



FEBRUARY 2022



RECOVERY & RESILIENCE IN SOUTHWEST ALASKA

**LESSONS FROM THE COVID-19 PANDEMIC –
FOR NOW AND THE FUTURE**

**PREPARED FOR:
SOUTHWEST ALASKA MUNICIPAL CONFERENCE**



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Regional Resiliency and Recovery Plan Highlights

Represented by the Southwest Alaska Municipal Conference (SWAMC), the 28,930 year-round residents of Southwest Alaska are spread across a vast geography spanning 57 communities. These communities are among Alaska's most remote, with many accessible only by air or water transportation. The region holds abundant natural resources, leading to the widespread practice of traditional subsistence culture (fishing, hunting, and gathering) and the commercial seafood industry's presence as the region's predominant private industry. Some of these qualities provided strength during the COVID-19 pandemic, while others posed risks.

SWAMC contracted with McKinley Research Group to develop a resiliency and recovery plan to build from lessons learned during the pandemic and provide strategies to build resiliency to future economic shocks or emergencies. McKinley Research Group researched the impact of COVID-19 on the economies and communities of Southwest Alaska within its particular social context and gathered stakeholder impressions of what worked well and where the pandemic exposed economic risks through a resident survey and one-on-one interviews. This process was used to develop recovery and resiliency strategic recommendations aligned with SWAMC's economic development goals, and an action plan, SWAMC's role, and key partnerships were identified. Below are the strategic recommendations, key message of its importance, and 1-3 year action plan. More detail can be found in the report that summarizes economic data, stakeholder engagement, and the process to prioritize recommendations.

Goal A: Resource Development and Management

Strategic Recommendation 1: Maintain Functioning Commercial Fisheries

Commercial fisheries are the biggest economic driver in Southwest Alaska.

- Develop a simple seafood industry reference guide for emergency managers.
- Assess/identify quarantine options for individual communities. Formalize/memorialize options for quarantine and/or other emergency housing in communities.
- Identify mechanism and plan to activate support for relief resources and funds.

Strategic Recommendation 2: Support Ongoing Seasonal Tourism

Support for the tourism industry increases economic diversification, building resiliency to economic shocks in other sectors.

- Deploy additional marketing to attract travel-ready market segments and utilize nimble methods, like social media.
- Continue support of entrepreneurial ventures.
- Assess current position and visitor marketing in the region.
- Engage with Alaska Native Heritage Center's Alaska Native Cultural Tourism plan to expand market awareness and promotion.

Goal B: Infrastructure Development and Maintenance

Strategic Recommendation 1: Improve Broadband Capacities

Internet access is essential to access relief funding, spread information, and business competitiveness.

- Capitalize on funding opportunities for broadband access improvement.
- Continue support for further tribal broadband funding for Southwest Alaska communities.
- Implement "Broadband-in-a-Box" plan.

Strategic Recommendation 2: Improve Supply Chain Systems

Maintaining essential air and waterborne transportation is critical. Warehouse infrastructure could build resilience and mitigate food insecurity.

- Assess need for, and capacity to provide, added food and materials storage for emergency purposes.
- Enhance necessary fuel storage capacity.
- Seek opportunities to incorporate renewable energy solutions.
- Restore, augment, and enhance regional transportation services.

Goal C: People and Partnerships Networking

Strategic Recommendation 1: Maximize Capture of Federal and Other Support Funding

Increased capacity to support awareness of, applications to, and effective spending of these available emergency resources and relief is critical and time-sensitive.

- Strengthen communication networks between tribal, municipal, and state organizations/governments.
- Create a plan describing how technical assistance/funding support can be provided to residents and businesses, including key partners.
- Inform federal officials of unique characteristics of the region in implementing federal funding mechanisms.

Strategic Recommendation 2: Strengthen Emergency Operations Center (EOC) Structures

Continued training on EOC best practices will position communities for effective disaster response.

- Increase training on how to activate an EOC and strengthen preparedness, including clarity on powers of authority and roles.
- Conduct emergency drills to enhance preparedness.
- Leverage health care providers' networks and capabilities.

Strategic Recommendation 3: Continue Building Communications between Industry and Communities

Effective communication regarding emergency plans will ensure organizations have capacity to meet objectives.

- Help build productive community networks and systems to improve crisis coordination and communication, such as those between the seafood industry and municipal, tribal, and healthcare leaders.
- Work with partners to develop an emergency communications plan that identifies local organizations with the capacity to lead regional communications and response planning.
- Develop and periodically update a list of regional and community emergency contacts to assist organizations outside the region offering assistance.
- Host online versions of community emergency response plans.
- Develop an online library for community emergency response plans.
- Use common platforms for hosting webinars or online meetings.

Goal D: Quality of Life Initiatives

Strategic Recommendation 1: Enhance Childcare Services and Support

Childcare services impact quality of life, but also workforce and community development, and labor force participation and helps families stay in the region.

- Secure funding support for childcare infrastructure development.
- Support workforce development for early childhood educators.
- Develop or attract new and expanded after-school programs.

