more concentrated in the region than other places of similar size. There are also some industry clusters in the AWCA that have a higher-than average establishment LQ, indicating proportionally more establishments compared with other regions, although employment and wage LQ scores are below national averages. These clusters include “Energy,” “Defense and Security,” “Chemicals and Chemical Based Products,” “Manufacturing” “Advanced Materials” and “Arts, Entertainment, Recreation and Visitor Industries.”

<sup>8</sup> Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment & Wages (QCEW) and Purdue Center for Regional Development. Accessed January 2016 from <http://www.statsamerica.org/innovation/anydata/index.asp>



Figure 13: Employment, Wages and Number of Establishments by Industry Cluster in the Aleutians West Census Area, 2012

<div> (LQ score of 1 = average) Green indicates a higher degree of cluster concentration and specialization (larger LQ scores = more concentrated) </div>						
Industry Cluster*	Total Employment	Total Annual Wages	Number of Establishments	Industry Cluster Location Quotient (LQ)		
				Establishment LQ	Employment LQ	Annual Wages LQ
Transportation & Logistics	298	\$19,067,820	14	3.69	2.6	3.69
Business & Financial Services	92	\$8,517,949	12	0.48	0.28	0.32
Energy (Fossil & Renewable)	115	\$7,814,663	15	2.16	0.67	0.64
Defense & Security	103	\$5,877,445	12	1.98	0.5	0.42
Manufacturing	65	\$3,450,229	3	1.55	0.46	0.39
Arts, Entertainment, Recreation & Visitor Industries	38	\$1,379,243	5	1.09	0.26	0.28
Mining	20	\$1,366,979	1	4.71	3.42	3.81
Information Technology & Telecommunications	19	\$1,308,357	2	0.32	0.13	0.1
Chemicals & Chemical Based Products	17	\$1,183,645	2	1.82	0.31	0.36
Advanced Materials	13	\$1,071,478	3	1.35	0.11	0.13
Education & Knowledge Creation	8	\$440,775	2	0.89	0.06	0.07
Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment & Wages (QCEW) and Purdue Center for Regional Development *Cluster definitions are available at <a href="https://www.statsamerica.org/innovation/industry_clusters.html">https://www.statsamerica.org/innovation/industry_clusters.html</a> .						

## Income and Community Revenue

Individual, household and family income are important measures of the economic health of a community. Economic development not only includes generating new businesses and new jobs; it should also aim to create higher wages and improve the retention of dollars that circulate within a community. This section examines how household, per capita and community income on St. Paul Island compares to the region, the state and the rest of the country. It also considers self-employment data and community-level income in the form of taxes.

Please note – during the planning process, the planning team also conducted a preliminary review of key community and regional entity revenues and investments in St. Paul Island. Of specific interest for the CEDS process and the long-term economic resiliency of the community – the amount of revenue that is invested in St. Paul Island community and economic development via infrastructure projects, employment, scholarships, and other contributions. At this time, community and regional entities track finances differently; as such, it was not possible to separate out “community investment data” from annual financial reports. As an implementation step, the CEDS recommends community entities better track the ways in which they generate

and reinvest revenue on St. Paul Island. This will be a helpful measure for evaluating the impact of the CEDS and the ways in which each local entity contributes to the overall economic success and viability of St. Paul Island.

Over the five-year period between 2010 and 2014, the average median household income for St. Paul Island was \$49,375. This number is smaller than the Aleutians West Census Area's median household income of \$82,284 and the statewide median of \$71,829, and similar to the U.S. median of \$53,382. Figure 14 shows the distribution of household income on St. Paul Island and the United States. The income category with the most households on St. Paul Island was \$50,000 to \$74,999 (about 18 percent of residents) followed by \$15,000 to \$24,999 with 16 percent of residents. In general, there are more St. Paul Island households with incomes under \$50,000 compared with Alaska and the United States. This may be related to the fact that proportionally more jobs on St. Paul Island are part time or seasonal compared with state and federal averages, which is discussed in more detail in the following section, Workforce Characteristics.

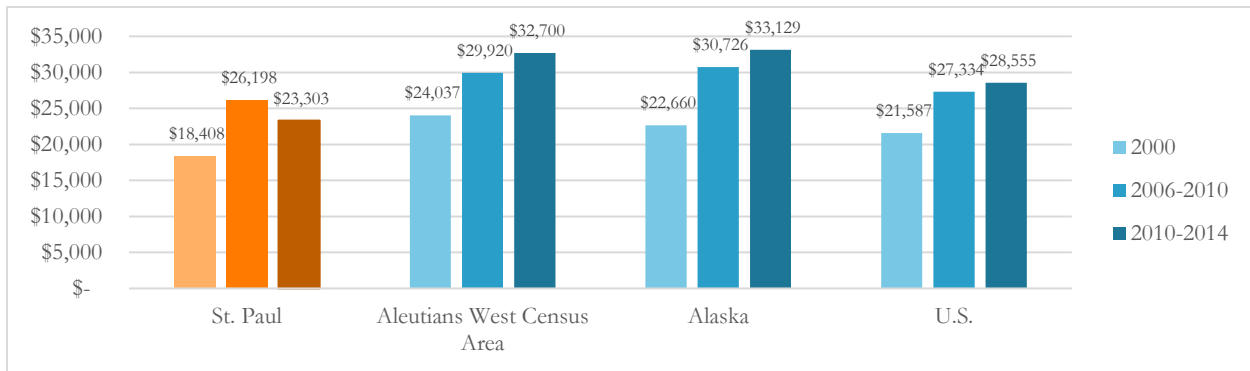
**Figure 14: Household Income Distribution, 2010-2014 Averages (in 2014 dollars) for St. Paul, Alaska and the United States**



Source: U.S. Census Bureau, American Community Survey 2010-2014 5-year averages

Figure 15 shows per capita income for St. Paul Island, the Aleutians West Census Area, Alaska and the United States. The numbers in the figure are not adjusted for inflation. The chart uses 2000 U.S. Census numbers and five-year averages for 2006 to 2010 and 2010 to 2014 to show overall per capita income trends in all four areas. Between 2000 and the five-year period between 2006 and 2010, per capita income increased in all four areas. In St. Paul, income went from \$18,408 to \$26,198. Over the next five-year period, average per capita incomes in the Aleutians West Census Area, Alaska and the United States all increased, but per capita income decreased in St. Paul to \$23,303.

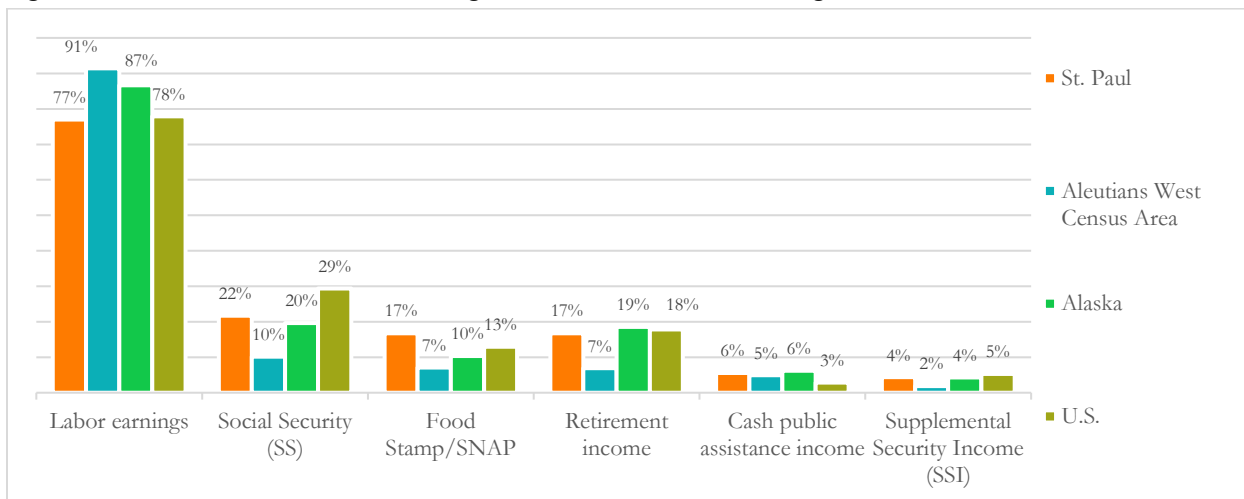
**Figure 15: Per Capita Income (not adjusted for inflation), 2000-2014**



Source: U.S. Census Bureau, American Community Survey 2010-2014 5-year averages

Over the five-year period between 2010 and 2014, seventy-seven percent of St. Paul Island households brought in income from labor earnings, lower than the Aleutians West Census Area (91.4 percent of households have earnings that come from labor) and Alaska (86.7 percent) and similar to the United States (78 percent). St. Paul Island households also receive earnings from social security (21.7 percent of households), food stamps and supplemental nutrition assistance programs (16.8 percent) and retirement income (16.8 percent), and smaller amounts from supplemental security income and public assistance. These numbers are similar to regional, state and national averages. For the full distribution of household earnings for St. Paul Island and comparative geographies, see Figure 16.

**Figure 16: Source of Household Earnings, St. Paul, 2010-2014 Average**

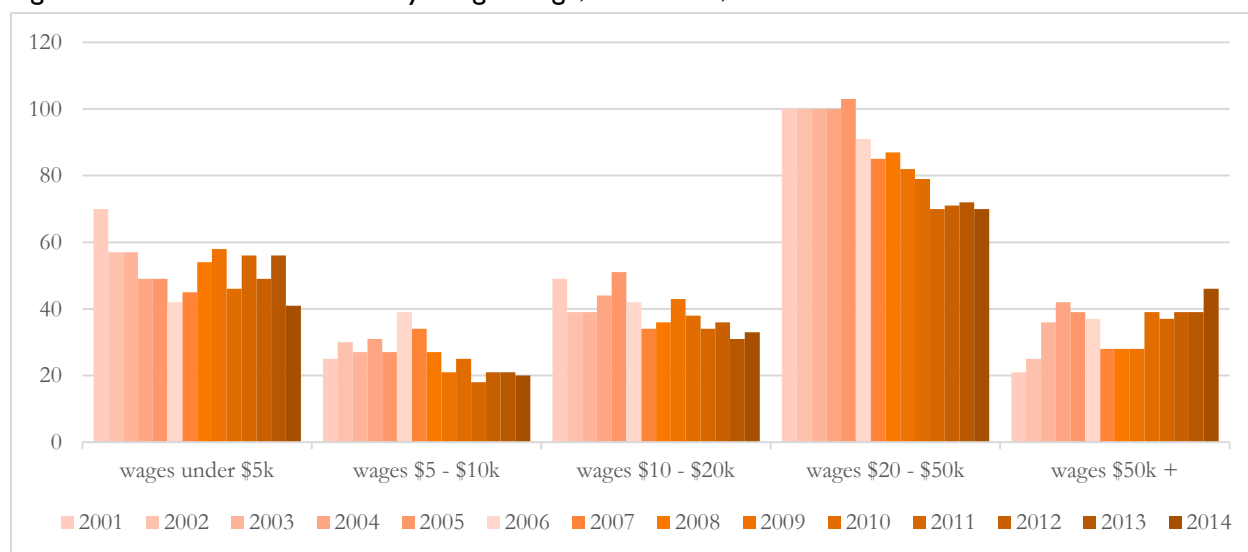


NOTE: Graph components total to over 100 percent because some households receive more than one source of income.

Source: U.S. Census Bureau, American Community Survey 2010-2014 5-year averages

Alaska's Department of Labor and Workforce Development provides information on wage ranges for Alaska communities, graphed below in Figure 17. In St. Paul, the number of workers by wage range category dropped in almost all categories, reflecting an overall decline in population. However, the number of workers in the highest wage category increased between 2007 and 2014, suggesting a small increase in higher-paying jobs. In 2014 the wage range with the most workers was \$20,000 to \$50,000 with 70 workers, followed by 46 workers with wages over \$50,000 and 41 workers with wages under \$5,000.

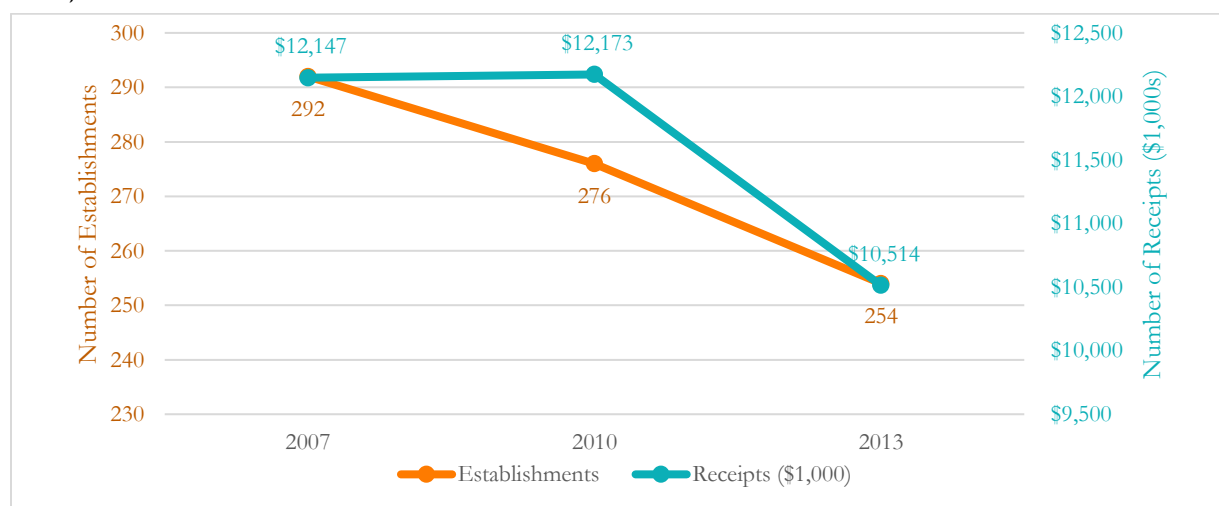
**Figure 17: Number of Workers by Wage Range, 2001-2014, St. Paul Island**



Source: Alaska Department of Labor and Workforce Development - Research and Analysis Section. Accessed September 2015.

When looking at industry and income trends, it is important to consider self-employment data to fully understand a region's economy. The U.S. Census Non-employer Statistics is based on the number of business income tax returns submitted by firms without any employees. As depicted in Figure 18, the number of self-employed individuals in the Aleutians West Census Area decreased slightly from 292 in 2007 to 254 in 2013, with a corresponding decline in receipts from \$12.1 million to \$10.5 million.

**Figure 18: Number of Non-Employment Establishments and Total Receipts, Aleutians West Census Area, 2007-2013**



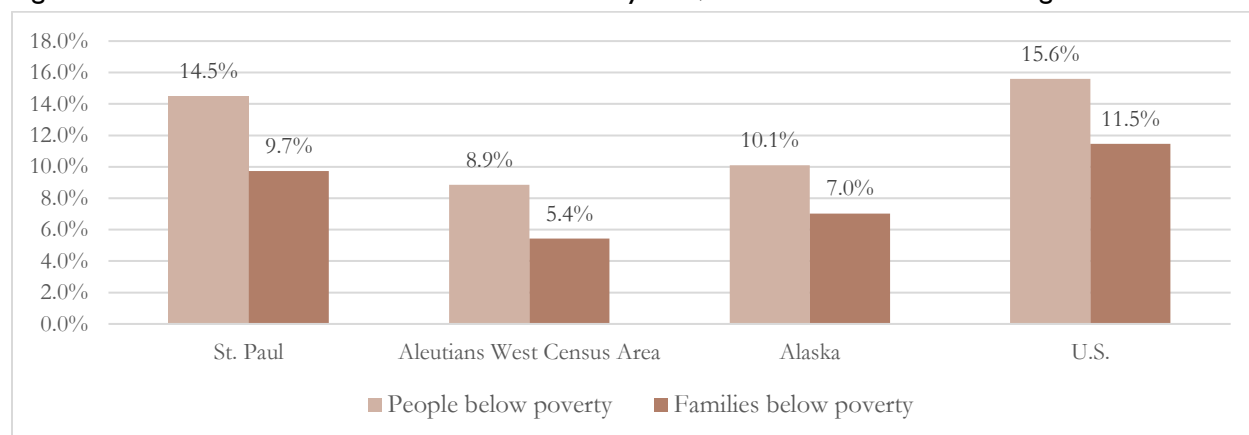
Source: U.S. Census and the U.S. Internal Revenue Service (IRS), as reported by the U.S. Census Non-Employer Statistics.

## Poverty

The U.S. Census Bureau uses a set of income thresholds that vary by family size to define who is poor. If the total income for an individual or a family falls below the poverty threshold, then the family or individual is classified as "below the poverty level." For example, the poverty threshold in 2014 was \$12,071 for an individual and \$24,200 for a household with two adults and two children. Families living in poverty are more

likely to experience increased crime rates, substance abuse, domestic violence and fewer opportunities for education and economic opportunity<sup>9</sup>. Figure 19 shows the percentage of individuals and families living below the poverty line for St. Paul, the Aleutians West Census Area, Alaska and the United States. As seen in the graph, poverty levels for both families and individuals are higher on St. Paul Island when compared with the Aleutians West Census Area and Alaska, and slightly lower than the nationwide averages.

**Figure 19: Individuals and Families Below the Poverty Line, 2010-2014 Five-Year Averages**



Source: U.S. Census Bureau, American Community Survey 2010-2014 5-year averages

## Taxation

In terms of community income, the City of Saint Paul collects a three percent raw fish tax and a three percent sales tax, which increased to 3.5 percent in summer 2016. According to the State of Alaska's Alaska Taxable Database, most of the city's revenue comes from the raw fish tax, which has been an average of 74 percent of the city's total tax revenue since 2004. In 2015, the sales tax brought in \$322,213 and the raw fish tax brought in \$2,456,276 for a total of \$2,456,276 in tax revenue. Per capita revenue was \$5,634 per resident, which places the City of Saint Paul as the number seven municipality in the State of Alaska in terms of per capita tax revenue.<sup>10</sup> Since fish landings vary year to year, the city does see large annual fluctuations in the revenue from the raw fish tax, which makes budgeting and long-range planning a challenge for the city. The State of Alaska also collects a three percent fisheries tax, with half that revenue returned to the community where the fish is processed.

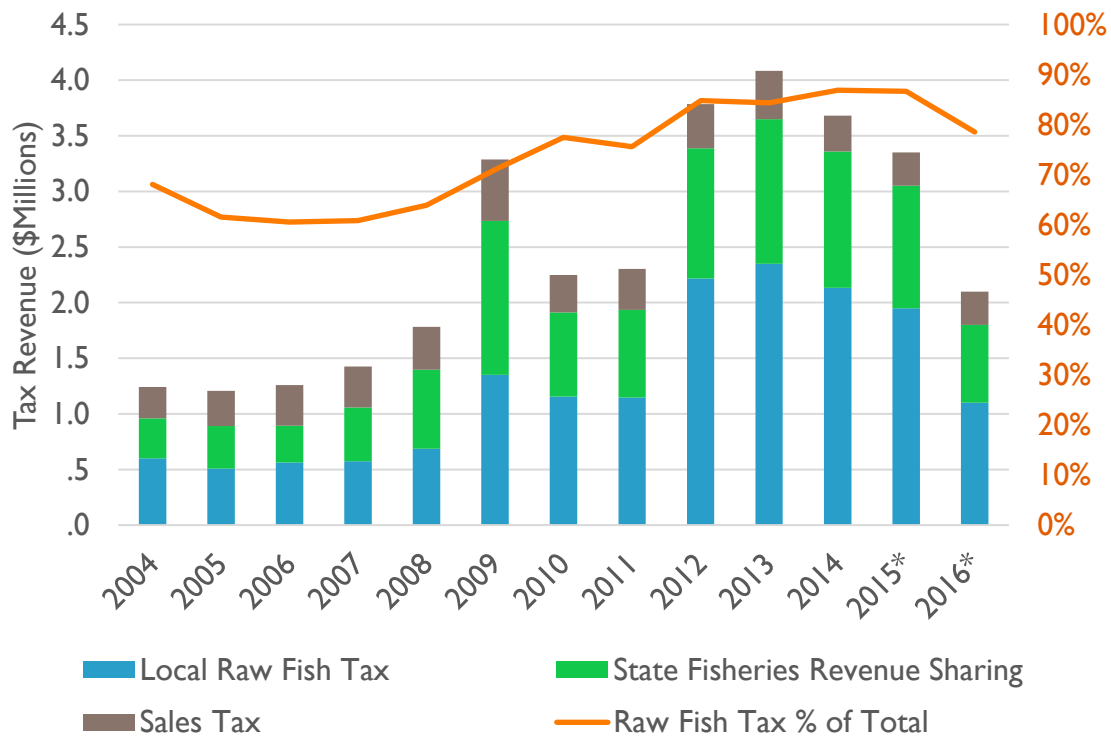
**Figure 20: City of Saint Paul Taxation Information, 2006-2015**

Year	Sales Tax (3%)	Local Raw Fish Tax (3%)	Total Taxes Reported	Population	Per Capita Revenue
2006	\$ 366,581	\$ 562,490	\$ 929,071	488	\$ 1,904
2007	\$ 370,240	\$ 575,397	\$ 945,637	460	\$ 2,056
2008	\$ 386,817	\$ 685,607	\$ 1,072,424	447	\$ 2,399
2009	\$ 551,835	\$ 1,349,981	\$ 1,901,816	450	\$ 4,226
2010	\$ 335,387	\$ 1,154,002	\$ 1,489,389	459	\$ 3,245
2011	\$ 369,567	\$ 1,146,552	\$ 1,516,119	479	\$ 3,165
2012	\$ 397,082	\$ 2,216,803	\$ 2,613,885	481	\$ 5,434

<sup>9</sup> *Economic Profile System*. Headwaters Economics with support from the Bureau of Land Management and the U.S. Forest Service. Accessed April 2016 from <http://headwaterseconomics.org/tools/economic-profile-system/#measures-report-section>.

<sup>10</sup> The top six municipalities are North Slope Borough, Egegik, Valdez, Skagway, Bristol Bay Borough and Whittier.

Year	Sales Tax (3%)	Local Raw Fish Tax (3%)	Total Taxes Reported	Population	Per Capita Revenue
2013	\$ 435,451	\$ 2,348,570	\$ 2,784,021	453	\$ 6,146
2014	\$ 384,086	\$ 2,061,513	\$ 2,445,599	453	\$ 5,399
2015	\$ 322,213	\$ 2,134,063	\$ 2,456,276	436	\$ 5,634



Source: Alaska Department of Labor and Workforce Development 2016; Alaska Department of Commerce, Community, and Economic Development, Office of the State Assessor: Alaska Taxable Database. Accessed March 2016 from <https://www.commerce.alaska.gov/dcrarepoext/Pages/AlaskaTaxableDatabase.aspx>

Data for 2015 and 2016 comes from budgets, and are preliminary.

The line shows the percentage of raw fish tax revenue of total tax revenue.

## Workforce Characteristics

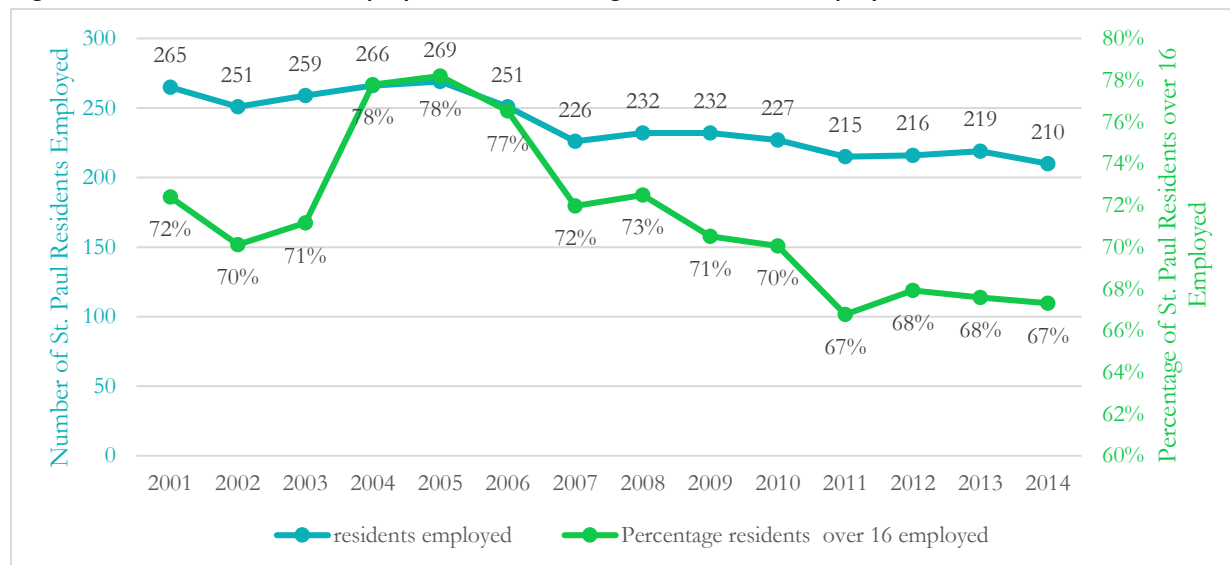
### Employment

The State of Alaska's Department of Labor and Workforce Development (DOLWD) collects and shares employment and workforce characteristic information for communities throughout Alaska. According to DOLWD, the total number of residents employed on St. Paul Island has declined over the past 13 years, from 265 in 2001 to 210 in 2014. This decline is consistent with the overall decline in population. Figure 21 shows the total number of residents employed, juxtaposed with the percentage of residents over 16 who are employed. As shown, the total percentage of residents over 16 who are employed also declined between 2001 and 2014. This means that while population is declining and the St. Paul Island workforce is shrinking, there is also a smaller percentage of those who remain who are working. However, as of 2014, there were more residents over 16 who were employed in St. Paul Island (67 percent) than overall for Alaska (61 percent). The



percentage of residents employed in the Aleutians West Census Area in 2014 was much higher than both St. Paul Island and the statewide average, with 81 percent of residents over 16 employed.