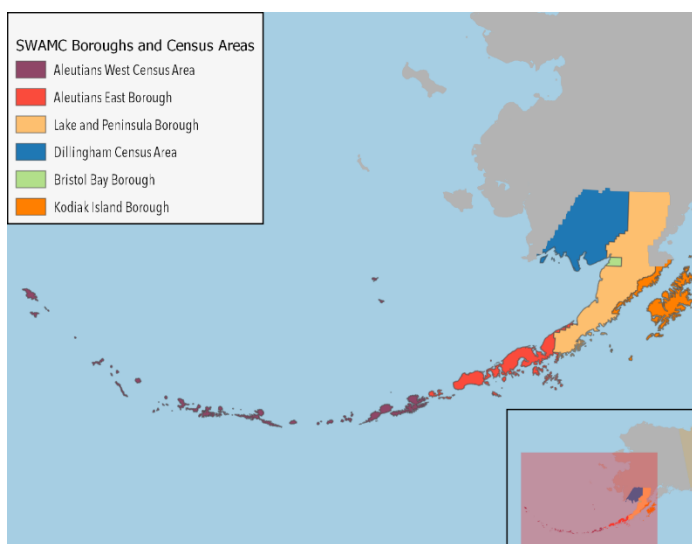
Plan Purpose and Approach

Purpose and Introduction

The Southwest Alaska Municipal Conference (SWAMC) contracted with McKinley Research Group to develop a *Southwest Alaska Economic Disaster Recovery & Resiliency Plan*, focused on pandemic recovery. The SWAMC region has a long history of recovery from disasters, including prior pandemics, earthquakes, volcanic eruptions, and significant industry disruptions that demanded robust and adaptive responses. The COVID-19 pandemic has also had dramatic impact on industries vital to the region, particularly seafood, but has also limited community travel, transportation, health, and education environments. This recovery and resiliency plan is intended to build from lessons learned during the current pandemic and provide a forward-looking preparedness and response plan for building SWAMC's resiliency in the event of future economic shocks, such as pandemics or industry downturns. SWAMC can use this plan to develop stronger regional partnerships and identify shared resources to support the region's recovery, as well as identify barriers to economic resilience and tools to support the continuing functioning of regional economies, even in the face of disaster.

Many communities in the region are among some of Alaska's most remote and share key characteristics, such as dependence on commercial fisheries and the importance of subsistence activities. The SWAMC region includes the communities in the Bristol Bay watershed, including those in the interior regions of Iliamna Lake and Lake Clark, the communities of the North and South Alaska Peninsula, Kodiak Island, the Pribilof Island communities in the Bering Sea, and communities in the Aleutian Islands.

Figure 1. The SWAMC Region



Source: McKinley Research Group.

Approach

McKinley Research Group approached this *Recovery and Resiliency Plan* in three critical phases:

- **Phase 1: Situational Awareness:** Understanding the economic context of Southwest Alaska and current structures to mitigate pandemic impacts.
- **Phase 2: Lessons Learned:** Synthesizing lessons learned – successes and challenges – from the current economic disaster response and lived experiences of the region’s stakeholders and residents.
- **Phase 3: Strategies to Build Future Resilience:** Developing actionable strategies to strengthen resilience to future economic shocks.

To inform this approach, several processes were used:

- **Stakeholder interviews:** Twenty-one interviews were conducted with representatives of industry; local government; tribal organizations; school districts, public health and tribal health organizations, regional housing authorities, and others to gain a deeper understanding of the pandemic’s economic impacts and developing strategies for the future. A list of interviewees is found in Appendix A. Interview questions included, among many others:
 - *To what extent was your government/business’ revenue (organization’s operating budget) impacted by the pandemic?*
 - *Have economic relief resources been effective in mitigating those impacts?*
 - *What will recovery look like for your business/organization/community?*
 - *How have the various government organizations and businesses interacted throughout the pandemic? What worked and what didn’t?*
 - *How would you measure the success of various pandemic responses to COVID-19 with respect to the economy?*
- **Resident online surveys:** To hear local residents’ voices, all regional residents were invited to participate in an online survey. The survey’s purpose was to capture resident perceptions on key economic barriers and perceptions of pandemic response challenges related to economic factors. The survey was hosted on the SWAMC website and SWAMC and its community partners issued notices to encourage resident participation. A total of 151 regional residents completed the survey. The most responses received came from Aleutian West Census Area and Pribilof Islands residents. The following table presents survey responses by geographic region in proportion to the region’s population distribution. A summary of survey results is found in Appendix B.

Table 1. Regional Resident Online Survey Responses by Primary Residency

Borough/Census Area	% of Total Responses	% of Population
Aleutians East Borough	14%	10%
Aleutians West Census Area and Pribilof Islands	30%	20%
Bristol Bay Borough	5%	3%
Dillingham Census Area	12%	17%
Kodiak Island Borough	21%	45%
Lake and Peninsula Borough	10%	5%
Other Alaska resident (outside Southwest Region)	8%	-

- Regional economic data collection and analysis:** Data were collected primarily from the Alaska departments of Labor and Workforce Development, Fish & Game; federal data sources such as the U.S. Small Business Administration; and local sources, including municipal and tribal governments. Data were analyzed to provide a high-level overview of economic context and COVID impacts on Southwest Alaska's: population, wage and salary employment, unemployment insurance claims, federal Paycheck Protection Program loan data, and others, industry-specific data (such as seafood and visitor industries), and local government revenue.
- Review of existing plans for preparedness and response:** SWAMC's 2020-2024 Comprehensive Economic Development Strategy (CEDS), local government COVID-19 mitigation plans, general disaster/emergency response plans, Tribal Hazard Mitigation Plans, and state plans were identified as resources available to residents, businesses, and communities. Interviewees and local residents provided input on the success of these plans to adequately prepare a local or regional response to the pandemic. A list of existing plans that were reviewed are found in Appendix C.
- Preparation of strategic recommendations:** Broad strategies to help the region recover from COVID-19 and to enhance the region's resilience to future economic shocks were recommended based on the situational awareness developed, lessons learned from the current pandemic response, and stakeholder and community input. SWAMC's role in building resiliency for future economic disruptions are defined. Recommendations are organized by SWAMC's four economic development goals identified in their CEDS: *A. Resource Development and Management*; *B. Infrastructure Development and Maintenance*; *C. People and Partnerships Networking*; and *D. Quality of Life Initiatives*.

Situational Awareness

A Legacy of Resilience

The communities of Southwest Alaska have proven themselves resilient through numerous economic and social challenges over the years. Regional strength has relied on several factors: the abundance of natural resources, including fish, game and other subsistence foods; familiarity with cycles of relative economic abundance and scarcity inherent in the region's dependence on fishery resources; and a strong sense of community among residents.

The last 250 years also brought infectious disease disasters (including smallpox epidemics in the 19th century and the 1918-19 flu pandemic), destructive volcanic eruptions (including the 1912 Novarupta eruption), and one of the world's largest recorded earthquakes and resulting tsunami (the 1964 Good Friday earthquake). Each of these events resulted in significant impacts in the Southwest Alaska region.

The region's historical inhabitants, who include the Unangan, Aluti'iq, Yup'ik, and Dena'ina Athabascan peoples, also endured economic and cultural colonization that began with European contact in the 18th century and numerous waves of natural resources extraction that followed, including the 18th and 19th century commercial fur trade and the 19th and 20th century commercial fisheries.

The Southwest Alaska region continues to confront the day-to-day challenges of life in the COVID-19 era. Despite earlier optimism that the pandemic might quickly subside, it is clear now it will be a persistent presence in people's lives and the regional economy well into the future. The early wave of the pandemic demanded a fast-moving response and was fueled by the energies of people pulling in the same direction. The pandemic's persistence requires a shift to longer-term thinking and planning, while the hardships of the period have taxed the people and resources of the region.

The COVID Condition

Through January 2022, a total of 6,001 COVID-19 cases have been reported among SWAMC region residents. Case rates per 100,000 people – a standard measure of severity – provide a standard way to compare COVID cases between regions. The SWAMC region's case rate of 21,255 per 100,000 people is lower than the statewide rate of 25,008. Within Southwest Alaska, Kodiak Island Borough had the highest case rate (28,190 cases per 100,000), followed by the Dillingham Census Area (22,774). The Aleutians East Borough had the lowest case rate at 6,120 cases per 100,000 people.

Table 2. COVID-19 Total Cases and Case Rate per 100,000 Population, SWAMC Region, March 2020 – January 2022

Study Area	Cases	Case Rate per 100,000
Aleutians East Borough	179	6,120
Aleutians West Census Area	670	12,085
Bristol Bay Borough & Lake and Peninsula Borough	510	21,074
Dillingham Census Area	1,087	22,774
Kodiak Island Borough	3,555	28,190
SWAMC Region Total	6,001	21,225
Alaska	182,285	25,008

Note: Case rates per 100,000 based on 2020 population.
Source: Alaska Department of Health and Social Services.

As of January 2022, vaccination rates in the SWAMC region are above statewide rates. The Aleutians East Borough has the highest vaccination rate in the SWAMC region, at 86.5% of the population 5 years old and above, followed by the Bristol Bay and Lake and Peninsula Borough at 71.5%. The Dillingham Census Area has the lowest vaccination rate at 60.1%.

Table 3. COVID-19 Vaccination Rates for Residents Age 5+, SWAMC Region, as of January 2022

Study Area	Residents 5+ Fully Vaccinated	% of Population
Aleutians East Borough	2,471	86.5%
Aleutians West Census Area	3,442	64.6%
Bristol Bay Borough & Lake and Peninsula Borough	1,595	71.5%
Dillingham Census Area	2,611	60.1%
Kodiak Island Borough	8,106	68.7%
SWAMC Region Total	18,225	68.6%
Alaska	396,491	58.3%

Note: Vaccination rates based on the resident population 5 years old and above who have completed their primary series.

Source: Alaska Department of Health and Social Services, McKinley Research Group calculations.

The Economic Context

The following sections provide insight into the ways in which the COVID-19 pandemic impacted the people and economies of the SWAMC region.

Population

Southwest Alaska has a very low population density. As of 2020, 28,930 people were spread across the 57 communities composing the SWAMC region. Very few of these communities are connected to a road system and are only accessible by boat or plane. Only three communities—Kodiak, Unalaska, and Dillingham—have a population larger than 1,000. These three communities make up 42% of the regional population.

Between 2010 and 2020, the SWAMC region population declined by 839, a 2.8% decrease. Only the Aleutians East Borough experienced a population increase due to a 55% increase in Akutan's population. The Aleutians West Census Area (-5.9%), Bristol Bay Borough (-15.3%), Kodiak Island Borough (-3.6%), and Lake and Peninsula Borough (-9.5%) all experienced population decline. Dillingham Census Area's population was essentially flat.