**Figure 21: Total Residents Employed and Percentage of Residents Employed for St. Paul, 2001-2014**



Source: Alaska Department of Labor and Workforce Development - Research and Analysis Section. Accessed September 2015.

Some jobs on the island are seasonal. Of the 210 employed St. Paul Island residents in 2014, 68 percent were employed all four quarters of the year, which is lower than the Aleutians West Census Area (77 percent employed all four quarters) and statewide (72 percent employed all four quarters).<sup>11</sup> While still lower than regional and statewide figures, this number is the highest it has been over the past decade, and an increase from the 58 percent who were employed all four quarters in 2013. American Community Survey (ACS) five-year estimates for 2010-2014 also indicate jobs on St. Paul Island are more likely to be part time (less than 35 hours) compared with statewide and regional estimates. However, the specific estimates for average weekly hours worked in the ACS data set have high error margins for St. Paul Island, making it difficult to draw specific conclusions about the data.

According to American Community Survey Five-Year Estimates' labor participation information for 2010 to 2014, 50 percent of St. Paul Island residents worked 35 or more hours per week compared with 78 percent in the Aleutians West Census Area, 65 percent for Alaska and 57 percent nationwide. Lower rates of full time employment can indicate lower standards of living and less purchasing power. However, while some residents may be working part time due to a lack of availability of full time employment, many part-time workers voluntarily choose to work part time, including those who are caring for dependents, those participating in commercial or subsistence harvests and those going to school or college. These numbers include seasonal employees who may only be in the community for a few months.

<sup>11</sup> Source: Alaska Department of Labor and Workforce Development - Research and Analysis Section. Accessed September 2015.

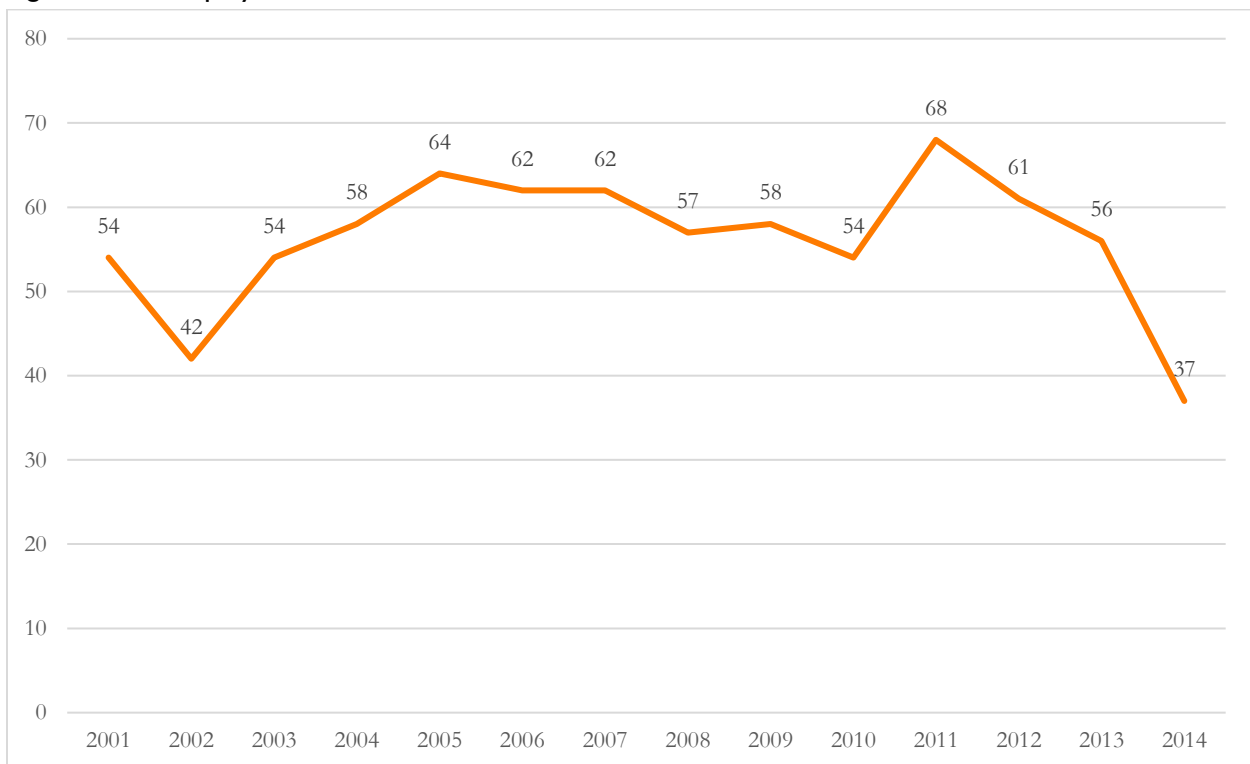
Quarter one includes January through March, quarter two includes April through May, quarter three includes June through September and quarter four includes October through December.

Another way to track employment in a community is by looking at unemployment insurance claimant information. The number of unemployment insurance claimants can be a helpful way to understand workforce characteristics but it typically underestimates overall unemployment; for example, some people may choose not to apply or not know how to apply, while others may run out of benefits but remain jobless. Figure 22 includes the number of unemployment insurance claimants for St. Paul Island between 2001 and 2014. Unemployment claimants have fluctuated over the past decade, with a peak at 68 in 2011. Since 2011, total claimants have dropped to a low of 37 in 2014, or 12 percent of all residents over 16. Unemployment rates in Alaska and the Aleutians West Census Area are lower, at approximately seven percent.

“When people start carrying a law enforcement record and getting felonies, it makes it hard to be successful because of all the barriers to employment.”

- St. Paul Island community member

**Figure 22: Unemployment Insurance Claimants for St. Paul, 2001-2014**



Source: Alaska Department of Labor and Workforce Development - Research and Analysis Section. Accessed September 2015.

In 2014 the Alaska Department of Labor and Workforce Development published a report titled “Nonresidents Working in Alaska.” The report includes information on the number and wages of nonresident workers by region. The report contains specific information about the Alaska seafood processing industry, which attracts many out-of-state workers. Figure 23 includes data extracted from the report for the Aleutians West Census Area and Alaska statewide. According to the report, the Aleutians West Census Area has 2,027 nonresident workers, who make up 67 percent of total workers and who earn 52 percent of total regional wages. These numbers are lower than statewide percentages. While nonresident employment estimates are not available for St. Paul Island, interviews with local leaders and stakeholders indicate the seafood processing industry on the Island is similarly staffed by nonresidents. According to interviews with

local leaders, the Trident plant on St. Paul Island fluctuates between 30 and 300 employees depending on the season, with between one and six local residents employed at the plant at any given time.

**Figure 23: Nonresident Employment in the Seafood Processing Industry, 2014**

	Total Workers in Seafood Processing	Total Wages	Nonresident Workers	% of Workers, Nonresident	Nonresident Wages	% of Wages, Nonresident
<b>Aleutians West Census Area</b>	3,025	\$64,776,501	2,027	67%	\$33,942,051	52%
<b>Statewide Total</b>	23,957	\$398,233,125	17,792	74%	\$257,808,146	65%

Source: Nonresidents Working in Alaska, 2014 publication from the Alaska Department of Labor and Workforce Development,

## Education

### St. Paul School

The St. Paul School is one of two schools in the Pribilof School District, with the other school located on neighboring St. George Island. The St. Paul school supports kindergarten through twelfth grade. There are six teachers who work at the school, plus a kindergarten teacher and a part-time building administrator. Two of the six teachers are from the community, one of whom teaches Aleut language and culture, which is a Pribilof School District priority and a graduation requirement. The Tribe also coordinates cultural and health-focused programs with the school, such as an annual health fair, summer science camps and Bering Sea Days, with The Tribe receives Johnson O'Malley funds and contributions from CBSFA to help cover the costs of these programs. In addition to helping fund these activities, CBSFA makes many other important contributions to the school, including fully funding a preschool program, covering the cost of a gymnasium remodel, purchasing a new fire alarm system and new fuel tank, and many others.

“A lot of St. Paul Island’s young people are going out and getting degrees; it is encouraging that many youth return to the community. They could make more elsewhere but they have a sense of obligation to give back.”

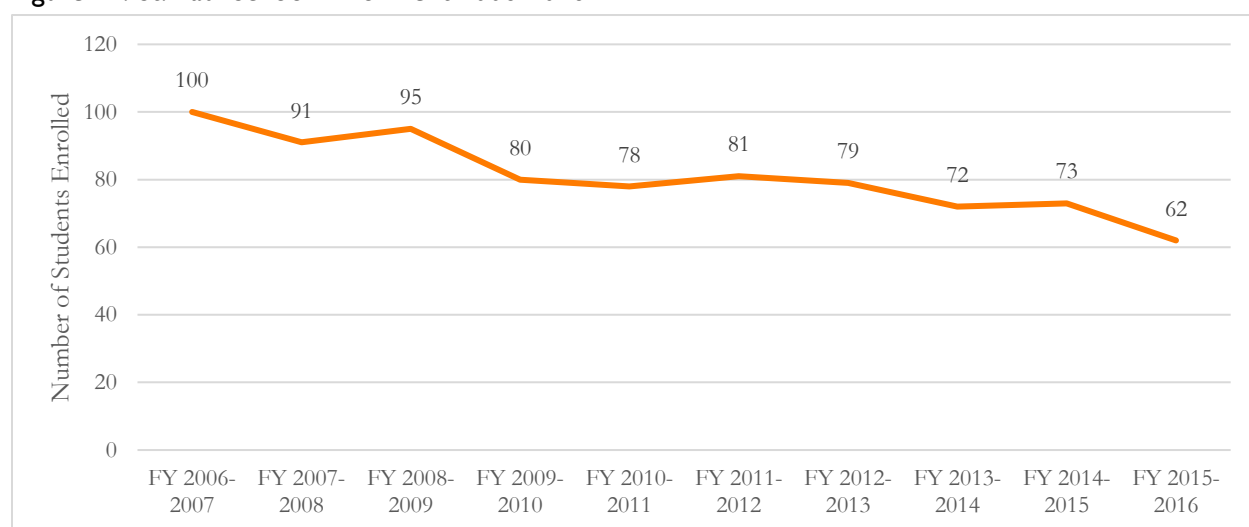
- St. Paul Island community member

Enrollment at the school has declined 38 percent over the past ten years, from 100 students during the 2006-2007 school year to 62 students during the 2015-2016 school year (Figure 24). Since funding formulas are based in part on the number of students at a school, reduced enrollment means less school funding, resulting in a decrease in class offerings and extracurricular activities. Today, many students in upper grades leave St. Paul Island for high school to enroll at locations such as Mt. Edgecumbe boarding school in Sitka or relocate to Anchorage for high school. Since ninth through twelfth grade classes are seeing the biggest drop in enrollment, the community is considering closing its secondary school options to focus on primary education. As of June 2016, only one secondary grade student was enrolled for the fall.

“People have smaller families with fewer kids, so school enrollment is going down.”

- St. Paul Island community member

**Figure 24: St. Paul School Enrollment 2006-2016**



Source: Alaska Department of Education and Early Development, Statistics and Reports

### **Youth Feedback**

During a January 2016 community visit, the planning team met with St. Paul Island middle and high school students to introduce them to concepts of planning and economic development, and to hear their perspectives on the future of St. Paul Island, including how to improve their school experience and to learn about their post-graduation plans. The following themes emerged from the discussion:

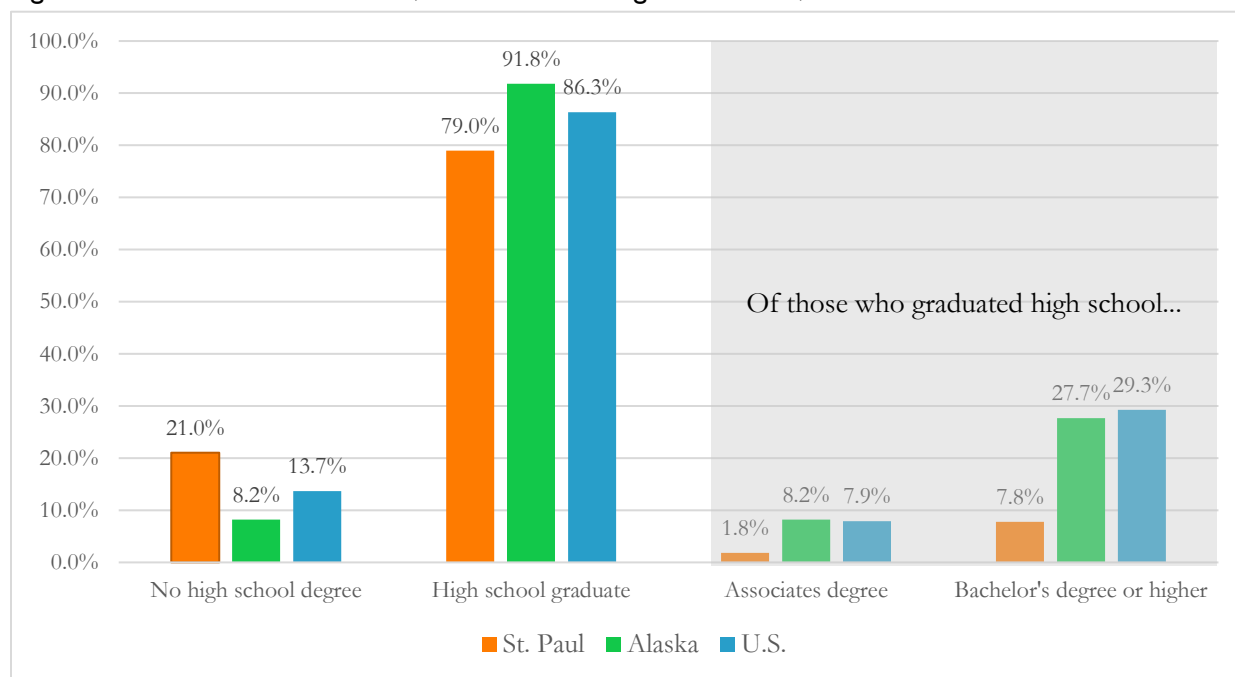
- St. Paul Island students would like more college and post-graduation preparation during high school, including information on how to fill out college applications and learn about and apply for job opportunities.
- Students would like more extracurricular options such as physical education and drama programs or classes, both through the school and in the community at large.
- Students want more hands-on science such as chemistry and lab work, as well as how to do taxes and other financial skills.
- When asked about post college plans, students offered a range of activities both on and off St. Paul Island. The top responses included:
  - Enrolling at the University of Alaska Anchorage to study topics such as health science, dental studies and demolition;
  - Opening a deli or coffee shop in St. Paul;
  - Playing college or professional basketball; and
  - Working in carpentry or welding.

### **Educational Attainment**

Education is one of the most important indicators for individual and community economic success. Educational attainment information for St. Paul, Alaska and the United States, is shown in Figure 25. As seen in the graph, educational attainment in the community is lower than state and national averages, with a larger proportion of the St. Paul Island community not completing high school and a smaller number of residents with college degrees compared with statewide and national averages. However, the graph only includes traditional collegiate programs; many vocational education programs and related certifications may not be

included in the data. While not captured here, vocational education and training certifications can be valuable workforce development tools by building individual employment skills and expanding local capacity to engage relevant industries and employers. In addition, anecdotal evidence suggests many young St. Paul Island residents pursue higher education outside the community and do not return to St. Paul, and are therefore not captured in the data. These former residents could be a valuable addition to the local workforce, if employers were able to attract them back to the community.

**Figure 25: Educational Attainment, 2010-2014 Average for St. Paul, Alaska and the United States**



Source: U.S. Census Bureau, American Community Survey 2010-2014 5-year averages

## Secondary Education

### Bristol Bay Campus in Dillingham

The Bristol Bay Campus is part of the University of Alaska Fairbanks College of Rural and Community Development, and currently serves 32 rural communities in the Bristol Bay region within a 55,000-square-mile coverage area. The Bristol Bay Campus recently expanded to include an additional 12 coastal communities served by the Aleutian-Pribilof outreach center located in Unalaska/Dutch Harbor, which was previously overseen by the Interior Aleutians Campus in Fairbanks. The main campus and administrative center for the Bristol Bay campus is in Dillingham. The campus offers an Associate of Arts degree in general studies and Associate of Applied Science degrees in allied health, applied business, applied accounting, community health, early childhood education, human services, information technology, interdisciplinary studies and renewable resources. Bachelor's

“People want to get into businesses but don’t know about all the expenses, overhead, business planning. At the end of the day, what’s in the cash register is not all profit – there are taxes and overhead costs, plus you have to reinvest in capital and maintenance costs for the next year. Not everyone understands that.”

- St. Paul Island business owner

degree programs include elementary education, interdisciplinary studies, rural development, and social work. Master's degrees are offered in rural development and education. Other programs include Adult Basic Education and GED programs, providing adult basic education through high school level instruction for Bristol Bay adults, and the Marine Advisory Program (MAP).<sup>12</sup>

The Bristol Bay Campus also provides educational opportunities for the communities within its service area, including vocational-technical, community interest and graduate courses. Classes are offered by distance delivery (audio conference, video conference, correspondence or Internet) and by instructors using traditional methods. For more information about course offerings, visit [www.uaf.edu/bbc/](http://www.uaf.edu/bbc/).

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<sup>12</sup> Information from Vivian Viar, Assistant Director of the Bristol Bay Campus, June 2016



### 3. SWOT Analysis

#### Strengths

##### Health, Wellness and Culture

- St. Paul Island residents are resilient with a strong culture, heritage and history of adaptability.
  - The community is safe, family-friendly and a great place to raise kids.
  - St. Paul Island has a strong clinic with many health and wellness programs. Southcentral Foundation and the Tribe are exploring innovative approaches to wellness.
  - Residents have access to subsistence resources such as fish, marine mammals, reindeer and birds.
  - Seniors live in the community and have a wealth of cultural knowledge.
  - The Saints Peter and Paul Church is home to an active church community.
  - The Tribe has a thriving tribal language and culture program called Unangan Tunuu, and Aleut is taught at the school. Through partnerships with APIA and other communities in the region, the program has brought together a group of motivated teens who are helping create a language program and revitalizing the Unangan language.
  - The Tribal Council is active in the community and has strong engagement with tribal departments.
  - The community has a strong network of volunteers, including an all-volunteer fire and emergency response crew and regular community clean-ups with high participation.
  - The Tribe operates a community weight room in the school, which is open six days a week.
  - The Tribe established a home beautification contest in 2016, with 14 St. Paul Island households repainting and upgrading the exterior of their homes. The Tribe hopes to repeat the contest in 2017.
- “The people here are passionate and unique. The youth are very caring and have strong beliefs and a sense of who they are. They are committed to bringing the language back.”

- Former Pribilof School District Superintendent
- “I left but eventually came back. I love it here. I need to be near my ocean.”

- St. Paul Island community member

##### Workforce and Business Development

- Scholarships are available for higher education through TDX, CBSFA, the Aleut Corporation and the Tribe.
- St. Paul Island is located in the middle of productive fishing grounds, with great access to Bering Sea resources which support CBSFA, the Trident Seafoods plant, bring in raw fish tax revenue for the City of Saint Paul and provides fishing opportunities for residents.
- The Island has many artists and local craftsmen, with a *Buy Sell Trade* Facebook page that residents use to advertise products and connect with one another. The page is also used to sell and trade

subsistence harvests such as berries and fish and is used as a communication tool for posting PenAir arrival and departure flight information.

- Visitors travel to St. Paul Island for birdwatching, duck hunting and fur seal observation. Occasional cruise ships stop by en route to Nome and other locations along the western coast of Alaska.
- The number of workers in the highest wage range category, wages over \$50,000, increased between 2007 and 2014, suggesting a small increase in higher-paying jobs on St. Paul.<sup>13</sup>
- The Alaska Native Science and Engineering Program (ANSEP), which is based in Anchorage and is affiliated with the University of Alaska and other partners, encourages and trains Alaska Natives to pursue and succeed in science and engineering-related careers. ANSEP offers a range of programs including scholarships, middle school and high school courses, college degree programs and community-based activities to support Alaska Natives in communities throughout the state.
- St. Paul Island has a unique reindeer herd with export potential; according to preliminary studies, the animals are disease-free, healthy and have an unusual diet of grass instead of lichen.
- TDX offers a Youth Hire Program to provide opportunities and job skill development for youth ages 14-18 during the summer months.
- With funding assistance from CBSFA, the Tribe offers a career resource center where residents can apply for jobs, access online education or training and create customized career plans.

## Infrastructure

- St. Paul Island has a large, deep harbor.
- The Island's airport has a 6,500 foot, well-maintained runway capable of serving large jets.
- TDX recently upgraded the Island's fiber optic cables, resulting in faster, more affordable internet.
- St. Paul Island has consistent, strong winds, which is very suitable for wind power generation.
- St. Paul Island has an active radio station KUHB, which is a popular and effective way of sharing community news, events, activities and job postings.
- St. Paul Island has mineral resources with quarries that provide local gravel and sand, with potential for scoria block production in the future.
- TDX owns an 18-room hotel at the airport, the King Eider Hotel.
- The community has empty buildings in convenient locations in the center of town that could be renovated and repurposed for new businesses, services or homes.
- The community has a new fire station/CBSFA crane storage building, with centrally-located fire-fighting equipment.

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<sup>13</sup> Source: Alaska Department of Labor and Workforce Development - Research and Analysis Section. Accessed September 2015.

# Weaknesses

## Health, Wellness and Culture

- St. Paul Island has a small population and lacks economies of scale for many businesses and industries.
- Residents struggle with ongoing negative impacts to physical health, mental health and motivation due to historical trauma.
- The St. Paul School has small and declining enrollment, with limited class offerings and extracurricular activities. This is especially true for secondary grades. Many students leave St. Paul Island for high school to enroll at locations such as Mt. Edgecumbe in Sitka.
- There are very few activities or organized programs for residents on the island.
- The Senior Center lacks activities for seniors and offers inadequate levels of care.
- The community experiences high rates of substance abuse.
- There are very few community gathering spaces on the island and no coffee shop or restaurant.
- There is limited privacy and confidentiality at the clinic because of the island's small population; residents who could benefit from services choose not to seek help.
- St. Paul Island residents experience high costs of living, including expensive groceries, energy bills and high transportation costs to and from the island.
- There is no doctor on the island, and the clinic has limited emergency response capabilities for issues such as cardiac arrests or other emergencies requiring surgery. Evacuations are time and resource intensive.
- Some community members, especially older residents, are distrustful of people from off island due to a long history of disenfranchisement and outside organizations and individuals taking advantage of resources and residents on St. Paul.

“There are people who are here and are suffering, and don’t know why. Historical trauma is passed down. People are trying to fill a void.”

- St. Paul Island community member

“Outside people come in, take our ideas and profit from them. That’s why we are distrustful of outsiders.”

- St. Paul Island elder

## Workforce and Business Development

- Most residents lack access to start-up capital for small businesses, and many do not have adequate credit to be eligible for a loan. There are no banks or financial institutions on the Island.
- St. Paul’s remote location and harsh weather limit access to markets. Shipping is expensive and slow; for example, fresh produce often expires before it ever reaches the grocery store shelves.
- The economy is dependent on one industry (fishing).
- There is very little coordination between local entities on developing the local workforce, and there are limited training opportunities for residents.