Table 4. Population by Borough or Census Area, SWAMC Region, 2010 and 2020

Study Area	2010	2020	Change 2010-2020	% Change 2010-2020
Aleutians East Borough	3,141	3,420	279	8.9%
<i>Akutan</i>	1,027	1,589	562	55%
<i>Sand Point</i>	976	578	-398	-40.8%
<i>King Cove</i>	938	757	-181	-19.3%
Aleutians West Census Area	5,561	5,232	-329	-5.9%
<i>Unalaska</i>	4,376	4,254	-122	-2.8%
<i>Pribilof Islands</i>	581	480	-101	-17.4%
Bristol Bay Borough	997	844	-153	-15.3%
<i>Naknek</i>	544	470	-74	-13.6%
<i>King Salmon</i>	374	307	-67	-17.9%
Dillingham Census Area	4,847	4,857	10	0.2%
<i>Dillingham</i>	2,329	2,249	-80	-3.4%
Kodiak Island Borough	13,592	13,101	-491	-3.6%
<i>Kodiak</i>	6,130	5,581	-549	-9.0%
Lake and Peninsula Borough	1,631	1,476	-155	-9.5%
SWAMC Region	29,769	28,930	-839	-2.8%

Source: Alaska Department of Labor and Workforce Development.

Net outmigration – a greater number of people leaving compared to those moving to the region – drove the overall population decline over the last decade. Again, Aleutians East Borough was the only subregion with net in-migration (more people moving in than moving out).

Table 5. Components of Population Change, SWAMC Region, 2010-2020

Study Area	Natural Increase (Births <i>minus</i> Deaths)	Net Migration (In-migration <i>minus</i> Out-migration)	Population Change
Aleutians East Borough	69	210	279
Aleutians West Census Area	192	-521	-329
Bristol Bay Borough	27	-180	-153
Dillingham Census Area	615	-605	+10
Kodiak Island Borough	1,365	-1,856	-491
Lake and Peninsula Borough	181	-336	-155
SWAMC Region	2,449	-3,288	-839

Source: Alaska Department of Labor and Workforce Development.

More than one-quarter (27.0%) of SWAMC region residents identify as Alaska Native or American Indian. Significant variation exists across SWAMC region communities regarding the race and ethnicity of residents. Many communities in the region are predominantly Alaska Native, while others are more diverse due to the presence of seafood processing facilities, U.S. Coast Guard, and other factors.

Table 6. Population by Race, SWAMC Region, 2020

Study Area	White	Alaska Native or American Indian	Asian	All Other Races & Two or More Races
Aleutians East Borough	21.1%	19.8%	44.2%	14.9%
Aleutians West Census Area	32.4%	12.4%	40.7%	14.6%
Bristol Bay Borough	41.4%	33.3%	2.6%	22.7%
Dillingham Census Area	15.4%	72.8%	1.0%	10.7%
Kodiak Island Borough	53.5%	13.0%	23.8%	9.8%
Lake and Peninsula Borough	23.5%	61.7%	2.3%	12.6%
SWAMC Region	37.5%	27.0%	23.5%	12.0%

Source: Alaska Department of Labor and Workforce Development.

Employment

Commercial fishing and seafood processing are the two largest sources of employment in the Southwest region. Harvesting jobs are considered self-employment and are not included in most published labor data; therefore, residents' commercial harvesting participation is discussed separately in this section.

Wage and salary employment in the Southwest region averaged 16,543 jobs in 2019. The government sector represented nearly a quarter of the region's employment, with an average of 3,760 people working in government jobs (Tribal, local, state, and federal) across the region in 2020, with no change in employment compared to 2019.

Between 2019 and 2020, the number of wage and salary jobs in the SWAMC region decreased by 6.5%, with approximately 1,074 fewer people employed in 2020 compared to the prior year. Government employment was a source of stability as other sectors contracted in 2020.

Across the region, the most significant job losses in the private sector between 2019 and 2020 were in leisure and hospitality (with 229 fewer annual average employees, a decline of 26%), manufacturing (with 131 fewer employees, a 2% decline), trade, transportation, and utilities (with 133 fewer employees, a decline of 7%), and educational and health services (with 76 fewer employees, a 5% decline).

Seafood processing represents nearly half of all private sector employment in the Southwest region. Average annual manufacturing employment (the majority of which is seafood processing employment) decreased 2% between 2019 and 2020, accounting for an average of 5,375 jobs in the Southwest region in 2020, down from 5,506 in 2019.¹

- Seafood processing represents the vast majority (79%) of salary and wage employment in the Aleutians East Borough, followed by employment in the government sector (12%).
- Half (51%) of employment in the Aleutians West Census Area is in the seafood processing sector.
- Nearly half (48%) of employment in the Bristol Bay Borough is in the seafood processing sector, with government representing 18% of employment.
- The Kodiak Island Borough's primary economic drivers are fishing and fish processing, and the U.S. Coast Guard base. More than a quarter (28%) of Kodiak Island Borough salary and wage employment is in the government sector, with the Coast Guard as a key employer in the area, and 21% of borough employment is in the seafood processing sector. Kodiak consistently ranks as one of the top seafood ports in the nation in terms of both volume and value of seafood landed.
- The government (33%) and educational and health care sectors (36%) are the top industries for the Dillingham Census Area.
- More than half (54%) of Lake and Peninsula employment is in the government sector, and 19% of employment is in the trade, transportation, and utilities sector.

¹ Manufacturing employment in the SWAMC region includes employment in Aleutians East Borough, Aleutians West Census Area, Bristol Bay Borough, and Kodiak Island Borough. Dillingham Census Area and Lake and Peninsula Borough are excluded due to data confidentiality.