- The community entities (Tribe, CBSFA, TDX and the city) sometimes compete against one another for people, resources and projects, and need better coordination and collaboration.
- Welfare programs and low income housing programs can create disincentives to work.
- Local employers find it difficult to recruit and retain qualified applicants, especially when positions require outside hire (e.g., schools, clinic, city manager) or are short term and low pay (like fur seal research or fish processing).
- Most residents do not have business planning skills and there are limited entrepreneurial resources and training in the community.
- Dogs are prohibited from the island to protect the vulnerable fur seal population. This sometimes discourages potential hires from accepting positions on St. Paul Island and limits recruitment efforts. This is especially true at the school and clinic.
- The entry and start-up costs for commercial fishing are very high and prohibitive for many who want to enter the industry.
- The workforce on St. Paul Island is shrinking, which parallels an overall decrease in population. The percentage of residents over 16 who are employed also declined between 2001 and 2014, from a high of 78 percent in 2004 to 67 percent in 2014. This indicates a smaller percentage of those who remain on St. Paul Island are working.<sup>14</sup>
- The Trident Seafoods processing plant on St. Paul Island is almost entirely staffed by nonresidents, with typically between one and six local residents employed at the plant.
- Median per capita income for St. Paul Island decreased from an average of \$26,198 between 2006 and 2010 to an average of \$23,303 between 2010 to 2014, not adjusted for inflation.<sup>15</sup>
- About eight percent of residents on St. Paul Island have a bachelor's degree or higher, which is lower than the statewide average of 28 percent and the U.S. average of 29 percent. St. Paul Island also has a higher percentage of residents who did not complete high school (21 percent).<sup>16</sup>

"The Tribe, City, Corporation and CBSFA can all be territorial about resources and activities; however, crisis brings us together. We need to work more collaboratively."

- St. Paul Island community member

"When we need electrical work done I have to call people and bring them in from Anchorage. It would be faster and cheaper if there was someone here, and it would keep that money on the island."

- St. Paul Island business owner

"We had three positions to fill at the school last year, and one third of the candidates withdrew their applications when they found out they could not bring dogs. It makes it harder to recruit qualified people."

- Former Pribilof School District Superintendent

<sup>14</sup> Source: Alaska Department of Labor and Workforce Development - Research and Analysis Section. Accessed September 2015.

<sup>15</sup> Source: U.S. Census Bureau, American Community Survey 2010-2014 5-year averages.

<sup>16</sup> Source: U.S. Census Bureau, American Community Survey 2010-2014 5-year averages.

## Infrastructure

- It is difficult to acquire land and property in the community because TDX owns most of the surface rights and many of the vacant buildings in town and prefers to lease instead of sell its assets. This is especially a challenge for those interested in homeownership and for residents who want to open a business.
- The community has a shortage of housing.
- The King Eider Hotel is located three miles outside the community, so visitors are isolated away from town center and have limited opportunities to interact with residents and support local businesses.
- The airport building is in need of significant repairs and maintenance.
- The community's visitation and transportation facilities are not handicap-accessible, which likely discourages some visitors (such as elderly birders) from traveling to the Island.

"I am a shareholder of the corporation and I know they operate to make profits, but I wish they would be more lenient on what they charge to lease their land and property. They should be more supportive of shareholders' efforts to create economic opportunities."

- St. Paul Island community member

"The [federal] government doesn't always know how to incorporate local knowledge into management decisions. Hopefully the next generation of students can help bridge that gap. Local knowledge plus scientific training could be hugely valuable, although it requires some upfront investment in education and it will take a few years before you see a return on that investment."

- Stakeholder interview with federal agency representative

# Opportunities

## Health, Wellness and Culture

- Southcentral Foundation is expanding the availability of historical trauma and wellness programs.
- There is an increasing focus on and availability of funding for climate change resiliency efforts through the Denali Commission, Alaska Native Tribal Health Consortium (ANTHC)'s Local Environmental Observer (LEO) network and many other private, state and federally managed efforts.
- The new Community Advocacy Center will host various health and wellness programs such as a safe house, child care and art-making opportunities for residents.
- There is an opportunity to further expand self-governance efforts at the Tribe.

“We are a close-knit community. It feels really save here, especially for kids.”

—St. Paul Island community member

## Workforce and Business Development

- Tourism in the community could be expanded to include ecotourism, adventure travel, cultural tourism and reindeer hunting.
- Cruise ship traffic in the area may increase as more ships travel along the western coast of Alaska. The Aleutians West Census Area also scored in the top three percent of regions in the United States in terms of employment density in the Water Transportation cluster.
- Regional education and training opportunities through partnerships and coursework with UAF's College of Rural and Community Development, which is operated through the Bristol Bay campus.
- The Tribe is considering various entrepreneurial options, including developing 8(a) tribal enterprises.
- Scholarships are available for youth who want to pursue secondary education and training.
- The Alaska Native Science and Engineering Program has many resources and programs to expand training and career development for Alaska Natives in science and engineering fields.
- The Southwest Alaska Municipal Conference (SWAMC), the University of Alaska's Fisheries, Seafood and Maritime Initiative and other regional entities working to strengthen the regional economy through targeted workforce development initiatives.
- CBSFA is working toward encouraging a small boat Pacific cod fishery in St. Paul, which would allow local CDQ halibut fishermen to retain cod while fishing for halibut. This would help diversify the species contributing to the local economy and help supplement income for halibut fishermen. As a part of this effort, CBSFA is working with Trident Seafoods on cod processing.

## Infrastructure

- An increase in Arctic development and shipping will likely result in increased traffic in the region and an associated increase in the demand for marine support services, search and rescue activities and spill response.
- Seafood waste, which is currently disposed of, could be processed into a usable byproduct such as fertilizer.



- The Trident Seafoods processing plant has additional capacity during parts of the year and could process new types of seafood.
- Chitin, a material made from leftover crab shells, could be produced on the island using existing waste from the Trident plant. Currently Trident Seafoods is shipping material to Seattle to produce chitin.
- Planes and boats deliver cargo to St. Paul Island and leave empty, creating opportunities for affordable shipping and export through backhauls.
- There is an unused Coast Guard facility on the island in decent condition that could be repurposed. The facility has sleeping accommodations and a kitchen.
- CBSFA and the Tribe are working together to develop a vessel repair and marine supply facility to improve access for local and non-local fishing vessel maintenance needs and reduce operating costs for these vessels.
- PenAir recently purchased a jet with larger passenger and cargo capacity and will be able to provide more reliable service and move more people to and from the island.
- Air traffic and refueling stops are increasing on St. Paul, especially along international routes and for planes traveling to and from Anchorage to the western edge of the Aleutians (e.g., Shemya and Adak).
- As shipping increases in and around the increasingly ice-free Arctic, there may be affordable cargo export opportunities as mostly-empty boats go back to Singapore and China.

# Threats

## Health, Wellness and Culture

- Climate change, including coastal erosion, higher intensity storms and ocean acidification.
- The community's economy relies heavily on marine species, which are subject to natural fluctuations and vulnerable to other external changes such as climate change. This includes the decline in fur seals and recent bird die-offs.
- Net outward migration of residents and the resulting decreasing population in the Pribilof region. Between 2010 and 2015, St. Paul Island saw an 11 percent decrease in population. Population projections for the Aleutians West Census Area also predict a decline in regional population over the next 30 years.
- Potential closure of St. George school and the subsequent reduction in administrative funding for the Pribilof Islands School District

"We're a fishing community and always have been, but with stock declines we need to stabilize ourselves in another way."

- St. Paul Island community member

## Workforce and Business Development

- Reliance on single industry (seafood) and threats of overfishing, bycatch and changes in Total Allowable Catch.
- School closure or elimination of upper grades could accelerate the outmigration of residents.
- The State of Alaska is facing a budget deficit and there will likely be some combination of an income tax, a sales tax, reduced Permanent Fund dividends or other changes that will impact household income for all Alaska residents over the coming years. Other state policy changes may impact the ability to recruit, retain and expand businesses in rural communities.
- St. Paul Island's primary visitor population, affluent birders, are an aging demographic and fewer young people are interested in birding.

"When crab and halibut are doing great, the economy is booming. It took a turn for the worse last year when quotas were cut; the whole community felt it. People made smaller purchases, and some didn't even have money to buy things they needed...sales [at the store] are definitely impacted by what's happening with the fisheries."

- St. Paul Island community member

## Infrastructure

- The availability of state funding is declining for programs and infrastructure, and Alaska may enter into a statewide recession due to low oil prices and the associated negative impacts on the state's budget and key industries.
- The Tribe relies heavily rely on federal funding, including resources for tribal operations, transportation projects and maintenance and capital project funds.

- Potential cuts to the federal Bypass Mail or Essential Air Service programs, which would increase the cost of transportation for goods and people and could make air transportation less viable for air carriers servicing St. Paul.
- Key community infrastructure in the flood plain, including the store and clinic.
- Natural hazards such as earthquakes, severe storm events, floods, tsunamis and volcanoes present potential threats to human health and community infrastructure.
- The community is dependent on one air carrier for all air transportation to and from the island.
- The transition from a manned to an automated weather observing system at the St. Paul Island weather station will likely result in staffing cuts and may present challenges for transportation, as there will be no ground observations to supplement weather reports.

## 4. Strategic Direction

### Economic Vision

An Aleut community of healthy, resilient people working together to sustain a robust fishing-based economy.

### Goals and Strategies

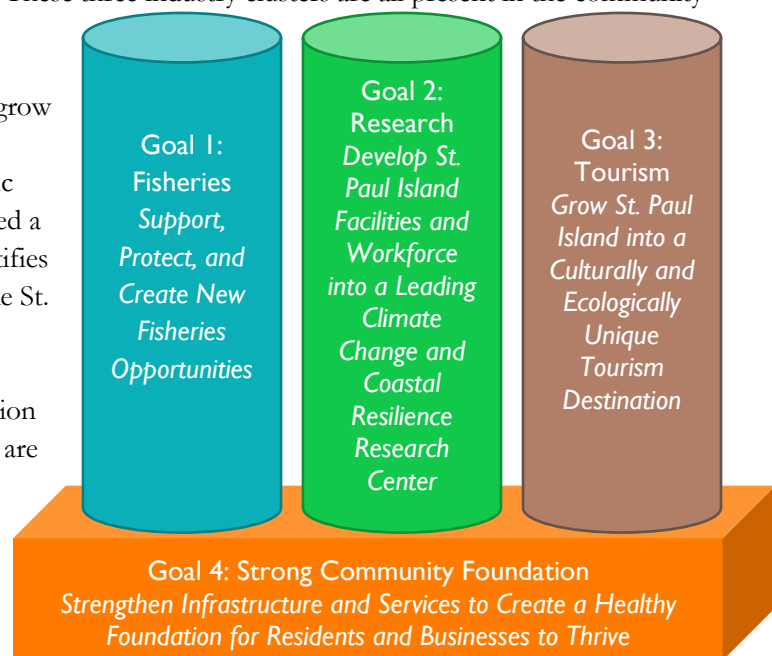
#### ***How and why these specific goals and strategies?***

For this CEDS process, our goals and strategies focus on the clusters and projects that are the most viable and have the greatest potential for increasing community wealth over the next five years. These priority clusters are fishing, research and tourism. These three industry clusters are all present in the community today, with existing infrastructure and community leads that have the resources, expertise, momentum and willingness to grow and strengthen the clusters. For data and trends on these clusters, see the Economic Profile in Chapter 2. We have also included a community foundations goal, which identifies the basic community needs that help make St. Paul Island a great place to live and work. This goal focuses on infrastructure, land, cultural preservation and wellness, education and workforce development, all of which are critical components that set the groundwork for a thriving economy.

The goals and strategies came from interviews, small group conversations, past economic visioning planning efforts and a review of relevant regional planning documents, past research and economic data analysis of existing and potential markets, with detailed follow-up input from community leaders, the TGSPI tribal council and business partners. The ultimate focus of these goals is to increase private sector sales of goods and services in order to increase the flow of money to the St. Paul Island community.

#### ***Why not other goals and strategies?***

St. Paul Island faces challenges such as the community's remoteness, harsh weather and small population size that make it unrealistic to develop and attract brand new industries over the next five years. While some of these challenges act as barriers to new development, they are also unique characteristics about the place that make St. Paul Island different and special and can even present as opportunities in the fisheries, research and tourism sector. In this CEDS, we have focused on growing and building resilience into existing industries, identifying ways to reduce the cost of living to increase quality of life and spending power for residents on the island, and to make it easier for residents to obtain the skills that match local and regional industry workforce needs.



There are some sectors and projects that were considered but did not make the final priority list. Some examples are listed below with more specific examples outlined in related goals.

- **Small Retail, Service and Food Businesses.** During the interview process, we heard a strong desire for more small businesses on the island. However, in a remote community with a small population (small market) and modest household incomes, it can be hard to create a viable business unless that business has a customer base beyond the on-island population. For example, in interviews many residents cited a desire for a restaurant, but many restaurants have tried and been unsuccessful in the community in the past due to high operating costs and the limited number of customers on the island. Small businesses that serve both residents and visitors have an opportunity to be more successful; this CEDS does offer some recommendations on how to support local entrepreneurs with the development of viable small businesses.
- **Arctic Development and Shipping.** Given the community's isolated location, lack of a community entity to take on a new sector and the slow pace at which Arctic development is likely to grow, this was considered but not identified as a priority over the next five years. Current shipping routes utilize larger ports such as Dutch Harbor and Nome and are unlikely to stop at St. Paul Island's modest harbor facilities, which do not have the capacity to support large vessels.

### ***How is this information organized so you can understand it?***

The information contained under each goal is organized in the following way:

- **Overview** – A brief summary of the sector or topic and its importance to economic development on St. Paul Island. This includes relevant highlights from the Strengths-Weaknesses-Opportunities-Threats (SWOT) Analysis in Chapter 3. This section also includes limitations for each sector, which discusses existing and potential challenges and notes specific strategies that were considered but not selected.
- **Strategies** – A list of strategies to help the community make progress on the goal, with priority strategies identified for the next five years. Specific action steps, costs and estimated impacts for the priority strategies are included in the following chapter.
- **Potential Magnitude of Economic Impact** – An estimated magnitude of new revenue to indicate the potential growth opportunities in that sector and economic impact to the community, as well as potential market share.

## **GOAL I: FISHERIES**

### ***Support, Protect, and Create New Fisheries Opportunities***

#### **Overview**

The fishing industry is the foundation of the St. Paul Island economy, and has been since the mid-1980s. National seafood consumption continues to grow; according to a recent report by NOAA's *Fisheries of the United States* annual report, Americans consumed an average of 15.5 pounds of seafood in 2015, a 0.9 increase from 2014.<sup>17</sup> On St. Paul Island, halibut fishing employs about one quarter of residents and ownership in seafood harvesting quota brings in revenue for CBSFA, who reinvest in the community by providing education and training programs, elder assistance, expanded internet and capital improvement projects such

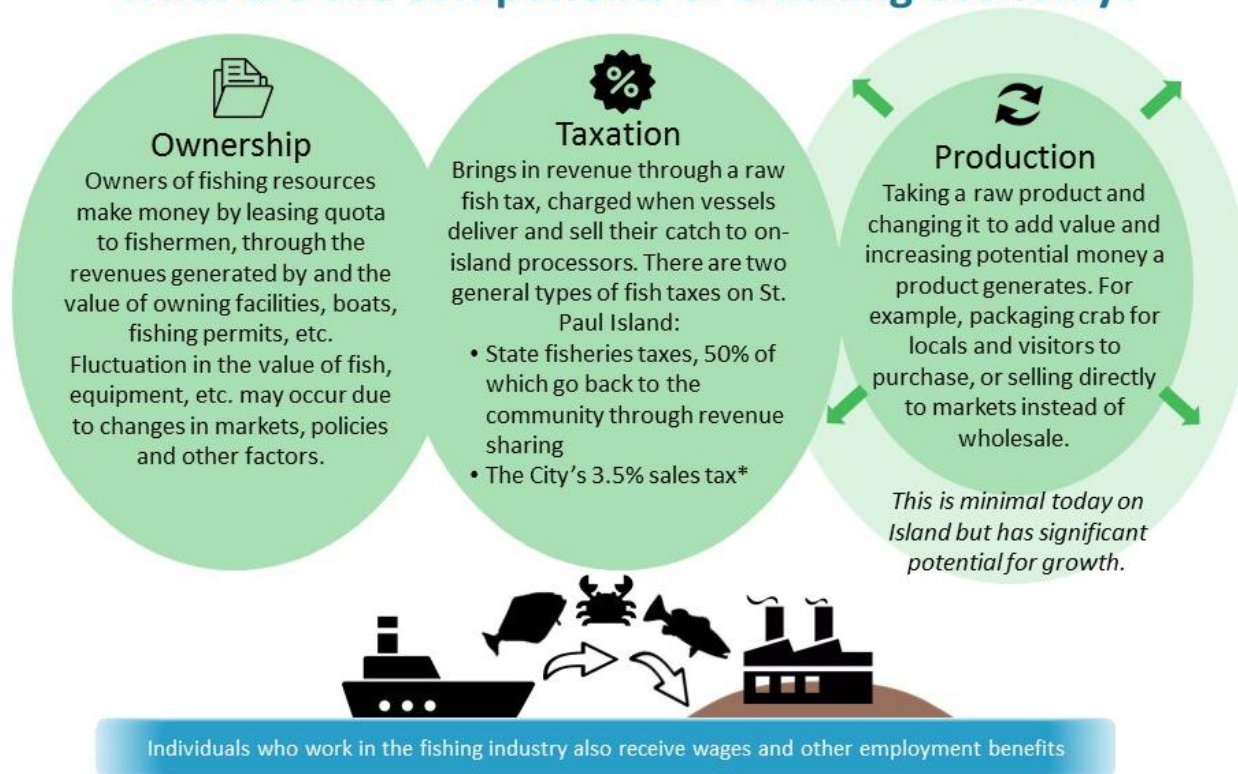
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<sup>17</sup> National Oceanic and Atmospheric Administration, Office of Science and Technology. *Fisheries of the United States, 2015*. Accessed October 26, 2016 from <http://www.st.nmfs.noaa.gov/commercial-fisheries/fus/fus15/index>

as the small boat harbor and vessel repair and marine supply facility. Since 2012, as halibut quota have been shrinking, in 2017 the halibut quota has increased while fixed costs have remained the same, CBSFA has opted to pay the Trident Seafoods processing plant to continue processing through the halibut season, essentially subsidizing the local halibut industry. Local sales tax dollars on crab fishing are the primary source of operating revenues for the City. This reliance on a single industry has left the community vulnerable to changes or threats to the local fisheries, including changes in market trends, natural species fluctuations, cutbacks and closures in crab TAC, overfishing, bycatch, and political decisions that impact allocations and bycatch caps.

There are four primary ways in which a community can make money from the fishing industry: taxation on the delivery and sale of raw harvests, revenues generated from owning shares in seafood quota, reduction in local fleet maintenance / repair costs, and infrastructure, and through value-added seafood production. The graphic below helps depict this process. In general, the first two categories, ownership and taxation, have limited opportunities for further growth, while the production/value-added category could be further expanded on St. Paul Island and reduced vessel maintenance / repair costs to improve the revenue to cost ratio. Today, the Trident Seafoods plant is the only business on St. Paul Island doing value-added production, and very few of those dollars stay in the community.

## What are the components of a fishing economy?



*\*NOTE: smaller boats, including most of the local fleet, are exempt from the City's sales tax. In 2016, the City also introduced a reduced tax rate to encourage new vessels to voluntarily deliver their catch to St. Paul Island who are currently processing seafood elsewhere.*



This goal focuses on strengthening and strategically growing the local fishing economy through diversification, advocacy, infrastructure and value-added processing in order to increase opportunities to generate revenues using the three methods mentioned above.

- **Diversification and growth (increases opportunities for ownership, taxation and production):** this could include fishing for new species such as cod or new types of crab, or could include expanding the market share of existing species such as halibut. For example, in recent years CBSFA has been investing in additional quota, including the purchasing of additional crab harvesting and processing quotas and a crab processing vessel, thereby increasing their assets by approximately 16 percent.<sup>18</sup> However, this category has limited growth potential. Most species with commercial value are already being harvested, and there are limited opportunities to break into new markets due to barriers including expensive quota purchases, policy limitations and costly equipment upgrades. Species that were considered but which were ultimately decided to be less feasible due to high entry costs or policy restrictions include Atka mackerel and yellowfin sole, pollock, sablefish, rockfish, skates, sculpins, sharks, squids and octopuses.
- **Investments in secondary processing (increases opportunities for value-added production):** this includes identifying secondary processing to add additional value to existing catch on St. Paul Island and increase revenue generation without increasing fishery landings. In the past CBSFA has done some limited value-added processing but has opted to focus on other investments such as quota. Potential value-added options include re-processing seafood waste into fish meal, utilizing leftover crab shells to manufacture chitin, live crab export and expanding branding and crab sales to individual buyers and smaller markets. Through this CEDS planning and other studies over the past five years, a number of value-added processing options have been explored, many of which have significant barriers that may limit success. For example, the Trident Seafoods processing plant is currently shipping its leftover crab shells to Seattle for chitin processing, and therefore there is less incentive for them to work with a local partner for on-island chitin processing. Another option, live crab export, is expensive and would require a logistically-complicated supply chain. Prior to initiating any value-added processing, a business/market study is recommended to determine a project's viability.
- **Advocacy and involvement (increases opportunities for ownership):** this approach includes maintaining an active presence in federal and international fisheries management processes such as the North Pacific Fishery Management Council (NPFMC) and the International Pacific Halibut Commission (IPHC) have a major impact on St. Paul Island; ongoing participation in these processes is another critical strategy to sustain the community's fishing industry. Advocating for sustainable management, quality research and fair allocations helps ensure the fishing industry remains viable into the future. St. Paul Island representatives have achieved various successes in the past through advocacy, including policies that have led to decreased halibut bycatch. While advocacy is critical to protect the sustainability of the local industry, it is unlikely to result in dramatic increases in catch limits or quota due to the tight competition and limitations on the resources themselves, most of which are being harvested to capacity.

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<sup>18</sup> CBSFA 2016 Annual Report

- **Infrastructure enhancements (generally increases the strength and viability of the local industry):** infrastructure enhancements help support local fishermen, keep costs down, attract more vessels and can have additional secondary benefits for other sectors such as research, tourism, emergency response and reduced transportation costs. Planned infrastructure improvements on St. Paul Island include city dock improvements, a jointly-owned and operated vessel repair facility and a renovated City-owned berthing site. A proposed marine equipment store could complement the new vessel repair facility by reducing the cost and inconvenience of purchasing and shipping marine equipment to St. Paul Island for fisherman and encouraging more fishing vessels to visit for services and supplies.



### Strategies

1. Complete the Vessel Repair and Supply Store (“VRSS”). (Priority A, led by TGSPI)
2. Explore feasibility of fishery expansion and diversification. (Priority B, led by CBSFA, TDX and the City)

### Potential new revenue:

- Total annual income for both new and saved jobs as a result of the Vessel Repair and Supply Store: over \$5.5 million
- Fresh halibut export: \$8,000,000
- Live crab export: \$10,000,000
- Sea urchin export: \$6,000,000
- Seaweed export: \$1,000,000
- Chitin processing and export: \$20,000,000

## GOAL 2: RESEARCH

*Develop St. Paul Island Facilities and Workforce into a Leading Climate Change and Coastal Resilience Research Center*

### Overview

Today, St. Paul Island is a research destination for federal agencies studying weather, fish, marine mammals and birds. In addition, the Ecosystem Conservation Office (ECO) branch of the tribal government is a regional leader in research, programming and science education. These strategies seek to further build upon this growing research cluster in two primary ways: elevating the role of local entities and individuals in managing natural resources, and attracting additional scientific exploration and research. This goal is complemented by some of the strategies in the Community Foundations Goal, especially education and

workforce development efforts that seek to increase Science-Technology-Engineering-Math (STEM) education on St. Paul Island.

- **Local management of natural resources:** The Tribe is interested in playing a larger research and management role in regard to many of the species on and around St. Paul Island, which would increase community ownership of subsistence resources and expand employment opportunities for local residents. The Tribe already has partnerships in place with federal agencies for managing fur seals and stellar sea lions, and the Tribe is responsible for overseeing the local reindeer herd. Federal agency interviewees indicated they would gladly hire more residents for services and trip support, if they were able to connect with people who had the appropriate level of training/technical knowledge and dedication. Challenges to increasing local management in this sector include a somewhat arduous federal hiring process, the seasonality of many natural resource positions and the lingering distrust many St. Paul Island residents have regarding federal agencies.
- **Expand research opportunities:** Arctic regions and coastal communities are on the forefront of climate change and scientists are already observing profound changes to the temperature distribution, chemistry and ecosystems of the Bering Sea. The National Oceanic and Atmospheric Administration (NOAA), the U.S. Coast Guard (USCG), the U.S. Fish and Wildlife Service (USFWS) and the National Weather Service (NWS) all have housing and research facilities on the Island that are not fully utilized. There may be an opportunity for community entities to eventually own and lease some of these spaces. Most recently, the Tribe was awarded a contract in 2016 to oversee off-season maintenance of NOAA's National Marine Fisheries Service (NMFS) facility on St. Paul Island, an approach that could be applied to other federally-owned buildings on the Island. Due to declining enrollment, the school also has excess capacity and classroom space that could be affordably repurposed to enhance research efforts by creating additional space for lab research and offices. By offering convenient access to laboratory and office space, plus investing in unique research projects on St. Paul Island, the community hopes to be able to attract an increasing number of researchers, scientists and academics who wish to study the region's unique attributes. Given the increasing focus on and availability of funding for climate change resiliency at the state, federal and international levels, St. Paul Island is in a unique position for attracting individuals hoping to study these changes. In addition, the Tribe's ECO department is investing in its own research projects, including attempting to establish a Pribilof blue king crab hatchery on the Island.

### Strategies

1. Develop and implement a salmon hatchery. (**Priority C**, led by TGSPI)
2. Develop a Pribilof blue king crab hatchery. (**Priority D**, led by the University of Alaska Fairbanks; National Oceanic and Atmospheric Administration (NOAA) Resource Assessment and Conservation Engineering (RACE) Division; and TGSPI)
3. Conduct research and enhance understanding of unique St. Paul Island reindeer population; expand local harvests and export potential. (**Priority E**, led by TGSPI)
4. Expand existing research and monitoring capabilities on St. Paul Island. (**Priority F**, led by TGSPI)
5. Increase local management of northern fur seals.
6. Develop a Subsistence Sea Lion Hunting Management Plan.
7. Establish a Pribilof Islands Research and Educational Center.
8. Develop a native plant garden.
9. Establish a tribal fisheries management zone.
10. Develop a squid/fish hatchery for fur seal repopulation project.

### **Potential new revenue:**

- [potential new revenue estimates are still being identified for this goal]

## **GOAL 3: TOURISM**

### *Grow St. Paul Island into a Culturally and Ecologically Unique Tourism Destination*

#### **Overview**

This goal seeks to improve the foundations of the visitor industry in order to help St. Paul Island become an increasingly popular, sought-out destination for birders, adventurers, hunters and small cruise lines. By focusing on tourism as one of its goals, the community hopes to increase the number of visitors to St. Paul Island.

St. Paul Island has a small tourism industry, with most tourism-related activities and facilities owned and operated by subsidiaries of TDX Corporation. The Pribilof Islands are world-renowned for bird-watching, and are sometimes referred to as the “Galapagos of the North.” However, tourism in the community is hampered by inadequate accommodations, limited visitor services, high transportation costs, inclement weather and the small jet capacity on flights that only operate three times per week. While detailed visitation numbers are not available, anecdotal accounts indicate annual visitation is between 150 and 200 tourists per year, which is much lower than the estimated 700 or so annual visitors to St. Paul Island when Reeve Airlines operated more frequent service to the community. From a statewide perspective, the Alaska tourism industry has maintained slow but steady growth since the 2008-2009 recession, a trend that is expected to continue in coming years. However, growth will likely be hampered due to reductions in marketing, research and infrastructure investment by the State of Alaska due to budget costs.

More visitors equate to more spending at local businesses, more jobs for residents, more sales tax and cheaper transportation costs. In order to increase St. Paul Island tourism, it's important visitors have a unique and memorable experience, quality customer service, reliable accommodation and transportation, and easy access to information, trip planning and booking.

- **Tourism market analysis** – There is growing momentum in support of tourism on St. Paul Island, as PenAir purchased a refurbished commercial plane in 2016 that will have larger seating capacity and will be able to provide more reliable service to the community. Before investing in significant improvements or upgrades to visitor amenities, it is critical the community prepares a market analysis to better understand visitor demographics and needs, current and potential offerings, hospitality gaps and what combination of physical improvements and marketing efforts are needed to bolster tourism and visitation. At a minimum, a tourism market analysis needs to address the following key questions: What is currently available on St. Paul Island? Who are the historic, current and potential visitors to St. Paul? What are the needs and expectations of visitors, including accommodations and experiences? And finally, how can the community better market and prepare for visitors?
- **Lodging and accommodations** – The community's only commercial accommodation for visitors, TDX's King Eider Hotel, is located in the aging airport complex three miles outside the community, so visitors are isolated from the town center and have limited opportunities to interact with residents and support local businesses. Tour groups typically eat in the mess hall at the Trident Seafoods processing plant because there is no local restaurant. TDX and the Tribe are in preliminary planning discussions for a new hotel complex in town, which would significantly improve the visitor experience and allow travelers to stay in a more convenient, central location than the current hotel

facility. The hotel could also house staff for community entities who have off-island employees, thereby reducing the need for organizations like the Tribe and the City to maintain excess housing stock. These houses could then be sold to residents on the Island. In the meantime, upgrades to the airport such as new paint, new carpet and an updated façade where visitors enter the airport could create a more welcoming visitor experience. These types of clean-up and beautification efforts make the community more attractive to visitors and residents, and align with other community programs such as the Tribe's recent house beautification, painting and yard improvement contest. This category also could include privately-owned and operated bed and breakfasts, cabins or other accommodation options.

- **Programs and activities** – Increasing recreational opportunities on the island for visitors also has secondary benefits for residents and vice versa. For example, group hikes, painting classes, stand-up paddle boarding and exercise classes can diversify and heighten the visitor experience, while simultaneously improving the quality of life for St. Paul Island residents and even attracting new residents to the community.

### **Strategies**

1. Grow visitation and tourism on St. Paul Island. (**Priority G**, led by TDX and City)
2. Increase the range and quality of recreation and tourism activities for visitors. (**Priority H**, led by the City, TGSPI and TDX)
3. Work with PenAir to mitigate and address transportation challenges.

### **Potential new revenue:**

- Estimated local spending per visitor per day: \$180 (on food, lodging, gift shop local services); would bring in approximately \$270,000 per year on top of existing approximately \$121,500.
- [additional new revenue estimates are still being identified for this goal]

## **GOAL 4: STRONG COMMUNITY FOUNDATION**

*Strengthen Infrastructure and Services to Create a Healthy Foundation for Residents and Businesses to Thrive*

### **Overview**

To grow St. Paul Island's three core economic clusters (fisheries, research and tourism), the community needs to have a core bedrock of crucial infrastructure, services and supports. Likewise, when the community's economy is thriving, there is greater community wealth and more funding available to re-invest into community foundations, programs and services. For more information on this concept, please refer to the infographic in the executive summary. This goal and associated strategies identify the cross-sectional opportunities for improvement that can make St. Paul Island a better place to live, visit and conduct business. For example, businesses and residents alike require critical basic needs such affordable power, accessible transportation and access to land. In addition, residents must be well and have access to quality education in order to seek gainful employment and positively contribute to the community.

Unlike the three previous goals, which are narrowly focused on individual industry clusters, this goal contains a broad spectrum of strategies and actions that seek to increase quality of life and the business environment. Overall categories include:

- **Infrastructure** – The physical building blocks that make up the community, including the energy grid, harbor, airport, internet and communications, quarries and other community facilities.

- **Land and Housing** – The policies and programs that ensure residents can access land for homes and businesses, while protecting tribal ownership and environmental values.
- **Business, Education and Workforce Development** – The local and regional schools, universities, trainings and programs that prepare residents for successful careers on and off St. Paul Island. This also includes support to small businesses and local entrepreneurs.
- **Wellness and Safety** – The availability of mental and physical health services, community activities, emergency response capabilities and cultural foundations such as subsistence and language that help residents thrive on St. Paul Island.

One of the strategies that was considered but ultimately not selected as a priority is strengthening the internet infrastructure on St. Paul Island. TDX and other internet providers have made upgrades to the communication infrastructure on the island in recent years. Additional improvements are unlikely in the next five years given the lack of available, affordable technology and the regional and global nature of large-scale broadband infrastructure investments such as worldwide satellite technology. Tracking advancements in communication technology and region wide upgrades remains a good idea for the community of St. Paul Island, but there are limited steps that entities on St. Paul Island can do to significantly improve communication infrastructure at this time.

## **Strategies**

### **Infrastructure**

1. Increase access to affordable, renewable energy and heating. (priority K, led by TDX and the City)
2. Support capital improvement projects that provide critical infrastructure to the community's economic development priorities. (priority L, led by the City)
3. Develop a small home improvement and construction supply store in the available space (downstairs) in the Alaska Commercial store building.
4. Upgrade internet infrastructure to improve connectivity, speed and reliability.
5. Collaborate with air and water transportation providers to improve access to the community.

### **Land and Housing**

6. Increase shareholder and/or tribal member access to land for housing and businesses.
7. Increase the availability of affordable homes through renovation and new construction.

### **Business, Education and Workforce Development**

8. Achieve educational excellence at Pribilof Island Schools and related early childhood development opportunities. (priority I, led by the Pribilof School District and TGSPi)
9. Develop and maintain a highly skilled, employment-ready workforce that supports and enhances the economic health of St. Paul Island. (priority J, led by the TGSPi)
10. Increase collaboration, engagement and commerce with the community of St. George.

### **Wellness and Safety**

11. Expand emergency planning, response and mitigation efforts to reduce community vulnerabilities to hazards and increase response capabilities.
12. Offer and engage in fun, healthy, year-round community activities.
13. Address historical trauma through communitywide and individual training and ongoing activities, in ways that are culturally appropriate and sensitive to individual and community needs.
14. Expand local food production on St. Paul Island.



15. Attract mid-level medical professionals for the clinic.
16. Expand child care availability, especially certified providers.
17. Continue to support language and cultural education programs through Unangan Tunuu.
18. Expand elder supports in the community, including improving elder care and senior housing options.
19. Conduct clean-up activities and implement recycling programs to reduce waste on St. Paul Island.
20. Encourage responsible, traditional subsistence hunting practices.
21. Improve leadership transition planning across all community entities.

***Potential new revenue:***

- [additional new revenue estimates are still being identified for this goal]

## 5. Action Plan and Evaluation Framework

This chapter identifies key actions, partners and resources for each of the priority strategies and will provide direction to the Tribe and other community partners. The action plan also identifies performance measures so tribal members, businesses and partners have a detailed picture of what the community hopes to accomplish and to better track progress being made on the CEDS. Annual updates will include a summary of actions taken and progress made toward CEDS-identified goals and objectives.

As discussed in Chapter 2, regarding income and community revenue – In addition to tracking progress using the performance measures listed below, the community would benefit from entities better tracking, through more expanded portfolios, revenue generated and how a portion/portions of that revenue is directly re-invested in St. Paul Island in the form of infrastructure, jobs, programs and services, etc. This is a helpful measure for evaluating the impact of the CEDS and the ways in which local entities contribute to the overall economic success and viability of St. Paul Island.

*NOTE: The following action plans identify preliminary leads and partners for each priority strategy. The lead will be responsible for moving the strategy forward and tracking implementation. In some cases, we have identified more than one potential lead. The leads and partners in this section will be further refined over the 30-day comment period. In addition, these leads and partners may change during CEDS implementation as community conditions and resources shift.*

Strategies that support <b>fish</b>	Strategies that support <b>research</b>	Strategies that support <b>tourism</b>	Strategies that strengthen <b>community foundations</b>
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### Priority Strategy A: Complete the Vessel Repair and Supply Store (“VRSS”), Production Greenhouse, Dock Extension, & Renewable Energy Plan.

Actions and Implementation Timeline	
<b>Year 1</b>	<ol style="list-style-type: none"> <li>1. Submit Economic Development Administration (EDA) request to amend existing grant to complete 100 percent of VRSS facility.</li> <li>2. If EDA amendment request is successful, bid construction of remaining work to be completed – interior partitions, mechanical, and electrical components.</li> <li>3. If EDA amendment request fails, develop phasing plan to continue work with remaining funds and future funds. Focus on completing critical and core components necessary to operate vessel repair portions of the facility.</li> <li>4. Design and develop adult educational/vocational program directed at marine trades including vessel construction, mechanical repairs, navigation and seamanship.</li> <li>5. Complete design drawing set for VRSS dock to include 120’ extension to the west.</li> </ol>
<b>Year 2</b>	<ol style="list-style-type: none"> <li>1. The vessel repair facility is fully operational and in use by Central Bering Sea Fisherman’s Association (CBSFA) and marine supply store in use by the Tribal Government.</li> <li>2. Launch adult educational/vocational program. <i>See Strategies I and J for additional actions related to education and workforce development.</i></li> <li>3. Launch marine educational/vocational program with the Pribilof School District.</li> <li>4. Design and develop vessel repair small business incubator program. Identify resources including capital equipment, local training, operating and use agreements necessary for mechanics and boat repair technicians to operate within the facility.</li> </ol>

	<ol style="list-style-type: none"> <li>5. Work with the Pribilof School District to adapt adult educational/vocational program that prepares interested high school students for job opportunities in marine trades.</li> <li>6. Offer expanded consumer options at the marine supply store, including new hardware and fishing product lines marketed to both the local and regional fishing fleet.</li> <li>7. Design and implement a production greenhouse operation plan located in the Community Store building.</li> <li>8. Begin evaluation of renewable energy plan for facility including wind and seawater heat pump options.</li> </ol>
<b>Year 3</b>	<ol style="list-style-type: none"> <li>1. New local fishing vessels are constructed.</li> <li>2. Launch small business incubator program for local residents.</li> <li>3. Complete renewable energy plan for facility.</li> </ol>
<b>Year 4</b>	<ol style="list-style-type: none"> <li>1. Continue to support and encourage local residents to participate in the vessel repair, construction, and maintenance marine vocational tech programs.</li> <li>2. Continue to expand and enhance greenhouse operations.</li> <li>3. Seek and secure construction funding to extend VRSS dock 120' to the west.</li> </ol>
<b>Year 5</b>	<ol style="list-style-type: none"> <li>1. Complete VRSS dock extension.</li> <li>2. Continue greenhouse operations to supply locally grown produce, lettuce and green leaf products to the tribally-owned grocery store.</li> </ol>
<b>Ongoing</b>	<ul style="list-style-type: none"> <li>• Collaborate with local partners and funders to expedite the timeline outlined above with a focus on accelerating construction.</li> </ul>
<b>Potential Lead Entity</b>	Tribal Government of St. Paul Island (TGSPI) Department of Business and Economic Development (DBED)
<b>Potential Partners</b>	CBSFA, Pribilof School District, TGSPI Ecosystem Conservation Office (ECO)
<b>Estimated Jobs</b>	<p>Approximately 73 jobs will be created and 135 jobs saved as a result of this strategy (5<sup>th</sup> year of operation):</p> <ul style="list-style-type: none"> <li>• Fishing and related: 88 jobs saved</li> <li>• New Fishing and related: 25 jobs created</li> <li>• Vessel repair facility and related: 32 new jobs</li> <li>• New vessel construction: 15 new jobs</li> <li>• Marine supply store: 8 new jobs</li> <li>• Other economic sectors: 25 jobs saved</li> <li>• Greenhouse: 7 new jobs</li> <li>• Crab and salmon rearing: <i>See Strategies C and D below.</i></li> </ul>
<b>Estimated Revenues</b>	Total annual income for both new and saved jobs: \$8.7 million. (5 <sup>th</sup> year of operation):
<b>Estimated Costs</b>	<ul style="list-style-type: none"> <li>• Vessel Repair and Marine Supply Facility to complete - \$2.5 million</li> <li>• TGSPI Adult Educational/Vocational Marine Trades Scholarship Program - \$20,000</li> <li>• Marines Trades Incubator Program - \$50,000</li> <li>• PSD Educational/Vocational Marine Trades Program - \$100,000</li> <li>• Renewable Energy Plan - \$50,000</li> <li>• Greenhouse - \$250,000</li> <li>• VRSS Dock Extension - \$3.2 million</li> </ul>

<b>Performance Measures</b>	<ul style="list-style-type: none"> <li>• Project phases completed on time.</li> <li>• Increase in the number of local businesses.</li> <li>• Increase in sales tax revenue that comes from retail sales.</li> <li>• Increase in local employment and job opportunities.</li> <li>• Increase in the sale and consumption of locally-grown food; greenhouse is the largest supplier of lettuce and green leaf products to the tribally-owned grocery store.</li> </ul>
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## Priority Strategy B: Explore feasibility of fishery expansion and diversification.

*NOTE: Strategies C and D focus on researching and investing in salmon and blue king crab hatcheries. Over the long term, these two projects have the potential to strengthen and expand the local fishery and could ultimately result in new products for exportation.*

<b>Actions and Implementation Timeline</b>	
<b>Year 1</b>	<ol style="list-style-type: none"> <li>1. Continue to explore options that increase community ownership of species, including purchasing more quota for crab or other species. <b>(Potential lead: TDX)</b></li> <li>2. Conduct additional resource and market research about the viability of different value-added fishery operations, including fresh halibut, sea urchins, a live crab export business, seaweed export, value-added fish waste, processing crab shells into chitin, and fish slurry fertilizer processing. <b>(Potential lead: TDX and TGSPI)</b></li> <li>3. Encourage entrepreneurial residents to consider value-added business models to sell or export value-added seafood products. <b>(Potential lead: TDX)</b></li> <li>4. Research fish slurry fertilizer operations. <b>(Potential lead: TGSPI)</b></li> </ol>
<b>Year 2</b>	<ol style="list-style-type: none"> <li>1. Conduct a feasibility study for a seaweed growing operation. <b>(Potential lead: TGSPI, TDX)</b></li> <li>2. Initiate marketing efforts for the vessel repair facility and marine supply store to ensure fishing vessels in the region are aware of the new facility. <b>(Potential lead: TGSPI)</b></li> <li>3. Begin testing live crab shipments to markets in Asia. <b>(Potential lead: TDX)</b></li> <li>4. Build value-added processing facilities at TDX dock and at the airport. <b>(Potential lead: TDX)</b></li> </ol>
<b>Year 3</b>	<ol style="list-style-type: none"> <li>1. Begin fresh halibut shipments to markets on the Eastern Seaboard of the United States. <b>(Potential lead: TDX)</b></li> </ol>
<b>Year 4</b>	<ol style="list-style-type: none"> <li>1. Secure grant funding to develop value-added seaweed processing. <b>(Potential lead: TDX)</b></li> </ol>
<b>Year 5</b>	<ol style="list-style-type: none"> <li>1. Secure Small Business Innovation Research (SBIR) grant to develop new non-acid processing of crab shells to chitin. <b>(Potential lead: TDX)</b></li> </ol>
<b>Ongoing</b>	<ul style="list-style-type: none"> <li>• Continue to participate in and advocate for equitable, sustainable fisheries management with the North Pacific Fisheries Management Council (NPFMC) and the International Pacific Halibut Commission (IPHC). <b>(Potential lead: CBSFA, City, TGSPI, TDX)</b></li> </ul>
<b>Potential Lead Entity</b>	Varies; see above
<b>Potential Partners</b>	City of Saint Paul, CBSFA, TGSPI, TDX, NOAA Fisheries Office of Aquaculture

<b>Estimated Jobs</b>	Approximately 25 to 60 jobs will be created as a result of this strategy: <ul style="list-style-type: none"> <li>• Live crab export: 15 to 20 jobs</li> <li>• Seaweed export: 10 to 40 jobs</li> </ul>
<b>Estimated Revenues</b>	To be determined.
<b>Estimated Costs</b>	<ul style="list-style-type: none"> <li>• Feasibility study for salmon, live crab and seaweed - \$500,000</li> </ul> Remaining actions, to be determined.
<b>Performance Measures</b>	<ul style="list-style-type: none"> <li>• Stable individual fishing quota shares in the region surrounding St. Paul Island (4C).</li> <li>• Continued reductions in halibut bycatch limits.</li> <li>• Increased sales tax revenue that comes from fish sales.</li> <li>• Increased employment in the fishery processing sector.</li> </ul>

### Priority Strategy C: Develop and implement a salmon hatchery.

NOTE: See Strategy D for more information and specific actions related to the development of operations for the crab hatchery.

<b>Actions and Implementation Timeline</b>	
<b>Year 1</b>	<ol style="list-style-type: none"> <li>1. Obtain scientific research collection permits from Alaska Department of Fish and Game (ADF&amp;G).</li> <li>2. Develop an aquaculture association.</li> <li>3. Obtain weir equipment and identify timing and location for weir in Salt Lagoon.</li> <li>4. Establish two to four transects in the Salt Lagoon for water quality monitoring and invertebrate monitoring.</li> <li>5. Determine equipment and infrastructure needs for hatchery operations/research/monitoring activities.</li> <li>6. Identify a freshwater source for hatchery operations.</li> <li>7. Identify a teacher partner and implement "Salmon in the Classroom".</li> <li>8. Monitor and collect salmon to determine feasibility of egg and milt collections.</li> </ol>
<b>Year 2</b>	<ol style="list-style-type: none"> <li>1. Research and secure funding for the purchase of equipment.</li> <li>2. Order incubation boxes.</li> <li>3. Install all necessary equipment for hatchery operations.</li> <li>4. Conduct pilot study field collections of eggs and milt.</li> <li>5. Conduct collections and hatchery training activities for potential technicians.</li> </ol>
<b>Year 3</b>	<ol style="list-style-type: none"> <li>1. Set weir and monitor abundance/timing.</li> <li>2. Collect available individuals for eggs and milt.</li> <li>3. Conduct experimental release.</li> </ol>
<b>Year 4</b>	<ol style="list-style-type: none"> <li>1. Set weir and monitor abundance/timing.</li> <li>2. Collect available broodstock.</li> <li>3. Conduct experimental release of approximately 500,000 juveniles.</li> </ol>
<b>Year 5</b>	<ol style="list-style-type: none"> <li>1. Finalize escapement goals with ADF&amp;G.</li> <li>2. Conduct large scale release of approximately one million juveniles.</li> <li>3. Set weir and monitor abundance/timing.</li> <li>4. Collect available broodstock.</li> </ol>
<b>Ongoing</b>	<ul style="list-style-type: none"> <li>• Continue to identify funding opportunities for long term operations.</li> <li>• Prepare reports to ADF&amp;G on research and collections.</li> <li>• Conduct annual counts via weir.</li> </ul>

	<ul style="list-style-type: none"> <li>• Conduct annual collections of broodstock.</li> <li>• Sustain operations and regularly-timed releases of salmon into Salt Lagoon.</li> <li>• Monitor the Salt Lagoon and channel flow; dredge when levels drop to critical levels as indicated by the U.S. Army Corps of Engineers. <b>(Potential lead: City)</b></li> </ul>
<b>Potential Lead Entity</b>	TGSPI ECO (except where noted above regarding City dredging of the Salt Lagoon Channel to ensure continued health of the Lagoon).
<b>Potential Partners</b>	ADF&G, Aleutian Pribilof Island Community Development Association (APICDA), CBSFA, City of Saint Paul, St. George Traditional Council
<b>Estimated Jobs</b>	Approximately 1 to 2 jobs will be created as a result of this strategy: <ul style="list-style-type: none"> <li>• Seasonal hatchery technicians: 1 to 2 positions.</li> </ul>
<b>Estimated Revenues</b>	To be determined.
<b>Estimated Costs</b>	<ul style="list-style-type: none"> <li>• Approximately \$20,000 for initial purchase of hatchery equipment, plus the cost to plumb in freshwater and electrical.</li> <li>• Approximately \$10,000 for annual operation costs.</li> <li>• Approximately \$20,904 annually for hatchery technician(s).</li> <li>• Other costs will be evaluated during CEDS implementation through preliminary feasibility assessment, program design, and additional research.</li> </ul>
<b>Performance Measures</b>	<ul style="list-style-type: none"> <li>• Increase of salmon occurring in the Salt Lagoon and nearshore habitats on St. Paul Island.</li> <li>• Additional and reliable subsistence opportunity for St. Paul Island community members.</li> <li>• Increased knowledge of salmon by student/youth that participate in TGSPI Bering Sea Days programs, hatchery technician training opportunities, and “Salmon in the Classroom” curriculum.</li> </ul>

### Priority Strategy D: Develop a Pribilof blue king crab hatchery.

*NOTE: See Strategy C for more information and specific actions related to the development of salmon hatchery.*