Table 7. Reportable Employment by Industry*, SWAMC Region, 2019 and 2020

Industry	2019	2020	% Change 2019-2020
Government	3,757	3,760	0.1%
Local	2,960	2,930	-1.0%
State	378	402	6.3%
Federal	419	428	2.1%
Private Sector	12,786	11,710	-8.4%
Manufacturing	5,506	5,375	-2.4%
Trade, Transportation and Utilities	1,984	1,851	-6.7%
Educational & Health Services	1,508	1,432	-5.0%
Leisure & Hospitality	866	637	-26.4%
Other Private Industry	2,922	2,415	-17.4%
Total Wage & Salary Employment	16,543	15,469	-6.5%

* Sector data is not reportable for all regions due to data confidentiality. Where possible, data has been aggregated for all boroughs/census areas in the SWAMC region.
Source: Alaska Department of Labor and Workforce Development.

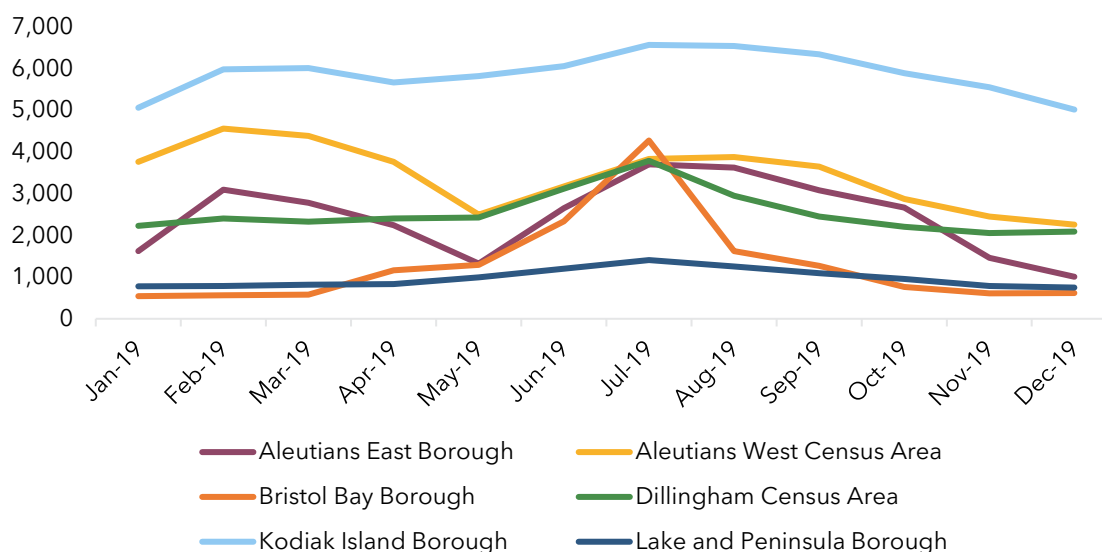
Table 8. Shore-Based Processor License Holders, 2021

Study Area	Number of Permit Holders
Aleutian East Borough	6
Aleutians West Census Area	10
Bristol Bay Borough	13
Dillingham Census Area	8
Kodiak Island Borough	12
Lake and Peninsula Borough	6
Total SWAMC Region	55

Source: Alaska Commercial Fisheries Entry Commission.

Over the course of the calendar year, employment levels fluctuate significantly in all boroughs and census areas within the SWAMC region due to the seasonal nature of commercial fishing. In the Aleutians East Borough and Aleutians West Census Area, peak employment occurs in February and July/August during pollock "A" and "B" seasons. In the Bristol Bay Borough, Dillingham Census Area, and Kodiak Island Borough, peak employment occurs in July during salmon seasons.

Figure 2. Monthly Employment by Borough or Census Area, 2019



Source: Alaska Department of Labor and Workforce Development.

NONRESIDENT EMPLOYMENT

Nonresident workers make up 53% of the workforce in the SWAMC region, compared to 21% in Alaska statewide. This is driven by workforce needs in the seasonal seafood industry, as well as seasonal tourism in Bristol Bay. The boroughs/census areas that have the highest percentage of nonresident workers are Bristol Bay Borough and Aleutians East Borough, where 82% and 77% of the total workforce are nonresidents, respectively.

Table 9. Local, Nonlocal*, and Nonresident Employment, SWAMC Region, 2019

Study Area	Percent Local	Percent Nonlocal	Percent Nonresident
Aleutian East Borough	15.9%	6.9%	77.2%
Aleutians West Census Area	39.5%	8.1%	52.5%
Bristol Bay Borough	7.7%	10.7%	81.6%
Dillingham Census Area	48.5%	8.8%	42.7%
Kodiak Island Borough	68.7%	5.6%	25.7%
Lake and Peninsula Borough	35.6%	14.9%	49.4%
SWAMC Region Total	39.3%	8.2%	52.5%
Alaska Total	66.5%	12.7%	20.8%

*Nonlocal Alaskans refers to Alaska residents who commute to different parts of the state for employment.

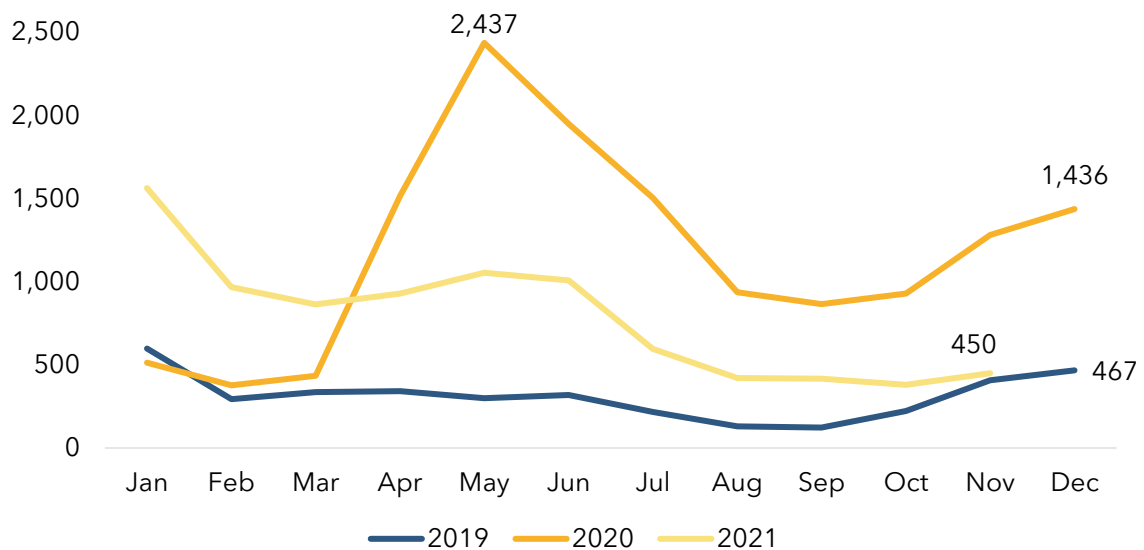
Source: Alaska Department of Labor and Workforce Development.

UNEMPLOYMENT INSURANCE CLAIMANTS

Consistent with national and statewide trends, unemployment insurance claims among SWAMC region residents increased dramatically in March and April 2020 due to the initial economic impacts of COVID-19. All boroughs and census areas in the region experienced severe increases in the number of claimants. Since reaching highs of 2,437 claimants in April 2020, unemployment insurance claims declined throughout 2021. By November 2021, the monthly number of unemployment claims remained 10% above November 2019 levels.

The state provided extended unemployment benefits between May 2020 and December 2021. Another federal program, Pandemic Unemployment Assistance, provided unemployment benefits to workers not covered by the state unemployment insurance program through September 2021. Including regular, extended, and federal program benefits, SWAMC region residents received \$9.4 million in unemployment insurance benefit payments in 2020 and \$5.9 million through November 2021.

Figure 3. Unemployment Insurance Claimants, SWAMC Region, 2019-2021



Note: Preliminary data through November 2021.

Source: Alaska Department of Labor and Workforce Development.

Table 10. Total Unemployment Insurance Benefit Payments, SWAMC Region, 2019-2021

Benefit Source	2019	2020	2021
Regular unemployment insurance benefits	\$2,196,580	\$8,646,850	\$3,982,750
Extended benefits	-	\$137,486	\$113,387
Federal program benefits	-	\$653,826	\$1,817,461
Total benefits	\$2,196,580	\$9,438,162	\$5,913,598

Note: Preliminary data through November 2021.

Source: Alaska Department of Labor and Workforce Development.

Income

MEDIAN HOUSEHOLD INCOME

The SWAMC region median household income of \$77,010 is consistent with overall household incomes across Alaska. However, this overall income masks significant variation in median household incomes across the region's boroughs and census area. Aleutians West Census Area's median income is higher than the Alaska median, largely due to high median income in Unalaska. The Lake and Peninsula Borough's median income is significantly lower than the statewide median.

Table 11. Median Household Income by Borough/Census Area, SWAMC Region, 2019

Study Area	Median Household Income	% of Alaska Median
Aleutian East Borough	\$69,250	89%
Aleutians West Census Area	\$87,466	113%
Bristol Bay Borough	\$79,808	103%
Dillingham Census Area	\$56,898	73%
Kodiak Island Borough	\$85,839	111%
Lake and Peninsula Borough	\$44,135	57%
SWAMC Region Total	\$77,010	99%
<i>Alaska</i>	<i>\$77,640</i>	<i>100%</i>

Source: U.S. Census Bureau, American Community Survey, 2015-2019 5-Year estimates, McKinley Research Group calculations.

PERSONAL INCOME

In 2020, total personal income in the SWAMC region grew due to a 20% increase in government transfer payments, including federal pandemic relief payments to individuals. Transfer payments also include Permanent Fund Dividend (PFD) payments, unemployment benefits, and Social Security payments, among others. The pandemic's impact on total personal income varied across the region. In two subregions, higher government transfers outweighed other income losses (Kodiak Island Borough) or were added to an increase in earnings (Aleutians West Census Area). In the four remaining boroughs/census areas, the influx of personal relief funding did not fill the gap left by lower earnings from salaries, wages, and proprietor income (including commercial fishing income). Additional detail on personal income changes by borough/census area are available in the appendix.

Table 12. Total Personal Income by Place of Residence, SWAMC Region, 2019-2020 (\$ Thousands)

Income Component	2019	2020	% Change 2019-2020
Salaries, wages, and proprietors' income	\$1,383,479	\$1,360,223	-1.7%
Investment income	\$264,613	\$262,751	-0.7%
Government transfer payments (including PFD)	\$248,808	\$297,666	19.6%
Total Personal Income	\$1,896,900	\$1,920,640	1.3%

Source: U.S. Bureau of Economic Analysis.