<b>Actions and Implementation Timeline</b>	
<b>Year 1</b>	<ol style="list-style-type: none"> <li>1. Obtain permits from ADF&amp;G for Pribilof broodstock (not St. Matt blue crab).</li> <li>2. Obtain and set up hatchery rearing equipment.</li> <li>3. Host University of Alaska Fairbanks (UAF) dive team to dive on potential blue king crab habitat around St. Paul Island.</li> <li>4. Charter vessel to collect broodstock.</li> </ol>
<b>Year 2</b>	<ol style="list-style-type: none"> <li>1. Continued dive operations around St. Paul Island.</li> <li>2. Attend training for hatchery technician in Seward at Alutiiq Pride.</li> <li>3. Host UAF dive team: dive on potential blue king crab habitat around St. Paul Island.</li> <li>4. Host open water dive class for community members.</li> <li>5. Rear blue king crab juveniles in hatchery (pilot study up to 10,000 juveniles).</li> </ol>
<b>Year 3</b>	<ol style="list-style-type: none"> <li>1. Continued dive operations around St. Paul Island.</li> </ol>



	<ol style="list-style-type: none"> <li>Rear blue king crab juveniles in hatchery (pilot study up to 10,000 juveniles).</li> <li>Install artificial habitat in nearshore St. Paul Island to outstock crabs.</li> <li>Conduct dive operations to monitor blue king crab on artificial habitat.</li> <li>Continue to host open water dive class for community members.</li> </ol>
<b>Year 4</b>	<ol style="list-style-type: none"> <li>Rear blue king crab juveniles in hatchery (up to 50,000 juveniles).</li> <li>Continue dive operations to monitor blue king crab on the artificial habitat.</li> <li>Re-evaluate Sea Grant's Alaska King Crab Research, Rehabilitation and Biology Program (AKCRRAB) Strategic Plan 2015-2019 as it relates to St. Paul.</li> </ol>
<b>Year 5</b>	<ol style="list-style-type: none"> <li>Rear blue king crab juveniles in hatchery (up to 100,000 juveniles).</li> <li>Dive ops to monitor blue king crab on artificial habitat.</li> </ol>
<b>Ongoing</b>	<ul style="list-style-type: none"> <li>Rear blue king crab juveniles in hatchery (<math>\geq 100,000</math> juveniles).</li> <li>Continue to host open water dive class (as necessary/ feasible).</li> </ul>
<b>Potential Lead Entity</b>	University of Alaska Fairbanks, National Oceanic and Atmospheric Administration (NOAA) Resource Assessment and Conservation Engineering (RACE) Division
<b>Potential Partners</b>	TGSPI ECO, Alaska Sea Grant, Alutiiq Pride Hatchery, Alaska Bering Sea Crabbers, CBSFA, United Fishermen of Alaska, Alaska Crab Coalition, Bering Sea Fisheries Research Foundation, Trident Seafoods (herein referred to as "Trident")
<b>Estimated Jobs</b>	<p>Approximately 2 to 4 jobs will be created as a result of this strategy:</p> <ul style="list-style-type: none"> <li>SCUBA dive technician- temporary/ seasonal (1 to 2 jobs)</li> <li>Hatchery technician- part time to full time regular (1 to 2 jobs)</li> </ul>
<b>Estimated Revenues</b>	To be determined.
<b>Estimated Costs</b>	<ul style="list-style-type: none"> <li>Total costs: \$250,000 <ul style="list-style-type: none"> <li>Approximately \$20,000 for pump and necessary pump equipment.</li> <li>Approximately \$200,000 for a dive boat.</li> </ul> </li> <li>Costs for dive books and materials to hold open water SCUBA classes: To be determined.</li> </ul>
<b>Performance Measures</b>	<ul style="list-style-type: none"> <li>Increased St. Paul Island community member knowledge of blue king crab-rearing.</li> <li>Successful, productive blue king crab-rearing operations.</li> <li>Increased local stocks of blue king crab.</li> </ul>

### Priority Strategy E: Conduct research to enhance understanding of unique St. Paul Island reindeer population; expand local harvests and export potential.

<b>Actions and Implementation Timeline</b>	
<b>Year 1</b>	<ol style="list-style-type: none"> <li>Invite biologists to study St. Paul Island reindeer; promote subsequent findings and reports.</li> <li>Obtain certifications for herd health.</li> <li>Prepare a Reindeer Management Plan.</li> <li>Conduct feasibility planning for a processing facility to support subsistence reindeer harvests.</li> <li>Conduct an experimental reindeer field slaughter.</li> <li>Improve hunting reporting practices.</li> </ol>

<b>Year 2</b>	<ol style="list-style-type: none"> <li>1. Develop communication materials related to subsistence hunting, including information on hunting safety and techniques.</li> <li>2. Conduct a market feasibility assessment for reindeer meat export and live animal export.</li> </ol>
<b>Year 3</b>	<ol style="list-style-type: none"> <li>1. Explore meat production options, including permit for store deli and frozen packaged meat operations.</li> </ol>
<b>Year 4</b>	<ol style="list-style-type: none"> <li>1. Establish a slaughter program, including purchasing necessary supplies and equipment.</li> </ol>
<b>Year 5</b>	To be determined.
<b>Ongoing</b>	To be determined.
<b>Potential Lead Entity</b>	TGSPI ECO
<b>Potential Partners</b>	U.S. Department of Agriculture, UAF Cooperative Extension, TDX
<b>Estimated Jobs</b>	To be determined.
<b>Estimated Revenues</b>	To be determined.
<b>Estimated Costs</b>	To be determined.
<b>Performance Measures</b>	<ul style="list-style-type: none"> <li>• Increase in annual reindeer harvests by both subsistence users and visitors.</li> <li>• Improved record-keeping around reindeer harvests and subsistence activities.</li> <li>• Increase exports from St. Paul Island and market recognition of St. Paul Island reindeer as superior meat product.</li> </ul>

## Priority Strategy F: Expand existing research and monitoring capabilities on St. Paul Island.

<b>Actions and Implementation Timeline</b>	
<b>Year 1</b>	<ol style="list-style-type: none"> <li>1. Develop an inventory of potential research topics (e.g., northern fur seal, Steller sea lion, reindeer, etc.).</li> <li>2. Develop a list of potential long term funding supporters for the BeringWatch database and framework.</li> <li>3. Make a contact list of people in communities around Alaska.</li> <li>4. Finalize sea ice monitoring protocols.</li> </ol>
<b>Year 2</b>	<ol style="list-style-type: none"> <li>1. Develop training protocols and video tutorials for the BeringWatch training.</li> <li>2. Develop a “trainer” packet with training materials to send out to regional representatives.</li> <li>3. Finalize salmon monitoring protocols.</li> </ol>

	4. Work with the National Weather Service (NWS) to establish a notification system and two-way communication for weather/storm events.
<b>Year 3</b>	<ol style="list-style-type: none"> <li>1. Finalize partnership with Local Environmental Observer (LEO) network to sync or nest ECO's Citizen Sentinel program/software inside LEO.</li> <li>2. Develop a list of potential server homes for BeringWatch.</li> <li>3. Fund a booth at the Alaska Marine Science Symposium (AMSS) to promote BeringWatch; highlight various community efforts and promote research opportunities on St. Paul Island.</li> </ol>
<b>Year 4</b>	<ol style="list-style-type: none"> <li>1. Bring two additional communities online to BeringWatch.</li> </ol>
<b>Year 5</b>	<ol style="list-style-type: none"> <li>1. Finalize long-term support and operation of BeringWatch. Continue technical assistance as necessary.</li> <li>2. Bring two additional communities online to BeringWatch.</li> </ol>
<b>Ongoing</b>	<ul style="list-style-type: none"> <li>• Promote BeringWatch expansion in other communities.</li> <li>• Maintain and update a contact list of people in communities around Alaska that use BeringWatch and/or Citizen Sentinel.</li> </ul>
<b>Potential Lead Entity</b>	TGSPI ECO
<b>Potential Partners</b>	Aleutian Bering Sea Islands Landscape Conservation Cooperative, Western Alaska Landscape Conservation Cooperative, National Weather Service, Environmental Protection Agency, Alaska Ocean Observing System, Bristol Bay Native Association, Kawerak, NOAA, National Science Foundation
<b>Estimated Jobs</b>	To be determined.
<b>Estimated Revenues</b>	To be determined.
<b>Estimated Costs</b>	Costs are highly dependent on individual project and personnel needs and will be defined during development and implementation of each project.
<b>Performance Measures</b>	<ul style="list-style-type: none"> <li>• Increased capacity within ECO to accomplish project goals and activities.</li> <li>• Expansion of BeringWatch to at least four new communities.</li> <li>• Increased exposure of St. Paul Island research benefits and potential.</li> <li>• Increased revenue resulting from expansion of existing and investment in new research facilities and programs on St. Paul Island.</li> </ul>

### Priority Strategy G: Grow visitation and tourism on St. Paul Island.

<b>Actions and Implementation Timeline</b>	
<b>Year 1</b>	<ol style="list-style-type: none"> <li>1. Identify and secure grant funding to conduct a comprehensive tourism/visitor market study and long term strategy to enhance and grow St. Paul Island as a world-renowned tourism/visitor destination. <b>(Potential lead: City and TDX)</b> At a minimum, the study should include a review of:</li> </ol>

	<ol style="list-style-type: none"> <li>a. TDX St. Paul Island tour program visitor data/trends – frequency, type, average dollars/day spending, revenue generated, etc.</li> <li>b. State visitor industry data regarding adventure travel – needs, expectations, satisfaction, etc.</li> <li>c. Inventory of current and potential lodging on St. Paul Island – What additional lodging space, aside from airport hotel, is available on-island? Could entities or individuals rent out vacant housing using Airbnb or a related service?</li> <li>d. What are the facility needs of tour boats/cruise ships and desired experiences of boat/cruise ship visitors – observation of cultural/traditional activities, walking tours, bus tours to wildlife viewing sites? How do we reach the decision-makers for this market?</li> <li>e. Assessment of comparable communities and facilities to assess market potential – what new/different tourists/visitors would appreciate the St. Paul Island experience?</li> <li>f. What are the limitations and issues with air service in and out of St. Paul Island? What improvements will address fog and low viability issues at the airport? How do we get an air carrier with a bigger, long-range aircraft, such as a 737-type jet, to service Island travelers and air cargo needs?</li> <li>g. What short, medium and long-term steps can community entities take to better prepare for St. Paul Island fly in and cruise ship visitors? For example, enhancing and/or expanding: gift shop and community crafts; cultural and heritage programs; ancillary visitor programs and tours operated by community members; access to wildlife viewing sites and community cultural sites.</li> <li>h. How can the community work together to better market itself against competition to attract and grow visitors? What are the most current, relevant marketing tools?</li> </ol> <ol style="list-style-type: none"> <li>2. Identify needed <u>short-term improvements at existing St. Paul Island airport lodging facility</u>, and complete planning to renovate or replace structure. <b>(Potential lead: TDX)</b></li> <li>3. If decision is to replace old TDX airport hotel structure – <u>prepare a feasibility study and business plan for a new hotel</u>, with preliminary concept ready for presentation to TDX shareholders at their annual meeting in July 2017. <b>(Potential lead: TDX)</b> At a minimum, this should include the following: <ol style="list-style-type: none"> <li>a. Identification of preliminary site options.</li> <li>b. A discussion with different community entities regarding housing needs and other uses for a facility, such as a combined culture center, community conference meeting space, and a year around restaurant and lounge, etc.</li> <li>c. Design and build options that will provide a return on investment while also meeting the goal of 1,500 visitors per year by 2025.</li> <li>d. Preliminary construction and operating cost estimates, plus potential financing options.</li> </ol> </li> <li>4. Conduct <u>transportation study</u> to clearly identify options for improving and providing more reliable and affordable/competitive community access. <b>(Potential lead: TDX, TGSPI, City, and CBSFA)</b></li> <li>5. Coordinate with air carrier to investigate possibility, including the regulatory requirements, costs and benefits, and any potential barriers/challenges of securing a bigger long range plane/jet to provide 30 to 75 passengers, with all of their luggage, and space and lift for community cargo and mail. <b>(Potential lead: TDX and City)</b></li> </ol>
<b>Year 2</b>	<ol style="list-style-type: none"> <li>1. Seek state and federal funding for new GPS landing system and fog buster technology at St. Paul Island Airport. <b>(Potential lead: TDX, City, TGSPI)</b></li> </ol>

	<ol style="list-style-type: none"> <li>Partner with all stakeholders to fund development of a marketing and promotion program for the St. Paul Island visitor and tourism industry (see Year 2, action item #3). <b>(Potential lead: TDX, City, TGSPI)</b></li> <li>Research the cost and benefits of instituting a city bed tax, including an estimate of potential revenue generation. <b>(Potential lead: City)</b></li> <li><u>If old airport hotel is still the main island hotel</u>, implement improvements at airport facilities to better meet visitor needs. <b>(Potential lead: TDX)</b></li> </ol>
<b>Year 3</b>	<ol style="list-style-type: none"> <li>Following stakeholder approval, <u>identify possible funding for the new hotel</u> and build relationships with potential funders, investors, partners. <b>(Potential lead: TDX, TGSPI)</b></li> <li>Launch new visitor and tourism marketing program funded by stakeholders and other potential revenues. <b>(Potential lead: TDX)</b></li> <li>Offer training to residents on tourism related jobs, hotel operations and management, including potential internships at Coast International Inn in Anchorage, a facility owned and operated by TDX Corporation. <b>(Potential lead: TDX, TGSPI)</b></li> </ol>
<b>Year 4</b>	<ol style="list-style-type: none"> <li>Secure financing for <u>new hotel facility</u>. <b>(Potential lead: TDX, TGSPI)</b></li> </ol>
<b>Year 5</b>	<ol style="list-style-type: none"> <li>Once financing secured, begin construction on <u>new hotel facility</u>. <b>(Potential lead: TDX)</b></li> <li>Open <u>new hotel facility</u> and related visitor and tourism facilities. <b>(Potential lead: TDX)</b></li> </ol>
<b>Ongoing</b>	<ul style="list-style-type: none"> <li>Visitor and tourism marketing and expansion efforts funded by stakeholders and other potential revenues, that boosts visitor traffic. <b>(Potential lead: TDX)</b></li> </ul>
<b>Potential Lead Entity</b>	Varies; see above.
<b>Potential Partners</b>	City, TGSPI, TDX, EDA, PenAir, U.S. Fish and Wildlife Service, Alaska Tourism Industry Association, State of Alaska Department of Commerce, Community and Economic Development, Economic Development Administration, Administration for Native Americans.
<b>Estimated Jobs</b>	Approximately 5 to 10 jobs will be created as a result of this strategy:
<b>Estimated Revenues</b>	Estimated local spending per visitor per day: \$180 (on food, lodging, gift shop local services); approximately \$270,000 on top of existing approximately \$121,500.
<b>Estimated Costs</b>	<ul style="list-style-type: none"> <li>Visitor and tourism market study and long-term strategy - \$300,000</li> <li>Existing airport hotel and related facilities (“POSS camp”) upgrades - \$3,000,000</li> <li>Hotel feasibility study/business plan - \$200,000</li> <li>New permanent <b>Pribilof Grand Hotel</b> - \$27,000,000</li> </ul>
<b>Performance Measures</b>	<ul style="list-style-type: none"> <li>Increase in annual visitation to St. Paul Island: 800 by 2020; 1,500 by 2025.</li> <li>Increase in local jobs: 25 local jobs by 2025.</li> <li>Increase tax, income and other revenue to community.</li> <li>Increase in range and quality of lodging options for visitors year-round.</li> <li>Increase in visitor satisfaction.</li> </ul>

**Priority Strategy H: Increase the range and quality of recreation and tourism activities for visitors.**

<b>Actions and Implementation Timeline</b>	
<b>Year 1</b>	<ol style="list-style-type: none"> <li>1. Conduct a visitor and tourism market study and identify a long-term strategy for St. Paul Island (<i>see Priority Strategy G above</i>). <b>(Potential lead: City, TDX)</b></li> <li>2. Increase opportunities for visitors to participate in existing activities, including inviting visitors to participate in activities at TGSPI's Community Advocacy Center (CAC), TDX's broad band center and library, the Aleut Heritage Museum, fitness rooms at the St. Paul Island school and mail call facility, and other community events that also benefit local residents. <b>(Potential lead: TGSPI, TDX)</b></li> <li>3. Increase opportunities for local artists to sell arts and crafts to visitors at the airport museum and TDX gift shop at the airport. <b>(Potential lead: TDX, TGSPI)</b></li> </ol>
<b>Year 2</b>	<ol style="list-style-type: none"> <li>1. Implement recommendations from the tourism/visitor market study and strategy. <b>(Potential lead: TDX, City, TGSPI)</b> Potential actions might include marketing and expanding: opportunities for visitors/tourists to participate in resident-taught activities such as reindeer hunting, boating, kayaking, all-terrain vehicle (ATV) tours/rentals, traditional arts and crafts activities such as basket weaving, carving, beading, sewing and how to make bentwood hats.</li> <li>2. Create a community calendar for visitors and residents with a list of all current and upcoming community activities. <b>(Potential lead: TGSPI)</b></li> <li>3. Improve access, signage, wayfinding and interpretive information throughout the Island to wildlife viewing sites, bird cliff viewing, fur seal rookery viewing and various Aleut cultural and historical sites. <b>(Potential lead: TDX and TGSPI)</b></li> </ol>
<b>Year 3</b>	To be determined.
<b>Year 4</b>	To be determined.
<b>Year 5</b>	To be determined.
<b>Ongoing</b>	To be determined.
<b>Potential Lead Entity</b>	TGSPI and TDX
<b>Potential Partners</b>	PenAir, City, St. Paul Island School, CBSFA
<b>Estimated Jobs</b>	Approximately 5 to 15 jobs will be created as a result of this strategy.
<b>Estimated Revenues</b>	Approximately \$250,000 annually.
<b>Estimated Costs</b>	Approximately \$100,000 annually.



<b>Performance Measures</b>	<ul style="list-style-type: none"> <li>• Increase in annual visitation to St. Paul Island; 800 by 2020 and 1,500 by 2025</li> <li>• Increase in tourism-related employment on St. Paul Island; 50% increase by 2020 and 100% increase by 2025.</li> <li>• Increase number of participants (residents and visitors) in community activities and events.</li> <li>• Increased community connectedness.</li> </ul>
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**Priority Strategy I: Achieve educational excellence at Pribilof Island Schools and related early childhood development opportunities.**

<b>Actions and Implementation Timeline</b>	
<b>Year 1</b>	<ol style="list-style-type: none"> <li>1. Engage educational expert to present to community entities on best practices and models for educational excellence applicable to Pribilof Island Schools. <b>(Potential lead: Pribilof School District)</b></li> <li>2. Explore the feasibility, including process, costs and potential benefits of developing a Pribilof School District (PSD) correspondence program. <b>(Potential lead: Pribilof School District)</b> <ol style="list-style-type: none"> <li>a. Get credit for half average daily membership (ADM).</li> <li>b. Could be any students in the state.</li> <li>c. Potentially develop and market a correspondence program that features courses unique to St. Paul Island – Aleut culture and language, science, technology, engineering and math (STEM)/environmental sciences, climate change and coastal resiliency, tribal administration. Look into potential for National Science Foundation funding.</li> </ol> </li> <li>3. Expand Bering Sea Days. <b>(Potential lead: TGSPI)</b> <ol style="list-style-type: none"> <li>a. Secure scholarship funds for shareholder and tribal members to participate in Bering School Days. <b>(Potential lead: CBSFA, TGSPI, TDX)</b></li> <li>b. Develop and implement summer camp and Bering Sea Days activities that are complementary.</li> </ol> </li> <li>4. Continue to build the curriculum and materials for a preschool language immersion program, with a 2018 start date. <b>(Potential lead: TGSPI)</b></li> <li>5. Hire Bering Sea Pribilof Island Science Education (BSPISE) Communications Specialist. <b>(Potential lead: TGSPI)</b></li> <li>6. Compete for external funding resources for expansion of BSPISE program. <b>(Potential lead: TGSPI)</b></li> </ol>
<b>Year 2</b>	<ol style="list-style-type: none"> <li>1. Pending the outcomes of feasibility studies in year one, begin to design and seek funding for PSD correspondence program. <b>(Potential lead: Pribilof School District)</b></li> <li>2. Pursue taking over Head Start Program. <b>(Potential lead: Pribilof School District, TGSPI)</b></li> <li>3. Sign Memorandum of Understanding (MOU) with PSD for partnership in STEM program development. <b>(Potential lead: TGSPI)</b></li> <li>4. Encourage students to participate in internships with local community entities and federal agencies who work on St. Paul Island. <b>(Potential lead: Pribilof School District)</b></li> <li>5. Pursue a Future Teachers program in the St. Paul Island School. <b>(Potential lead: Pribilof School District)</b></li> <li>6. Begin preschool language immersion program in the St. Paul Island School. <b>(Potential lead: TGSPI)</b></li> <li>7. Complete strategic planning for BSPISE program. <b>(Potential lead: TGSPI)</b></li> </ol>

	8. Secure external funding resources for expansion of BSPISE program. <b>(Potential lead: TGSPI)</b>
<b>Year 3</b>	<ol style="list-style-type: none"> <li>1. Complete development of PSD correspondence school. <b>(Potential lead: Pribilof School District)</b></li> <li>2. Develop a foundation or non-profit organization that can independently raise funds for the PSD – a “Friends of Pribilof School District.” <b>(Potential lead: Pribilof School District)</b></li> <li>3. Develop partnership with Lower 48 tribes to enhance cultural learnings and exchange opportunities. <b>(Potential lead: Pribilof School District)</b></li> </ol>
<b>Year 4</b>	<ol style="list-style-type: none"> <li>1. Continue to grow and expand partnerships with Lower 48 tribes to enhance cultural learnings and exchange opportunities. <b>(Potential lead: Pribilof School District)</b></li> <li>2. Evaluate and amend strategic plan for BSPISE program as necessary. <b>(Potential lead: TGSPI)</b></li> <li>3. Develop student STEM track in partnership with the Pribilof School District. <b>(Potential lead: TGSPI)</b></li> </ol>
<b>Year 5</b>	<ol style="list-style-type: none"> <li>1. Host PSD correspondence and place-based education programs. <b>(Potential lead: Pribilof School District and TGSPI)</b></li> <li>2. Develop activities and curriculum in BSPISE according to Alaska Natural Resource and Environmental Literacy Plan. <b>(Potential lead: TGSPI)</b></li> </ol>
<b>Ongoing</b>	<ul style="list-style-type: none"> <li>• Develop opportunities and tools for increasing community awareness, recognition and engagement in schools. <b>(Potential lead: Pribilof School District)</b></li> <li>• Expand youth leadership opportunities in STEM education. <b>(Potential lead: TGSPI)</b></li> <li>• Increase awareness and enrollment in existing educational programs. <b>(Potential lead: Pribilof School District)</b></li> <li>• Identify and recruit more village-based staff positions in BSPISE related fields. <b>(Potential lead: TGSPI)</b></li> </ul>
<b>Potential Lead Entity</b>	Varies; see above
<b>Potential Partners</b>	Pribilof School District, TGSPI, City, TDX, Aleutian Pribilof Islands Association, Alaska Native Science and Engineering Program, Kodiak Island School District, UAF's College of Rural and Community Development, National Oceanic and Atmospheric Administration, U.S. Fish and Wildlife Service, Alaska Sea Grant, National Science Foundation, North American Association for Environmental Education (NAAEE), Alaska Department of Fish and Game, Seabird Youth Network
<b>Estimated Jobs</b>	<p>Approximately one job will be created as a result of this strategy:</p> <ul style="list-style-type: none"> <li>• BSPISE Science and Education Communications Specialist: 1 full-time position.</li> </ul>
<b>Estimated Revenues</b>	To be determined.
<b>Estimated Costs</b>	To be determined.
<b>Performance Measures</b>	<ul style="list-style-type: none"> <li>• Increased interest from students in BSPISE related programs and activities.</li> <li>• Increased enrollment and participation in school activities, internships, mentoring opportunities.</li> </ul>

	<ul style="list-style-type: none"> <li>• Short-term: Increased average daily membership (ADM) and both Pribilof School District schools are open in 2017-2018.</li> <li>• Short/medium-term: Increased funding to Pribilof School District schools (i.e., more teachers and increased dollars per student).</li> <li>• Longer-term: Students are prepared for vocational, post-secondary, and career opportunities after they graduate.</li> <li>• Medium/longer-term: Youth exchanges between Pribilof Island Schools and other Alaska and Lower 48 schools – St. George and St. Paul Island youth getting exposure to other places and educational experiences.</li> <li>• Long-term: Harness St. Paul Island assets.</li> <li>• Increase in the number of high school graduates who are employed and/or seeking secondary education after graduation.</li> <li>• Increase in the number of St. Paul School teachers who are St. Paul Island residents, tribal members or shareholders.</li> </ul>
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### Priority Strategy J: Develop and maintain a highly skilled, employment-ready workforce that supports and enhances the economic health of St. Paul Island.