Table 13. Total Personal Income by Place of Residence by Borough/Census Area, SWAMC Region, 2019-2020 (\$ Thousands)

Study Area	2019	2020	% Change 2019-2020
Aleutian East Borough	\$205,097	\$202,612	-1.2%
Aleutians West Census Area	\$320,998	\$338,947	5.6%
Bristol Bay Borough	\$122,032	\$120,310	-1.4%
Dillingham Census Area	\$300,202	\$293,806	-2.1%
Kodiak Island Borough	\$847,282	\$870,313	2.7%
Lake and Peninsula Borough	\$101,289	\$94,652	-6.6%
SWAMC Region Total	\$1,896,900	\$1,920,640	1.3%

Source: U.S. Bureau of Economic Analysis.

School Enrollment

Nine school districts operate in the SWAMC region. Of the 37 communities with a school, 29 have fewer than 100 students enrolled in pre-kindergarten through 12th grade. Public school enrollment dropped by 220 students (5%) across the region between academic year 2019-2020 and 2021-2022 – statewide public enrollment dropped by 2% over the same period.²

(See table on next page)

² Official enrollment counts are conducted annually in October of the current academic year. The 2019-2020 academic year enrollment, therefore, does not account for enrollment changes due to the onset of the COVID-19 pandemic in March of 2020.

Table 14. School Enrollment by School District, SWAMC Region, 2019-2020 – 2021-2022 Academic Years

School District	2019/2020	2020/2021	2021/2022
Aleutian Region Schools	29	25	24
Aleutians East Borough Schools	234	228	207
Bristol Bay Borough Schools	113	122	113
Dillingham City Schools	442	412	427
Kodiak Island Borough Schools	2,315	2,297	2,275
Lake and Peninsula Borough Schools	361	367	351
Pribilof Schools	65	65	61
Southwest Region Schools	636	652	574
Unalaska City Schools	412	387	355
Total SWAMC Region	4,607	4,555	4,387

Source: Alaska Department of Education and Early Development.

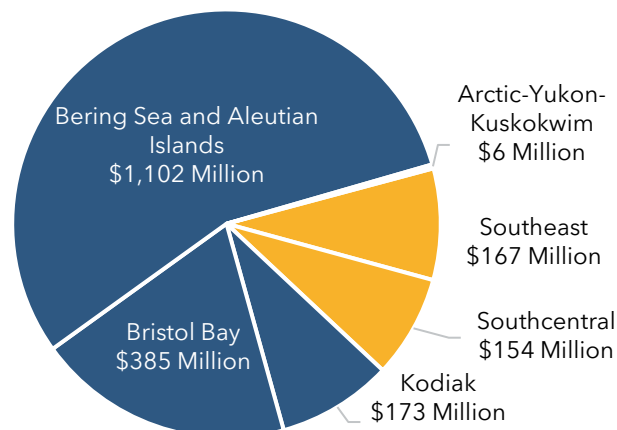
Industry

COMMERCIAL FISHING

As previously mentioned, commercial fishermen are not included in employment figures listed earlier in this report because they are classified as “self-employed,” and not as “employees” in labor statistics.

However, commercial fishing is a key source of income for residents of the SWAMC region. The SWAMC region produces two of Alaska’s most valuable seafood resources – Bristol Bay sockeye salmon and Bering Sea/Aleutian Island groundfish – and includes other commercially important fisheries along the Alaska Peninsula and in the Gulf of Alaska near Kodiak Island. In 2019, the SWAMC region represented more than 83% of the ex-vessel value (the amount paid to fishermen) of Alaska’s total commercial catch.

Figure 4. Ex-Vessel Value by Region, 2019 (SWAMC Regions Shown in Blue)



Source: Alaska Department of Fish and Game.

Not all the seafood harvesting revenue generated in the SWAMC region is earned by region residents. As with seafood processing, nonresident workers make up a large share of the seafood harvesting workforce. Nonetheless, SWAMC region resident harvest revenue is significant, totaling \$203 million in commercial fishing revenue in 2019. This includes revenue from fishing within the SWAMC region as well as in other parts of Alaska, although in practice most SWAMC residents participate in fisheries within the SWAMC region.

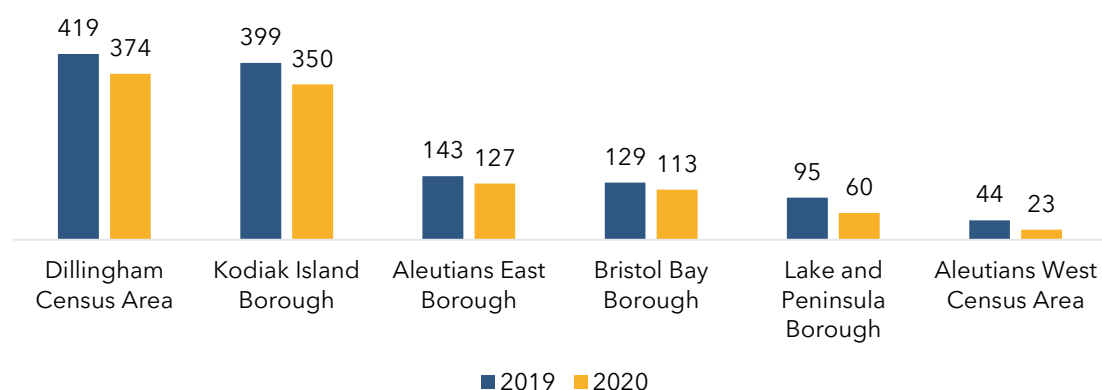
COVID Impacts to Commercial Fishing Industry

Across Alaska, the total ex-vessel value of the commercial fishing industry dropped 26% (\$511 million) in 2020 from 2019. This sizeable contraction was caused by both fisheries issues (particularly poor salmon runs and dispersion of pollock biomass) as well as the COVID-19 pandemic.