Actions and Implementation Timeline	
<b>Year 1</b>	<ol style="list-style-type: none"> <li>1. Re-evaluate effectiveness and efficiency of community entities' allocation of education and workforce development investments (e.g., internships, scholarship programs, training centers, etc.). <b>(Potential lead: TGSPI, all entities participate)</b></li> <li>2. Redirect/reallocate entity education and workforce development funds to a community-based education and workforce development staff (one or two people) on St. Paul Island. <b>(Potential lead: TGSPI)</b> <ol style="list-style-type: none"> <li>a. Identify best practices for individual case management to ensure skill development of current and potential workforce to align with existing and planned industry needs (as identified in other sections of the CEDS).</li> <li>b. Pilot an approach with a small number of individuals to allow more robust, intensive one-on-one interactions with educators and employers, but also allows individuals to address specific barriers to their success.</li> <li>c. Research and identify approach/best practice for reaching individuals that do not proactively seek education and training assistance. How do we reach young adults and/or those adults who are not comfortable going to an entity office to discuss their future education and employment needs?</li> </ol> </li> </ol>
<b>Year 2</b>	<ol style="list-style-type: none"> <li>1. Expand the education and workforce development program to more individuals, including those individuals that do not proactively seek services. <b>(Potential lead: TGSPI)</b></li> <li>2. Host an annual career fair, with all local entities sharing information on positions, requirements and how to apply. <b>(Potential lead: TGSPI)</b></li> <li>3. Support entrepreneurs with business planning, help finding potential space, financial/accounting courses and supportive technical assistance. <i>See also Strategy A marine business incubator program.</i> <b>(Potential lead: TGSPI)</b></li> </ol>
<b>Year 3</b>	<ol style="list-style-type: none"> <li>1. Research privatizing City services that lie outside of scope of the City's mission and are a business opportunity for a local or privately-owned business (e.g., mechanic services). <b>(Potential lead: City)</b> <ol style="list-style-type: none"> <li>a. Identify potential solutions to barriers such as space (facilities and land), offsetting insurance costs and community willingness to pay.</li> </ol> </li> </ol>

	b. Develop agreements to help small business owners who want to provide services directly to residents; for example, using city AMPY cards for non-paying customers.
<b>Year 4</b>	To be determined.
<b>Year 5</b>	To be determined.
<b>Ongoing</b>	<ul style="list-style-type: none"> <li>Annually evaluate the education and workforce development program to include progress of participants, but also to identify opportunities for adapting and/expanding the program to better meet existing/future participant needs.</li> </ul>
<b>Potential Lead Entity</b>	Varies; see above
<b>Potential Partners</b>	TGSPI, City, TDX, CBSFA, Aleutian Pribilof Islands Association, Southwest Alaska Municipal Conference, Southwest Alaska Vocational & Education Center, Alaska Native Science and Engineering Program, Kodiak Island School District, UAF's College of Rural and Community Development, National Oceanic and Atmospheric Administration, U.S. Fish and Wildlife Service, Southcentral Foundation
<b>Estimated Jobs</b>	To be determined.
<b>Estimated Revenues</b>	To be determined.
<b>Estimated Costs</b>	To be determined.
<b>Performance Measures</b>	<ul style="list-style-type: none"> <li>Increase in the percentage of residents over 16 who are employed.</li> <li>Increase in local hires by federal, state, regional agencies and entities.</li> <li>Increase in number of locally-owned businesses that operate for at a profit within three to five years of opening.</li> <li>Increase in higher wage jobs.</li> <li>Local employers report their workforce needs are being met by education and workforce development program/staff.</li> </ul>

### Priority Strategy K: Increase access to affordable, renewable energy and heating.

<b>Actions and Implementation Timeline</b>	
<b>Year 1</b>	<ol style="list-style-type: none"> <li>Conduct a comprehensive energy plan for St. Paul Island, including: <ol style="list-style-type: none"> <li>Inventory of existing infrastructure and related strengths and weaknesses.</li> <li>Identification of current and future energy needs – residential, commercial, public.</li> <li>Overview of potential alternatives, including specific steps to ensure all potential projects align with the community's vision, goals and have been researched and vetted by partner entities.</li> </ol> </li> </ol>

	<ul style="list-style-type: none"> <li>○ Seek funding for wind-to-heat system study that identifies cost/benefit of adding renewable energy to existing energy distribution system from TDX's wind farm.</li> <li>○ Complete current community micro-grid demonstration project in Sand Point, Alaska; apply lessons learned to St. Paul Island.</li> <li>○ Develop and implement agreement with City of Saint Paul, integrating existing power grid with renewable energy from TDX wind farm.</li> <li>○ Secure funding to install three additional wind turbines (675kw of additional capacity) at the TDX wind farm.</li> <li>○ Complete design and engineering to integrate additional wind energy capacity into existing grid.</li> <li>○ Build community infrastructure for wind-to-heat upgrades</li> <li>○ Develop consumer off-take agreements for wind-to-heat installations at community public facilities.</li> <li>○ Complete install of three new wind turbines and interconnection of all six turbines.</li> <li>○ Build/improve City electric grid infrastructure to accommodate additional wind capacity wheeled over city utility grid.</li> <li>○ Begin wind-to-heat installations to half of community homes.</li> <li>○ Complete installation of wind-to-heat system in all homes and public facilities.</li> <li>○ Complete installation of wind-to-heat system in all homes and public facilities.</li> <li>○ Secure funding to add three more wind turbines at TDX wind farm to meet future residential and commercial needs.</li> <li>○ Seek additional funding to develop innovative uses of wind power to drive new energy transport or storage needs.</li> </ul>
<b>Year 2</b>	To be determined.
<b>Year 3</b>	To be determined.
<b>Year 4</b>	To be determined.
<b>Year 5</b>	To be determined.
<b>Ongoing</b>	To be determined.
<b>Potential Lead Entity</b>	TDX and City
<b>Potential Partners</b>	Pribilof School District, CBSFA, TGSPI, TDX, Trident
<b>Estimated Jobs</b>	To be determined.
<b>Estimated Revenues</b>	To be determined.

<b>Estimated Costs</b>	To be determined.
<b>Performance Measures</b>	<ul style="list-style-type: none"> <li>Stabilize cost of energy in short and long-term for residents, business owners, public facilities.</li> <li>Decreased energy costs that incentivize/make possible increased business investments by large employers/private sector (e.g., Trident). Example: <ul style="list-style-type: none"> <li>Increased fish processing, value added processing and related jobs.</li> </ul> </li> <li>Continued reductions in average energy, electricity and heating costs.</li> <li>Increase local employment and high tech energy-related jobs.</li> </ul>

**Priority Strategy L: Support capital improvement projects that provide critical infrastructure to the community's economic development priorities.**

<b>Actions and Implementation Timeline</b>	
<b>Year 1</b>	<ol style="list-style-type: none"> <li>Complete update to the City Capital Improvement Project (CIP) list, including required public process.</li> <li>Strategize with other community entities to research and secure funding for priority projects.</li> </ol>
<b>Year 2</b>	To be determined.
<b>Year 3</b>	To be determined.
<b>Year 4</b>	To be determined.
<b>Year 5</b>	To be determined.
<b>Ongoing</b>	<ul style="list-style-type: none"> <li>As necessary, conduct annual update to City CIP list and strategize with community entities to secure necessary funding.</li> </ul>
<b>Potential Lead Entity</b>	City of Saint Paul
<b>Potential Partners</b>	CBSFA, TGSPI, TDX
<b>Estimated Jobs</b>	To be determined.
<b>Estimated Revenues</b>	To be determined.
<b>Estimated Costs</b>	To be determined.
<b>Performance Measures</b>	To be determined.





## 6. Other Relevant Background

### Land and Housing

#### Land Ownership

The regional village corporation, Tanadgusix Corporation (TDX) is the majority landowner on St. Paul Island, with the regional Aleut Corporation maintaining subsurface rights of TDX lands per ANCSA. The U.S. government has retained a portion of the lands on St. Paul Island, including those associated with fur seal habitats and harvests, infrastructure, navigation and weather. In 1981, the United States Secretary of the Interior purchased land to establish the Pribilof Islands Subunit of the Alaska Maritime National Wildlife Refuge, which includes key marine mammal and bird habitat.

TDX typically does not sell their land; they opt to lease in order to ensure community lands stay within shareholder ownership. This can present a challenge for home buyers, since banks do not like to sign over a mortgage to a house when the prospective owner does not own the land. According to interviewees, the cost of leasing land and buildings can be cost-prohibitive for businesses as well.

#### Housing

There are two predominant residential areas in St. Paul: “Old town,” which is above the old harbor and surrounding the church, and “Uptown,” on the opposite hillside above the clinic. Most new home construction is located north of Uptown. According to the 2010 U.S. Census, there are 190 housing units in St. Paul, 162 of which are occupied. This equates to a 15 percent vacancy rate. Some of the vacant units are currently for rent, but many of them are in poor shape and not suited for habitation without substantial improvements. The Tribe owns 22 houses, six of which are used for tribal government functions, with the remaining homes rented to tribal members with rental rates based on income. The Tribe is considering a 10-home development project, constructed using Title V funds.

Figure 26: Housing Count and Characteristics, 2010 Census

U.S. Census Data	St. Paul City	Aleutians West Census Area	Alaska
Average household size	2.81	2.49	2.65
Average family size	3.35	3.18	3.21
Total housing units	190	1,929	306,967
Occupied housing units	162	1,212	258,058
Vacant housing units	28	717	48,909
Vacant units - For rent	12	85	6,729
Vacant units - Rented, not occupied	1	34	667
Vacant units - For sale only	0	45	2,876
Vacant units - Sold, not occupied	0	187	1,006
Vacant units - For seasonal, recreational, or occasional use	3	92	27,901
Vacant units - All other vacants	12	274	9,730
Homeowner vacancy rate (percent)	0%	7%	2%
Rental vacancy rate (percent)	14%	9%	7%
Total occupied housing units	162	1,212	258,058

Owner-occupied housing units	91	391	162,765
Renter-occupied housing units	71	821	95,293
Source: 2010 U.S. Census			

The Alaska Housing Finance Corporation (AHFC) conducted a statewide housing assessment in 2014.<sup>19</sup> According to the assessment, approximately 10 percent of the households are overcrowded. This reinforces the shared perspective of many interviewees that there is a housing shortage on the island. The median value of an owner occupied house with a mortgage is \$183,300 while the median value of an owner occupied house without a mortgage is \$74,000. The average median housing cost is \$690 per month, with renters paying slightly more at \$731 per month, households with a mortgage paying more at \$917 a month and housing units without a mortgage spending \$533 per month. On average, 16 percent of median income is spent on energy, which includes home heating. Almost 30 percent of households are cost burdened, meaning they spend 30 percent or more of household income on home and energy expenses.

**Figure 27: Housing Information from the 2014 Alaska Housing Assessment**

Housing Information from 2014 Alaska Housing Assessment		
<b>Owner occupied House with Mortgage, Median Value</b>	\$183,300	
<b>Owner-occupied House without a Mortgage, Median Value</b>	\$74,000	
<b>Median Housing Costs</b>		
	Monthly	Annual
All-occupied	690	8,280
Gross rent	731	8,772
Owner-occupied	647	7,764
Housing units w/mortgage	917	11,004
Housing units w/out a mortgage	533	6,396
<b>Average median income spent on energy</b>	16.10%	
Source: Alaska Housing Finance Corporation (AHFC) 2014 Alaska Housing Assessment		

The AHFC housing assessment also provides estimates on the number of housing units by category for Alaska communities; however, the numbers vary significantly from the 2010 Census count and appear to be inflated. For example, the assessment estimated 313 total units on St. Paul Island compared to the Census estimate of 190, and estimated 132 owner-occupied units compared with 91 in the Census. The reason for this discrepancy is unclear and could be the result of incorrectly including fish processing dormitory space in the count or some other methodological error. According to local residents the Census numbers are more representative of housing on St. Paul Island.

According to interviews with residents, one of the contributing factors to the housing shortage on St. Paul Island is the high cost of home construction. Homes often cost upwards of \$350,000 to \$400,000 to build due to the high costs of materials, shipping and labor, but a completed home is typically only worth \$125,000-\$150,000, creating a disincentive for building new homes. The Tribe is looking into options to reduce the cost of home construction in a variety of ways, including exploring the purchase of a scoria block plant to increase

<sup>19</sup> Wiltse, N., Madden, D., Valentine, B., Stevens, V. (2014). *2014 Alaska Housing Assessment*. Cold Climate Housing Research Center. Prepared for: Alaska Housing Finance Corporation. Available at <https://www.ahfc.us/efficiency/research-information-center/housing-assessment/>

the supply of local building materials. The Tribe is also considering selling homes at a discounted rate to higher-income families who are ineligible for many of the existing housing programs.

## Infrastructure

### Energy

The City of Saint Paul operates an electrical utility that provides power to most households. Like many rural Alaska communities, St. Paul uses #2 diesel to produce power and heat for most buildings in the community, although that is slowly being offset by renewables. The City of Saint Paul has five generators and large bulk fuel storage capacity. TDX and Trident Seafoods both have smaller fuel storage. Trident generates its own power to run the seafood processing operations and is not connected to the city's grid.<sup>20</sup>

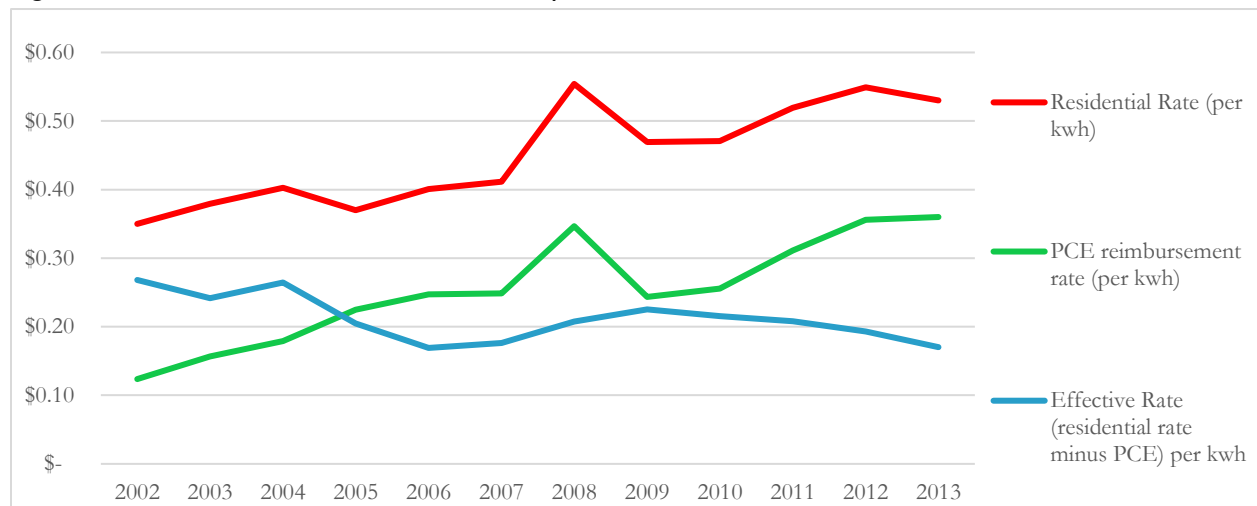
The island has high winds and great wind power potential, which TDX captures through three Vesta V-27 wind turbines located adjacent to the airport. TDX Power, a subsidiary of TDX, oversees operations of the turbines. The turbines have a 675 kW rated wind capacity. Wind power can be intermittent and highly variable, so TDX uses specialized equipment and diesel generators to create consistent and reliable power generation, using a “medium” renewable fraction system that diverts excess energy into heat. The turbines are considered high penetration because they use minimal diesel, and the diesel only powers on when supplemental power is needed. According to TDX, the turbines paid for themselves in five years. The energy generated from one of the turbines powers operations and provides heat to the airport facility, while power generated from the other two is sold to the city utility. The wind farm provides approximately 20 percent of the community's electrical power requirements; TDX Power hopes to provide 80 percent of the community's electrical needs through renewable sources by 2025.

Despite the recent investments in renewables, energy costs remain high on St. Paul. The community benefits from the Alaska Energy Authority (AEA)'s Power Cost Equalization (PCE) program, which subsidizes rural electricity rates to help offset high costs of living. Figure 28 shows the residential rate before PCE (in red), the annual PCE reimbursement rate (in green) and the effective rate for electricity once PCE is factored in (in blue). All numbers are per kilo watt hour (kwh). Overall, the PCE program has kept rates around \$0.20 per kwh. For example, in 2013 the effective rate was \$0.17, whereas without the program, residents would have been paying more than three times that amount at \$0.53 per kwh. According to conversations with TDX Power, recent investments in renewable energy have offset electricity costs but do not produce significant financial benefits for residents, since the cost savings mean the PCE reimbursement rate is reduced and the effective rate stays the same for customers. The biggest cost savings in renewable energy development are in commercial electricity, which is not eligible for PCE subsidies, and home heating, where renewable energy can offset heating fuel use.

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<sup>20</sup> Southwest Alaska Municipal Conference (SWAMC) and the Alaska Energy Authority (AEA). *Alutian Pribilof Islands Energy Resource Inventory*. November 2013.

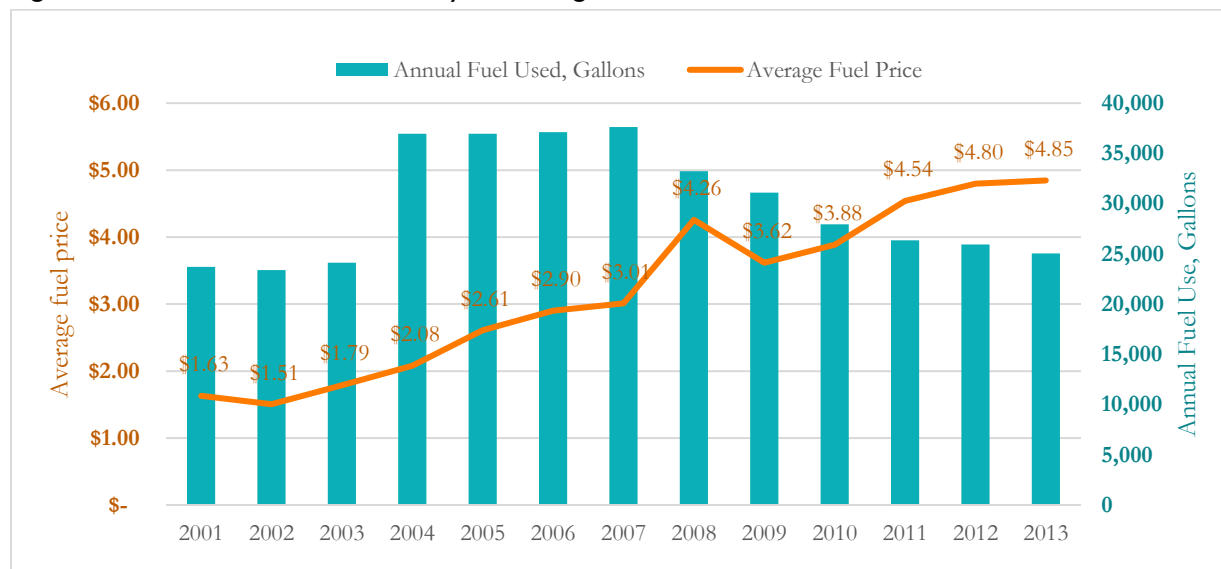
**Figure 28: Electrical Rates and Power Cost Equalization, St. Paul Island 2002-2013**



Source: Alaska Energy Data Gateway, developed by the Institute of Social and Economic Research, University of Alaska Anchorage, is supported by the U.S. Department of Energy (DOE), Office of Science, Basic Energy Sciences (BES), under EPSCoR Award # DE-SC0004903 (database and web application development), and by Alaska Energy Authority (Renewable Energy Fund data management and reporting). Database and web hosting is provided by Arctic Region Supercomputing Center, University of Alaska Fairbanks.

Fuel prices remain expensive for residents and contribute to the high annual household costs discussed in the previous section. Over the past year, however, fuel prices have declined as worldwide oil prices have dropped. According to the Alaska Department of Commerce, Community and Economic Development (DCCED) Community Database Online, as of January 2016 a gallon of heating fuel was \$3.66, which is the lowest price since 2009. For fuel use and fuel costs between 2001 and 2013, see Figure 29.

**Figure 29: Fuel Prices and Community Fuel Usage for St. Paul, 2001-2013**



Source: Alaska Energy Data Gateway, developed by the Institute of Social and Economic Research, University of Alaska Anchorage, is supported by the U.S. Department of Energy (DOE), Office of Science, Basic Energy Sciences (BES), under EPSCoR Award # DE-SC0004903 (database and web application development), and by Alaska Energy Authority (Renewable Energy Fund data management and reporting). Database and web hosting is provided by Arctic Region Supercomputing Center, University of Alaska Fairbanks.

## Transportation

St. Paul Island is accessible by air and sea, with a gravel road system on the island. St. Paul has a paved 6,500 - foot runway. Peninsula Airways (“PenAir”) services the community three times per week with direct flights from Anchorage with a re-fueling stop in Dillingham. In 2014, PenAir delivered 2,733 passengers to St. Paul. PenAir recently purchased new jets and will have a larger, faster jet servicing St. Paul Island starting in Fall 2016. The jets will hold more passengers and have fewer weight restrictions, meaning flights will not sell out as quickly and the airline will have sufficient capacity for passenger bags. Alaska Central Express (ACE) supplies the community’s air cargo services. For information on passenger, freight and mail delivery to St. Paul Island in 2014, see Figure 30. Anchorage-based contractor APUN oversees PenAir operations and runway maintenance at the airport. The airport facility is owned by TDX. APUN started selling fuel at the airport in 2014 and St. Paul Island is slowly becoming a refueling stop for international planes, with six stops in 2015. Other airlines such as Security Aviation plan to stop at St. Paul Island on their routes from Anchorage to and from Shemya and Adak. St. Paul Island experiences weather limitations due to frequent fog and wind, and flight delays and cancellations are frequent. However, St. Paul’s weather limitations are less restrictive than those on the neighboring community of St. George, which has stricter visibility and wind restrictions due to the orientation and topography of the St. George runway.

“People use Amazon Prime for their non-perishable groceries; however, shipping can be very unreliable. My artificial Christmas tree didn’t arrive until the end of January.”

- St. Paul resident

Figure 30: Passenger, Freight and Mail Delivery to St. Paul Island by Air, 2014

Carrier	Year	Enplaned Passengers	Enplaned Freight (lbs)	Enplaned Mail, lbs
<u>Alaska Central Express (ACE)</u>	2014	39	162,515	346,657
<u>Era Aviation</u>	2014	0	7	0
<u>Peninsula Airways Inc.</u>	2014	2,733	26,351	251,548
<b>TOTAL</b>	6042	2,772	188,873	598,205

Source: From the Alaska Dept. of Commerce, Community and Economic Development, Community and Regional Affairs, Community Database Online. Accessed January 2016.

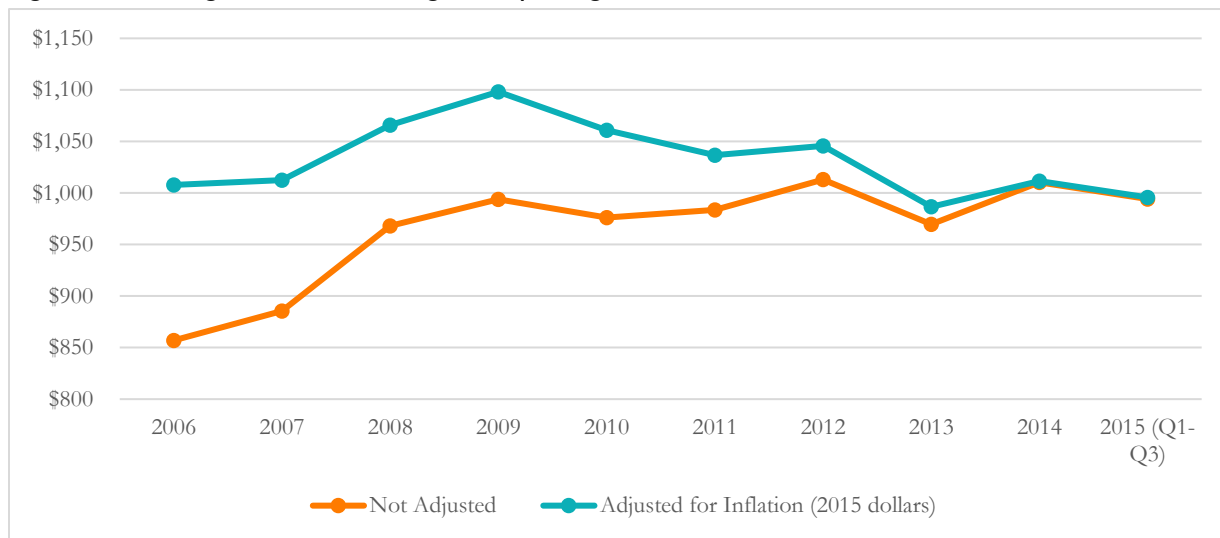
During the planning process, residents expressed frustration at the high cost of airfare to and from St. Paul. The cost of a round-trip ticket is typically over \$1,000, which is a prohibitively expensive flight for many families. While air fare is expensive, prices have remained consistent over the past ten years, when accounting for inflation (see Figure 31).

“Residents are hostage to the size of the airport and the weather.”

—St. Paul resident



**Figure 3I: Average Air Fares for Flights Departing from St. Paul Island**



Source: United States Department of Transportation, Bureau of Transportation Statistics. Accessed January 2016.

Aside from mail, most supplies and freight arrive by boat. The harbor has a breakwater, 700 feet of dock space and a barge off-loading area. As Arctic traffic increases, St. Paul's strategic location in the middle of the Bering Sea means the community could be well-positioned to expand marine services, search and rescue capabilities and even have an opportunity for exporting goods. However, St. Paul Island is limited by the size and depth of its harbor, which is not large enough to host large vessels.

### **Communications**

There are multiple internet service providers (ISP) on St. Paul. TDX is one of the service providers and has made extensive recent investments in the local communication infrastructure on the island, including a fiber optic cable. With financial assistance from CBSFA, TDX recently expanded the local bandwidth by purchasing more satellite bandwidth, increasing the amount from 5 Mega-bytes per second (Mbps) to 15 Mbps. Satellite connections are also available but are often slow and expensive.

### **Other Facilities**

St. Paul Island has a number of facilities dispersed throughout the community with economic development potential. The following list includes some of the facilities, both used and unused, located on the island:

- A former U.S. Coast Guard Long Range Aid to Navigation (LORAN) facility, which was originally constructed in 1960, is no longer active but is being maintained by a contractor. The facility is located near the airport and includes lodging quarters and a kitchen.
- A Vessel Repair Facility is being designed and constructed using a partnership between the Tribe, the city and CBSFA. Final funding for the building is still being secured. The vessel repair facility will also include space for vehicle repair and maintenance.
- A National Weather Station is located near the airport, with adjacent housing facilities for station employees. There are three staff people who currently work at the station. The weather station also releases daily weather balloons. The National Weather Service is moving toward an automated surface system on St. Paul, which will ultimately eliminate the need for manual surface observations. The automated system may introduce new limitations such as weather reports with fewer details about local weather conditions. However, the Federal Aviation Administration (FAA) maintains

three cameras around the airport, which can be used to verify the forecast and help pilots make informed decisions about weather delays and cancellations.

## Community Partners

### Aleut Community of St. Paul Island

The Aleut Community of St. Paul Island (ACSPI, or “the Tribe”), also known as the Tribal Government of St. Paul Island (TGSPI), is the tribal entity on St. Paul, as designated through the Alaska Native Claims Settlement Act (ANCSA) in 1971. The Tribe has offices on St. Paul Island and in Anchorage. As of November 2016, the Tribe has 1,584 tribal member records, including living and deceased members living on and off St. Paul Island, and employs between 45 and 55 employees. The Tribe receives self-governance funds from BIA and administers many of their own programs to support residents on St. Paul, including economic development projects, a tribal court, health and wellness programs, child protective services and more.<sup>21</sup> The Tribe also has an active Ecosystem Conservation Office (ECO); staff oversee recreational and educational activities for youth, work with federal partners on co-management of fur seals and other activities.

### City of Saint Paul

St. Paul was incorporated as a second-class city in 1971. The City of Saint Paul organizational structure includes a mayor, a city manager, a seven-person city council and four departments comprised of approximately 40 municipal staff, plus 20 volunteers who help with emergency response, fire and search and rescue. A city manager oversees daily operations, helps with long-term planning, and provides leadership and guidance to city staff. The city runs the power plant, oversees activities at the harbor, collects refuse and disposes it at a landfill and incinerator site, provides water and sewer, oversees the police, maintains the road system and coordinates the volunteer fire department. The city also sells fuel and is available for occasional home and vehicle maintenance as time permits. In recent years the city has struggled to find and keep important staff positions; as of early 2016 the positions of city manager, city finance officer and the police chief were all vacant.

### Central Bering Sea Fisherman’s Association (CBSFA)

In 1992, the Community Development Quota (CDQ) program was established, which created six non-profit corporations that support local economic development efforts and help residents enter into the fishing industry. The CDQ Program allocates a percentage of all Bering Sea and Aleutian Islands quotas for groundfish, prohibited species, halibut, and crab to eligible communities. Of the sixty-five participating communities, St. Paul is the only one to have its own CDQ group, the Central Bering Sea Fisherman’s Association (CBSFA). CBSFA contributes to the community in many ways, including the following:

- Providing education and training programs, hosting high school athletic events, helping fund the annual 5<sup>th</sup> grade class trip to Hawaii, expanding internet bandwidth, offering scholarships, supporting language revitalization efforts, providing elder assistance, sponsoring the volunteer fire department

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<sup>21</sup> For more information on self-governance, visit the Bureau of Indian Affairs (BIA) website: <http://www.bia.gov/cs/groups/mywesp/documents/collection/idc017334.pdf>

and contributing funds for capital improvement projects in the community such as upgrades to the small boat harbor, the vessel repair facility and a new crane for the local fishing fleet.

- Purchasing crab, pollock, cod and sablefish quota to bring in revenue to the community and support local crab harvesters and processors.
- Advocating for management policies to support sustainable halibut populations and reduce bycatch in the Bering Sea region.
- Overseeing subsidiaries including St. Paul Fishing Company and three subsidiaries that market seafood products that come from CBSFA's fisheries resources, including 170 Degrees West (halibut), Village Cove Seafoods (Pacific cod and sablefish harvest) and 57 Degrees North (crab).

## Tanadgusix Corporation (TDX)

Tanadgusix Corporation (TDX) is the Alaska Native Claims Settlement Act (ANCSA) designated village corporation for St. Paul Island. Under ANCSA terms, TDX received a share of the Alaska Native Fund and surface rights to 138,240 acres of land (the regional corporation, Aleut Corporation, received subsurface rights to these lands). As the local village corporation, TDX pays annual dividends to eligible members of the Tribe. TDX has investments on St. Paul Island as well as other parts of Alaska and even internationally, with several subsidiary companies that provide services to commercial, industrial and public sectors. The biggest portion of revenue comes from government contracting; TDX works in four countries and has over 100 federal contracts. TDX owns the hotel on St. Paul Island as well as hotels in Anchorage, Seattle and Portland. In addition to the hotel, TDX's on-island assets include gravel and sand quarries, many of the buildings and most of the surface land rights in town. TDX also oversees most of the visitor activities and arrangements on the island.

## Aleut Corporation

The Aleut Corporation is the regional ANCSA corporation for the Aleutian Islands, Pribilof Islands, Shumagin Islands and the southwestern portion of the Alaska Peninsula. Per ANCSA, the Aleut Corporation has surface estate of approximately 66,000 acres of land and 1,572,000 acres of subsurface land rights. The Corporation has approximately 4,000 shareholders. The Corporation's business lines include government operations, maintenance contracting, fuel delivery, sales and storage, commercial and residential real estate, gravel operations, laboratory analysis, oil field industrial services, instrumentation and controls sales, and mechanical contracting. Shareholders receive shares annually, and many years the Corporation also circulates additional benefits for elder shareholders. The Aleut Corporation funds many non-profit initiatives including the Aleut Foundation, culture camps and various programs for tribes in the region, and coordinated a career fair in 2016.<sup>22</sup>

## Aleutian Pribilof Islands Association

The Aleutian Pribilof Islands Association (APIA) is a regional tribal organization that provides a number of services to twelve tribal communities throughout the Aleutian and Pribilof region. On St. Paul Island, services include overseeing the operations at the Senior Center and the Head Start program. APIA used to manage the St. Paul clinic, but the Tribe opted to negotiate a new agreement with Southcentral Foundation.

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<sup>22</sup> From the Aleut Corporation 2016 Annual Report

# Environment

## Climate and Climate Change

St. Paul Island is located in an arctic maritime climate zone, with cool temperatures year-round that typically range from 19 °F to 51°F. Average precipitation is 25 inches, with an average snowfall of 56 inches. The weather is characterized by overcast skies and fog, high winds and frequent storms.

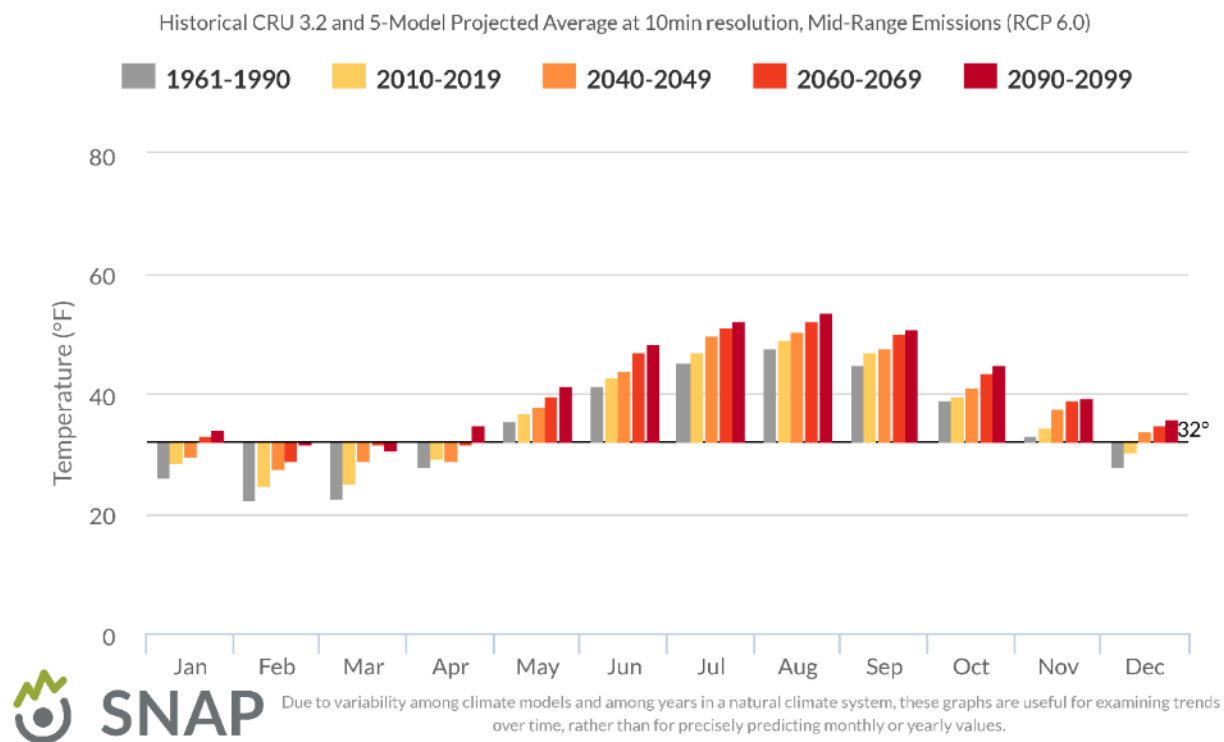
Climate change is a concern throughout Alaska (and the nation, world), as temperatures have already warmed Alaska by an average of three degrees Fahrenheit over the past six decades.<sup>23</sup> Climate change could bring many additional impacts to the region, including impacting species that are important for subsistence and the economy, erosion, increased storm intensity and changes to precipitation patterns. Climate change may also have positive impacts, such as longer growing seasons and expanded transportation routes through previously ice-covered waters.

The Scenarios Network for Alaska and Arctic Planning (SNAP) has a number of data sources and tools that document historical change and offer future projections for Alaska and Arctic communities. Temperature projections for St. Paul Island show an estimated increase in temperatures across all months over the next ninety years. The most significant changes may occur in January, April and December, with average temperatures projected to go from below freezing to above freezing. The full projections are available in Figure 32. The projections are based on an average of five different climate models and assume a mid-range global emissions scenario.

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<sup>23</sup> Climate Change Impacts in the United States: The Third National Climate Change Assessment. 2014. Published by the National Climate Assessment and Development Advisory Committee. Available here: <http://www.globalchange.gov/node/2939>

Figure 32: Average Monthly Temperatures for Saint Paul, 1961-2099



Source: Scenarios Network for Alaska and Arctic Planning

Working with a large team of contributors, the National Marine Fisheries Service (NMFS) produces information on the conditions and changes in the marine waters around Alaska. A 2015 report, *Ecosystem Considerations 2015A: Status of Alaska's Marine Ecosystems*, prepared for the North Pacific Fishery Management Council, contains an annual Eastern Bering Sea Report Card 2015.<sup>24</sup> Among its findings, the Report Card noted the eastern Bering Sea was characterized by warm conditions in 2014 that continued through the winter, with reduced sea ice and smaller-than-normal seabird and fur seal reproduction.

## Natural Resources

For detailed information on the natural resources of the Pribilof Islands, visit the National Oceanic and Atmospheric Administration (NOAA)'s dedicated webpage: <http://pribilof.noaa.gov/island-resources.html>

<sup>24</sup> Zador, Stephanie, Alaska Fisheries Science Center, National Marine Fisheries Service, NOAA. *Ecosystem Considerations 2015: Status of Alaska's Marine Ecosystems*. Prepared for the North Pacific Fishery Management Council. November 16, 2016. Available here: <http://access.afsc.noaa.gov/reem/ecoweb/Index.php?ID=0>

St. Paul Island is world-renowned for its high concentrations of marine mammals and birds. The island was initially settled by Russians in order to harvest the abundant fur seals who establish rookeries on the Pribilof Islands. During peak breeding season there can be between 400,000 and 500,000 fur seals on the Pribilof Islands, which is approximately half of the entire fur seal population. Today, the fur seals and stellar sea lion populations are co-managed with the tribal Ecosystem Conservation Office (ECO) and federal agency representatives. In order to protect the vulnerable fur seal population, dogs have been prohibited on the island for over 50 years to avoid harassing the seals and the risk of disease transfer.

“Geographically, St. Paul is in the center of hugely productive fishing grounds. They have concentrations of marine mammals that are spectacular on a world-wide scale.”

- Stakeholder interview with federal agency representative

The National Oceanic and Atmospheric Administration (NOAA) conducts research on St. Paul Island every summer from April to October. Local residents are hired to help with research and to maintain infrastructure. According to an interview with a lead fur seal researcher, populations have been declining over the past 20 years, although recent counts on nearby St. George are levelling off and may indicate the population is stabilizing.<sup>25</sup>

According to the Alaska Maritime National Wildlife Refuge, an estimated 3 million seabirds come to breed and raise their young on the islands each year. The Pribilof Islands also offer opportunities to observe many migratory birds, including birds from Asia that are rarely seen in North America.<sup>26</sup> As a result, St. Paul Island attracts birders from around the world each summer.

St. Paul Island also has a reindeer herd, which is managed by the Tribe. Permits are required for harvest. Residents may harvest reindeer for free and there is a \$50 fee for nonresidents. As of early 2016 there were approximately 375 animals. According to a visiting University of Alaska biologist during summer 2016, the reindeer herd is healthy and disease free. The biologist also identified a unique characteristic about the St. Paul Island reindeer: they have adapted to eat grass instead of lichen. Prior to this discovery, biologists believed the herd was

“St. Paul could be managing the reindeer herd for trophy hunting. Look at Adak! Hunters from all over the world pay big money and hire guides there...If people are willing to travel all the way to St. Paul to shoot a duck, they will definitely come for reindeer. There are a lot of caribou but not a lot of reindeer hunting in Alaska.”

- Stakeholder interview with federal biologist

over its carrying capacity based on the limited amounts of lichen on the Island; however, since grass is the reindeer’s primary food source, the population appears to be a stable and healthy size. There is potential to grow the reindeer hunt as a tourism opportunity; currently very few visitors travel from off-island to hunt the reindeer and the herd is not marketed to outside residents.

<sup>25</sup> For extensive information on northern fur seals in Alaska, including history, co-management and research, visit the following webpage: <https://alaskafisheries.noaa.gov/pr/fur-seal>

<sup>26</sup> For more information about the Alaska Maritime National Wildlife Refuge, visit [http://www.fws.gov/refuge/Alaska\\_Maritime/visit/pribilof\\_Islands.html](http://www.fws.gov/refuge/Alaska_Maritime/visit/pribilof_Islands.html)



## Subsistence

The tribal Ecosystem Conservation Office (ECO) monitors annual subsistence harvests of northern fur seals and Steller sea lions with a co-management agreement with the National Marine Fisheries Service. The three most significant sources of subsistence foods are halibut, fur seal and sea lion. Using data from ECO and supplementary interviews, a 2013 publication found that subsistence harvests have declined over the past 20 years. In the 1990s, harvests provided an average of 131 pounds of wild food per person annually, whereas that number dropped to an average of 41 pounds per person per year between 2006-2010.<sup>27</sup> During the summer, ECO helps coordinate fur seal hunts, with 309 fur seals harvested in summer 2016.

## Environmental Hazards: Flooding, Earthquakes, Storms

In order to maintain a resilient economy, it is essential to understand, plan for and mitigate the environmental vulnerabilities of a community. The City of Saint Paul has an updated Hazard Mitigation Plan which focuses on the following hazards: earthquake, flood, severe weather and tsunami/seiche. Other threats, identified as “minor,” include tundra fire, volcanic ash and ground failure such as avalanches, landslides and melting permafrost. The plan considers both the severity of a potential hazard as well as the probability of that hazard occurring. The plan also identifies two community facilities designated as emergency shelters in the event of an event such as a tsunami; they include: City Hall on the west side of the community and the Senior Center on the east side.

Figure 33: Potential Natural Hazards on St. Paul Island

Hazard	Possible Impacts	Possible Magnitude/Severity	Probability
		On a scale of 1 to 4.  1 = “Negligible”  4 = “Catastrophic”	On a scale of 1 to 4.  1 = “Unlikely”  4 = “Highly Likely”
<b>Earthquake</b>	Structural damage or collapse; surface faulting; liquefaction; landslides/debris flow.	3 - Critical	2 - Possible
<b>Flood</b>	Storm surges, erosion, sea level rise, sediment deposition, infrastructure damage	2 - Limited	2 - Possible
<b>Sever Weather (heavy rain, heavy snow, freezing rain/ice storms, extreme cold, high winds)</b>	Transportation impacts, infrastructure damage, hypothermia	2 - Limited	4 - Highly Likely
<b>Tsunami (Seiche)</b>	Inundation, wave impact, coastal erosion	2 - Limited	Unknown
<b>Ground Failure (avalanches, landslides, mudflows, etc).</b>	Surface subsidence, infrastructure damage	1 - Negligible	2 - Possible

<sup>27</sup>James A. Fall, Nicole S. Braem, Caroline L. Brown, Lisa B. Hutchinson-Scarborough, David S. Koster and Theodore M. Krieg, all Alaska Department of Fish and Game Division of Subsistence. *Continuity and change in subsistence harvests in five Bering Sea communities: Akutan, Emmonak, Savoonga, St. Paul, and Togiak*. Deep Sea Research II. March 2013.

<b>Volcano</b>	Impacts from volcanic ash, including air and marine transportation delays, respiratory problems and structural damage	varies	3 - Likely
<b>Wildland/ Tundra Fire</b>	Structural damage, air quality impacts	I - Negligible	I - Unlikely
Source: St. Paul Island Draft Hazard Mitigation Plan 2016			

## Health and Wellness

This section includes a brief snapshot of health programs and services available on the island, and a short summary of emergency services in St. Paul. While wellness is not necessarily a traditional economic development topic, it is an important subject to consider in order to understand the broader picture of the quality of life and livability in a region. When individuals are well, they are better able to pursue educational and other workforce development opportunities and contribute to their local economy and community, and the region. St. Paul Island struggles to maintain the personnel and resources in order to sustain critical public safety, emergency and medical needs. In addition, historical trauma resulting from many years of economic disparities, mistreatment and severe cultural disruptions continues to have a negative impact on the mental and physical health of residents.

“We need to address historical trauma and encourage healthy activities in order to stamp out abusive substances and alcohol. This is critical in order for St. Paul to be economically healthy.”

- St. Paul resident

## Public Safety and Emergency Response

St. Paul Island has a volunteer fire department coordinated by the City of Saint Paul. CBSFA helps offset equipment costs and the Tribe helps with training costs for volunteers. CBSFA recently helped fund a new fire station, which has consolidated all the community’s fire-fighting equipment into one central location, thereby improving the logistics and speed of responses.

The city provides law enforcement services through the Police Department. The Tribe also provides public safety through its Department of Community Safety and Peace, including prevention and safety programming at the school, enforcement of tribal ordinances, support to tribal staff during home visits, seasonal patrol at the small boat harbor and support to the city’s police department during larger incidents that require additional assistance.

St. Paul Island also has an active network of emergency responders. The Tribe owns a rescue vessel, Lunax, and oversees the crew. The Tribe has also secured funding to expand emergency planning, hazard mitigation and response capabilities on St. Paul. Over time, some of these responsibilities may be transferred to the city.

## Access to Medical and Behavioral Health Programs and Services

### Seniors

St. Paul Island has a senior center, owned and managed by the Aleutian Housing Authority (AHA). The Tribe provides limited programming for seniors, including luncheons, transportation assistance and other activities.

During community interviews, residents shared concerns about the level of care at the senior center, and shared a desire for increased resident engagement and interaction with the elders living at the senior center. In the long term, the Tribe is considering taking over ownership and management of the senior center from AHA.

### **Clinic**

St. Paul Island is home to the St. Paul Health Center, a clinic built in 2006. The clinic offers services to both residents and visitors to the island, including care and emergency services for processors, vessel crews and rescue operations in the surrounding region. Southcentral Foundation oversees activities at the clinic, with the Tribe providing supplemental services for residents (see next section). Clinic services include primary care, telemedicine, family planning, behavioral health, education, lab and toxicology screenings and more. The clinic is staffed with a range of medical professionals including health aides, clinicians, advocates and therapists, with occasional visits from doctors, dentists and optometrists. The clinic sometimes struggles retain mid-level providers such as physician's assistants and nurse practitioners on the island. While the clinic does offer better access to medical services than most communities of similar size, it does have limited response capabilities for extreme health emergencies that require a doctor or surgeon.

"It can be painful to provide tribal health care services because everybody knows everybody. Topics are very personal and there is not enough confidentiality."

- St. Paul clinic staff member

### **Tribal Health Services**

The Tribe's Department of Health and Human Services offers a variety of health and support services for tribal residents. Many of these programs are offered out of the community clinic and in close partnership with Southcentral Foundation. In recent years the Tribe has been exploring integration and ways to more fully incorporate wellness concepts into its programs, including focusing on increasing the availability of positive, healthy recreation activities instead of only focusing on reactive treatment programs. The Department's programs include child protective services, victim support services, advocacy and community education and behavioral health services. The Tribe also oversees the recently-opened Community Advocacy Center (CAC), which provides a host of new activities for St. Paul Island residents. It includes art space, classes and supplies for painting, knitting and pottery, a small conference space, a children's room. The CAC is also home to a domestic violence shelter on the top floor, and the community food bank in the basement.

"We need to be well in order to have a healthy economy. Right now we are in survival mode."

- St. Paul resident

### **Tribal Court**

The Tribe's Office of Governance and Justice Administration (OGJA) oversees tribal court programs and provides legal services and self-governance advisory support to the Tribe. The court offers restorative justice and is exploring integration through its Healing to Wellness Drug Court program for rehabilitating substance abusers.

# Appendix

***Appendix A: Acronyms***

***Appendix B: List of Relevant Plans and Resources***

***Appendix C: City of Saint Paul Capital Improvement Plan Project List***

***Appendix D: Graphic – “What is the multiplier effect?”***

***Appendix E: Emerging Goals Feedback Form (shared at TDX shareholders meeting, July 2016)***

***Appendix F: Trivia Slides (shared at the Tribe’s semi-annual meeting, July 2016)***

***Appendix G: CEDS Update (shared in the Tribe’s annual newsletter, December 2016)***

## Appendix A: Acronyms

AC	Alaska Commercial
ACS	American Community Survey
ACSPI	Aleut Community of St. Paul Island (see also TGSPI)
ADF&G	Alaska Department of Fish and Game
ADHSEM	Alaska Division of Homeland Security and Emergency Management
ADM	average daily membership
AEA	Alaska Energy Authority
AHA	Aleutian Housing Authority
AHFC	Alaska Housing Finance Corporation
AKCRRAB	Alaska King Crab Research, Rehabilitation and Biology Program (through Sea Grant)
AMSS	Alaska Marine Science Symposium
ANA	Administration for Native Americans
ANCSA	Alaska Native Claims Settlement Act
ANSEP	Alaska Native Science and Engineering Program
ANTHC	Alaska Native Tribal Health Consortium
APIA	Aleutian Pribilof Islands Association
APICDA	Aleutian Pribilof Island Community Development Association
ATV	All-terrain vehicle
AWCA	Aleutians West Census Area
BIA	Bureau of Indian Affairs
BSAI	Bering Sea/Aleutian Island Management Area
BSPISE	Bering Sea Pribilof Island Science Education
CAC	Community Advocacy Center
CBSFA	Central Bering Sea Fisherman's Association
CDQ	Community Development Quota
CDFI	Community Development Financial Institution
CEDS	Comprehensive Economic Development Strategy
CEO	Chief Executive Officer
CIP	Capital Improvement Project
DCCED	Alaska Department of Commerce, Community and Economic Development
DHHS	Department of Health and Human Services (tribal department)
DOE	U.S. Department of Energy
DOLWD	Alaska Department of Labor and Workforce Development
ECO	Ecosystem Conservation Office (tribal department)
EDA	U.S. Economic Development Administration
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
GED	General Education Development
HUD	U.S. Department of Housing and Urban Development
IFQ	Individual Fishing Quota
IPHC	International Pacific Halibut Commission
IRS	Internal Revenue Service
ISP	Internet Service Provider
kwh	kilowatt hour
LEO	Local Environmental Observer
LEPC	Local Emergency Planning Commission
LORAN	Long Range Aid to Navigation
LQ	Location Quotient
MAP	Marine Advisory Program
MOU	Memorandum of Understanding

NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPFMC	North Pacific Fishery Management Council
NWS	National Weather Service
OGJA	Office of Governance and Justice Administration (tribal department)
PCE	Power Cost Equalization
PFD	Permanent Fund Dividend
PSD	Pribilof School District
QCEW	Quarterly Census of Employment and Wages
SAVEC	Southwest Alaska Vocational Education Center
SBIR	Small Business Innovation Research grant
SCF	Southcentral Foundation
SNAP	Scenarios Network for Alaska and Arctic Planning
STEM	Science, Technology, Engineering and Math
SWAMC	Southwest Alaska Municipal Conference
SWOT	Strengths, Weaknesses, Opportunities, Threats
TDX	Tanadgusix Corporation
TGSPI	Tribal Government of St. Paul Island (see also ACSPI)
UAF	University of Alaska Fairbanks
USCG	U.S. Coast Guard
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geologic Survey
VRSS	Vessel Repair and Supply Store



## Appendix B: List of Relevant Plans and Resources

The following plans and documents were reviewed as a part of this planning process.

Title	Organization (s)	Date
<b>City of Saint Paul, Alaska - Hazard Mitigation Plan</b>	The City of St. Paul Hazard Mitigation Planning Team	February 2016
<b>Southwest Alaska Transportation Plan Update</b>	Alaska Department of Transportation and Public Facilities	January 2016
<b>Written Testimony of John Lyons on Micro Grid Technology, provided to Senator Murkowski and the U.S. Senate Committee on Energy and Natural Resources</b>	TDX Power Inc.	January 2016
<b>Ecosystem Considerations 2015: Status of Alaska's Marine Ecosystems</b>	North Pacific Fishery Management Council	November 2015
<b>St. Paul Visioning Survey Results and Analysis</b>	Tribal Government of St. Paul Island	2015
<b>Seabirds as a subsistence and cultural resource in two remote Alaskan communities</b>	Institute of Arctic Biology and the School of Fisheries and Ocean Sciences, University of Alaska Fairbanks; as published in <i>Ecology and Society</i>	December 2014
<b>Comprehensive Economic Development Strategy 2014-2019</b>	Southwest Alaska Municipal Conference	2014
<b>Alaska Housing Assessment</b>	Alaska Housing Finance Corporation	2014
<b>Continuity and change in subsistence harvests in five Bering Sea communities: Akutan, Emmonak, Savoonga, St. Paul, and Togiak</b>	Alaska Department of Fish and Game Division of Subsistence, as published in Deep Sea Research II.	March 2013
<b>St. Paul Interconnection 35 percent Design Report</b>	Prepared by TDX Power for the Alaska Energy Authority	January 2012
<b>BSAI Crab Rationalization Five-Year Review: Final Social Impact Assessment, Appendix A.</b>	North Pacific Fishery Management Council	December 2010
<b>Comprehensive Economic Development Strategy and Economic Adjustment Strategy for St. Paul Island</b>	Tribal Government of St. Paul Island	Developed 2002, Updated 2010
<b>Demographic and environmental conditions are uncoupled in the social-ecological system of the Pribilof Islands</b>	Pribilof Islands Collective, as published in the <i>Norsk Polar Institute</i>	2009
<b>Fishing Community Profiles, Chapter 4</b>	North Pacific Research Board and the North Pacific Fishery Management Council	June 2008
<b>Wind Resource Assessment for St. Paul, Alaska</b>	Alaska Energy Authority	March 2006
<b>TDX Five Year Economic Development Strategy</b>	TDX	July 1999
<b>Feasibility Study and Business Plan Arts and Crafts Cooperative</b>	Tribal Government of St. Paul Island	1996
<b>Ataqan Akun Community Plan</b>	City of St. Paul	March 1995

## Appendix C: City of Saint Paul Capital Improvement Plan Project List

### One to Five Year Projects

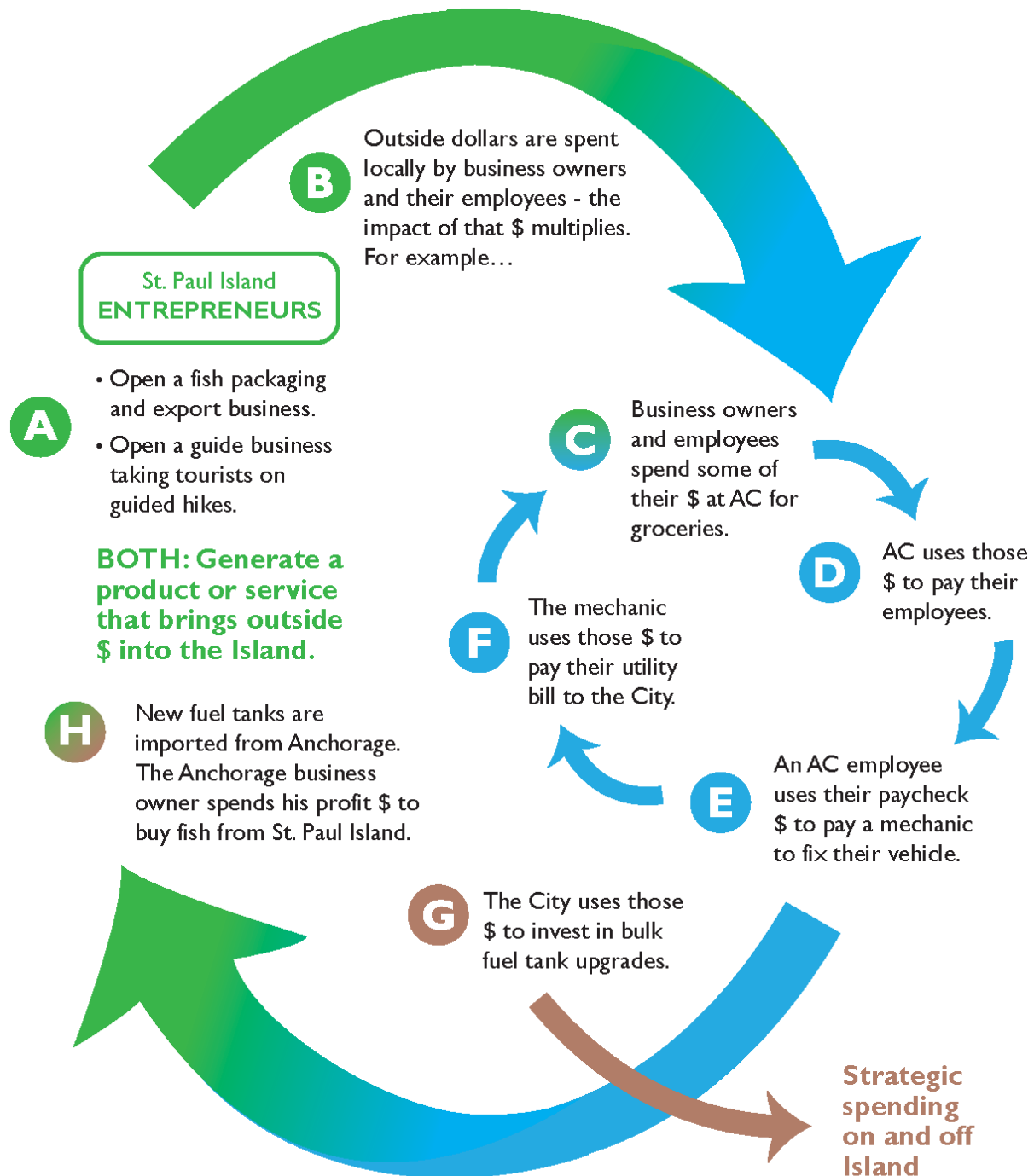
Project Name (in alphabetical order)	Estimated Cost
Black Bluff Stabilization, Phase 1 Toe Berm	\$ 498,000
Breakwater Berth Multi Use Dockage	\$ 8,900,000
Bulk Fuel Upgrades	\$ 640,000
City Hall Auditorium Insulation & Code Updates	\$ 350,000
City Hall Emergency Generator, 100-150 kW	\$ 600,000
Community Street Lighting Upgrade	\$ 300,000
Distribution Transformer Resize & Replace	\$ 453,745
Ellerman Lift Station Replacement	\$ 138,760
Harbor Master Building/Fuel Sales Storage	\$ 2,000,000
Harbor Road Relocation	\$ 631,000
Power Plant Upgrade	\$ 1,187,000
Road Upgrade, Lakeside - East Landing	\$ 614,000
Salt Lagoon Channel Maintenance Dredge	\$ 700,000
Sandy Lane Lift Station Replacement	\$ 138,760
Small Boat Harbor Public Facilities	\$ 474,000
Small Boat Harbor Sewer & Lift Station	\$ 439,360
Small Boat Harbor Water Main Extension	\$ 131,250
Small Boat Harbor Water Main Loop	\$ 432,000
South Dock Fuel Header Valve Isolation	\$ 195,000
South Ellerman Septic Tank Replacement & Sewer Main Relocation	\$ 342,000
Water Pump Building Rebuild	\$ 248,400
Water Storage Tank, Airport Service Area	\$ 700,000
Water Treatment Building Upgrade	\$ 132,480
Water Wells, Automated Controls Upgrade	\$ 362,500
<b>Grand Total, All 1-5 Year Projects</b>	<b>\$ 20,608,255</b>

### **Five to Ten Year Projects**

<b>Project Name (in alphabetical order)</b>	<b>Estimated Cost</b>
Clinic & Ellerman Comm Electric Loop Feed	\$ 106,000
Colonel Fouke Sewer	\$ 169,000
Community Park	\$ -
Drill 2 New Domestic Water Wells	\$ 1,268,000
East Landing Community Septic Tanks	\$ 2,500,000
Ellerman to Lukanin Electric Loop Feed	\$ 268,000
Harbor Comm. Area Gravity Sewer Mains	\$ 30,000
Harbor Subd. Gravity Sewer Mains	\$ 224,000
Lukanin to Polovina Electric Loop Feed	\$ 334,000
North Lukanin to Polovina Water Main Loop	\$ 454,000
North Lukanin Water Main Loop	\$ 207,000
Polovina Landfill Access Road	\$ 2,200,000
Polovina Landfill, Phase 1	\$ 2,750,000
Rec Center with Pool	\$ -
Reroof Public Works/Motor Pool Buildings	\$ 1,623,000
South Ellerman Sewer Realignment to PL's	\$ 503,000
Venia Minor Water Main Loop Feed	\$ 171,000
<b>Grand Total, All 6-10 Year Projects</b>	<b>\$ 12,807,000</b>

## Appendix D: Graphic – “What is the multiplier effect?”

When new money is brought to St. Paul Island, wealth is increased through the “multiplied effect” -



In this example, **the original \$\$ was spent five times**, multiplying its impact on the local economy. Increasing outside \$\$ into the community then increases the potential for that \$\$ to be spent on Island, circulating through the local economy many times, increasing its positive impact on the community.

Appendix E: Emerging Goals Feedback Form  
(shared at TDX shareholders meeting, July 2016)

# How can we strengthen the St. Paul Island economy?

## St. Paul Island Comprehensive Economic Development Strategy (CEDS)

July 2016 Project Update

**Emerging Goals** *(select your top three)*

- ☐ Support and Protect the Fisheries
- ☐ Expand Workforce and Business Development
- ☐ Expand Access to Land for Local and Business Use
- ☐ Strengthen and Expand Infrastructure (e.g., internet, new construction, energy)
- ☐ Grow Tourism
- ☐ Increase Housing Availability
- ☐ Healthy Individuals, Healthy Families and Thriving Culture

**Tell us what you think!**

1. What new businesses would be most successful on the Island?

2. What businesses/ industries would create quality jobs?



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## What is a CEDS?

- A community vision, goals and strategies, including priority strategies that support the economic vitality of St. Paul Island.
- A SWOT Analysis: an analysis of the Strengths, Weaknesses, Opportunities and Threats that are helpful or harmful to economic development on St. Paul Island.
- A plan of action and way to measure how we're doing: Are we creating any new jobs? Are we expanding or bringing in new businesses? Are we bringing new money and investment to St. Paul Island?

### Who have we talked to so far?

- AC Store
- Apun Alaska
- Bristol Bay Campus, UAF College of Rural + Community Development
- Central Bering Sea Fishermen's Association (CBSFA)
- City of St. Paul
- National Marine Fisheries Service
- National Oceanic + Atmospheric Administration (NOAA)
- National Weather Service
- Pribilof School District
- Southcentral Foundation
- St. Paul Church Council
- State of Alaska Governor's Office
- Tanadgusix Corporation (TDX)
- TDX Power
- Tribal Government of St. Paul Island
- Trident Seafoods
- Local small business owners + fishermen



Do you have additional questions, comments or ideas? Let us know!

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Agnew::Beck Consulting

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Tribal Government of St. Paul Island

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907-223-8754



## Appendix F: Trivia Slides (shared at the Tribe's semi-annual meeting, July 2016)

1. \$542,698

2. \$197,436

3. \$462,198

4. \$274,834

What is our annual Housing grant award amount?

4. \$274,834

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*Press the space bar to see the correct answer.*

1. \$78,200

2. \$66,950

3. \$60,300

4. \$86,800

What is the income limit for a family of 3 in our region to participate in our low-income housing programs?

3. \$60,300

---

*Press the space bar to see the correct answer.*

1. \$350,000

2. \$300,000

3. \$500,000

4. \$450,000

What is the average cost to build a three bedroom house on St. Paul?

2. \$300,000

---

*Press the space bar to see the correct answer.*

1. \$80,000

2. \$200,000

3. \$225,000

4. \$150,000

What is the average price to acquire and remodel a home on St. Paul?

4. \$150,000

---

*Press the space bar to see the correct answer.*

1. 30%

2. 15%

3. 50%

4. 25%

What is the highest % of a family's income that can be spent on rent?

1. 30%

---

*Press the space bar to see the correct answer.*

1. \$400

2. \$750

3. \$500

4. \$800

What is the average rent paid by our tenants?

3. \$500

---

*Press the space bar to see the correct answer.*



1. 2x a year

2. 4x a year

3. 1x a year

4. Never

How often are home inspections conducted?

3. 1x a year

*Press the space bar to see the correct answer.*

1. Housing programs

2. Council Wages

3. New vehicles

4. Office Parties

What is the income made from our rental units used for?

1. Housing programs

*Press the space bar to see the correct answer.*

1. 47

2. 39

3. 56

4. 65

How many homes have received weatherization and rehab since we started out housing program?

3. 56

*Press the space bar to see the correct answer.*

1. \$750,000

2. \$250,000

3. \$500,000

4. \$1,000,000

How much does it cost to build 1 mile of road?

3. \$500,000

*Press the space bar to see the correct answer.*

1. 25%

2. 75%

3. 50%

4. 100%

What percentage of construction costs is related to gravel?

3. 50%

*Press the space bar to see the correct answer.*

1. 6

2. 4

3. 9

4. 1

How many enterprises does the Tribal Government have?

1. 6

*Press the space bar to see the correct answer.*

What would you like us to offer/improve?  
Prioritize this list.

- Food services (pizza, deli, coffee)
- Games
- More/new activities
- More selection/variety of products

1. HMC

2. Tavern

3. Bulk

4. Real Estate

Which enterprise is most profitable?

1. HMC

*Press the space bar to see the correct answer.*

1. HMC

2. Bulk

3. Tavern

4. Real Estate

Which enterprise has the most sales?

1. HMC

*Press the space bar to see the correct answer.*

1. \$1,000

2. \$1,500

3. \$500

4. \$750

How much is our annual scholarship amount per person?

1. \$1,000

*Press the space bar to see the correct answer.*

What hours would you like the center to be open?

8:00 AM – 12:00 PM  
1:00 PM – 5:00 PM  
5:00 PM – 9:00 PM

*Press the space bar to see the correct answer.*

What types of training would you like us to offer? \_\_\_\_\_

Distance  
1 on 1  
Classroom

*Press the space bar to see the correct answer.*

## Appendix G: CEDS Update (shared in the Tribe's annual newsletter, December 2016)

# Saint Paul Island Comprehensive Economic Development Strategy

Project Update, December 2016

Questions, comments or ideas? Contact us!

Shelly Wade, Project Manager, Agnew::Beck  
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Patrick Baker, Executive Director, Tribal  
Government of St. Paul Island  
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## What is a Comprehensive Economic Development Strategy (CEDS)?

A CEDS is a tool for community based and regionally driven economic planning, with strategies and an implementation plan for creating stronger and more resilient communities and economies. CEDS are an important part of the U.S. Department of Commerce Economic Development Administration (EDA) programs, and are often required in order to be eligible for EDA and other federal and state funding opportunities.

## What is economic development?

- Economic growth happens when dollars come from off the Island into the community, either by exporting a product (such as fish) or selling a service (such as tourism).
- More money coming in from off island means more job opportunities, new and expanded businesses, and workforce development opportunities on Saint Paul Island.
- Without a diverse base economy that is supported by outside dollars coming in, existing community dollars simply circulate amongst residents on-island and do not "multiply" into other economic opportunity and community wealth.
- A critical component to sustained economic growth is a focus on attracting private sector investment and a diversified local economy. Today, local government is the largest employment industry on Saint Paul Island, and federal and state grants and loans, as well as City income from fish tax, are the primary sources of funding for local programs, services and infrastructure.

## Where are we in the CEDS planning process?





## Who is leading this process?

The Tribe has overseen the CEDS process, working closely with the City of Saint Paul, Central Bering Sea Fishermen's Association and Tanadgusix Corporation. The planning team collected input from community leaders and entities, residents and off-island partners. The Tribe hired Agnew::Beck, and their project partner, Northern Economics, to assist with CEDS development.



Agnew::Beck project team:  
Shelly Wade and Molly Mylius  
touring the vessel repair facility

## Our Economic Vision

An Aleut community of healthy, resilient people working together to sustain a strong, fishing-based economy.

## CEDS Goals and Strategies



## Appendix H: CEDS Photos of CBSFA and Local Resident Vessels



Halibut, cod, and sablefish



Crab and salmon



Crab



Pollock, crab, and cod



Pollock, crab, and cod





Pollock, crab, and cod



Small Boat Harbor – local owned vessels

## St. Paul Island Vessels – Individually Owned







## Appendix I: Crab, Halibut, & Groundfish Fishery Information

<b>Economic Importance of the Crab &amp; Halibut Fishery In the St. Paul Island Economy Based on Estimated Ex-Vessel Prices &amp; Estimated Landings Reported in Millions of Dollars (\$0.000 Million) by Year</b>						
<b>Fishery</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017 Projected</b>
Crab	\$78.286	\$68.717	\$66.667	\$71.135	\$36.667	\$18.333
Halibut	\$3.000	\$2.057	\$2.000	\$1.912	\$2.479	\$2.526
<b>Total</b>	<b>\$81.286</b>	<b>\$70.774</b>	<b>\$68.667</b>	<b>\$73.047</b>	<b>\$39.146</b>	<b>\$20.859</b>
Sources: 2017 CEDS Report; Agnew Beck Consulting & Northern Economics, Inc. National Marine Fisheries Service State of Alaska Department of Fish & Game International Pacific Halibut Commission						

<b>Economic Importance of the Crab &amp; Halibut Fishery In the St. Paul Island Economy Based on Estimated Ex-Vessel Prices &amp; Estimated Landings Reported in Percent to the Total St. Paul Island Fishery Landings by Year</b>						
<b>Fishery</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017 Projected</b>
Crab	96.31%	97.09%	97.09%	97.38%	93.67%	87.89%
Halibut	3.69%	2.91%	2.91%	2.62%	6.33%	12.11%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>
Sources: 2017 CEDS Report; Agnew Beck Consulting & Northern Economics, Inc. National Marine Fisheries Service State of Alaska Department of Fish & Game International Pacific Halibut Commission						

<b>Halibut Total Allowable Catch by CDQ &amp; IFQ</b> <b>Areas 4 C, D, &amp; E</b> <b>St. Paul Island Fishing Grounds by Year</b> <b>In Pounds</b>											
Year	Area 4C			Area 4D			Area 4E			Total	Percent Change
	Total	CDQ	IFQ	Total	CDQ	IFQ	Total	CDQ	IFQ	Pounds	
2014	596,600	298,300	298,300	596,600	178,980	417,620	91,800	91,800	0	1,285,000	0.00%
2015	596,600	298,300	298,300	596,600	178,980	417,620	91,800	91,800	0	1,285,000	0.00%
2016	733,600	366,800	366,800	733,600	220,080	513,520	192,800	192,800	0	1,660,000	29.18%
2017	752,000	376,000	376,000	752,000	225,600	526,400	196,000	192,800	0	1,700,000	2.41%
Source: International Pacific Halibut Commission (IPHC) National Marine Fisheries Service											

<b>City of St. Paul Fish Tax Revenue</b> <b>Reported in Millions of Dollars (\$0.000 Million) by Year</b>						
Fishery	2012	2013	2014	2015	2016	2017/18 Projected
Crab	\$2.349	\$2.062	\$2.000	\$2.134	\$1.100	\$0.550
Halibut	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000
<b>Total</b>	\$2.349	\$2.062	\$2.000	\$2.134	\$1.100	\$0.550
Sources: City of St. Paul State of Alaska 2017 CEDS Report; Agnew Beck Consulting & Northern Economics, Inc.						

<b>Comparison of the Economic Values of the Aleutian Islands Crab and Groundfish Fishery Landings in Millions of Dollars</b>				
<b>Fishery</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017 Estimated</b>
Crab <sup>1</sup>	\$123.8	\$199.5	\$178.9	\$127.7
Groundfish	\$741.9	\$755.1	\$624.5	\$785.2
<b>Total</b>	<b>\$865.73</b>	<b>\$954.57</b>	<b>\$803.43</b>	<b>\$912.87</b>
<b>Crab as a % of the Total Crab &amp; Groundfish Fishery Landed Value</b>	<b>14.30%</b>	<b>20.90%</b>	<b>22.27%</b>	<b>13.99%</b>
<b>Groundfish as a % of the Total Crab &amp; Groundfish Fishery Landed Value</b>	<b>85.70%</b>	<b>79.10%</b>	<b>77.73%</b>	<b>86.01%</b>
<sup>1</sup> Only the value of Aleutian Island Landings Source: National Marine Fisheries Service State of Alaska				

**Data is also available for the Total Bering Sea Crab Fishery upon request.**