The pandemic impacted fisheries in the SWAMC region in two principal ways: First, COVID-19 made harvesting and processing seafood more costly and dangerous. The pandemic required ship captains and seafood processing plant owners to adjust their operations to mitigate the risks of virus spread. Second, the pandemic indirectly affected the Alaska industry by lowering prices for many seafood products. Global closures of food-service businesses in 2020 led to lower demand and lower prices for many Alaska seafood products. These price decreases were largely reversed in 2021 as the global economy made a partial recovery from 2020. Taken together, the biological fishery issues and the pandemic contributed to a 48% decrease in the revenue of SWAMC region resident commercial fishing permit holders between 2019 and 2020, a drop of nearly \$100 million.

Commercial fishing participation among SWAMC residents also fell in 2020. Across the region, the number of resident permit holders who fished fell by 14%. Participation fell especially steeply in some of the regions with the fewest active permit holders: participation was down 47% in the Aleutians West Census Area, and 37% in the Lake and Peninsula Borough.

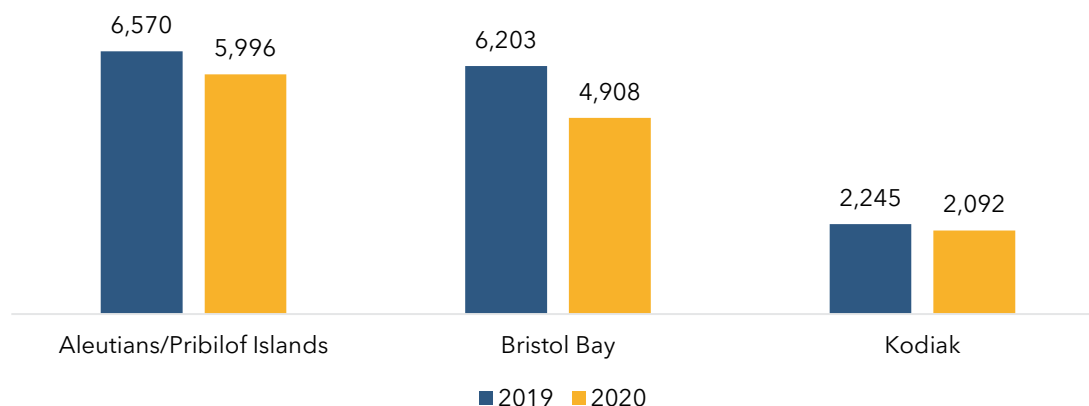
Figure 5. Number of Resident Commercial Fishing Permits Holders Who Fished, by Borough or Census Area, 2019-2020



Source: Alaska Commercial Fisheries Entry Commission.

The number of people who worked in the seafood processing sector also fell by 13% across the region in 2020. The Bristol Bay region saw the largest decrease by number and percentage of workers, with 1,295 fewer workers employed in 2020, a 21% decline. The number of workers was down 574 (-9%) in the Aleutian/Pribilof Island region and 153 (-7%) in the Kodiak region.

Figure 6. Number of Seafood Processing Workers by Region, 2019-2020



Source: Alaska Department of Labor and Workforce Development.

VISITOR INDUSTRY

The visitor industry is another important sector for various communities in the SWAMC region. In summer 2016, the last time all visitor markets were measured, the Southwest region (SWAMC region excluding Kodiak) welcomed 84,000 nonresident visitors, and Kodiak welcomed 40,000 visitors.

Popular activities in the region include wildlife viewing, fishing, and hiking. Relatively few cruise vessels call at ports in the region, with Kodiak receiving the highest regional cruise volume of 26,300 passengers in 2019.³

(See table on next page)

³ McDowell Group. *Alaska Visitor Volume Report – Winter 2018-2019 and Summer 2019*. June 2020.

Table 15. Top Visitor Activities in Region, Southwest Region and Kodiak, 2016

Activity	Southwest	Kodiak
Wildlife viewing	50%	38%
Fishing	41%	32%
<i>Unguided</i>	18%	16%
<i>Guided</i>	25%	17%
Hiking/nature walk	31%	31%
Culture/History	16%	23%
Flightseeing	12%	7%

Source: McDowell Group, *Alaska Visitor Statistics Program*.

Wildlife Viewing and Sportfishing

Southwest Alaska is a world-famous sportfishing destination, with anglers targeting salmon and trout, including Dolly Varden. Visiting sportfishers generally stay overnight at all-inclusive lodges and fish camps. Sportfishing lodges are remote and distributed across the region. The region is also home to Alaska's premier bear viewing destinations (Katmai and Lake Clark national parks). Most bear viewing visitors are on day trips from Anchorage. Several remote lodges in the region also offer overnight bear viewing experiences.

National Parks Service Assets

Four National Parks are in the SWAMC region, all within the Lake and Peninsula Borough: Alagnak Wild River, Aniakchak National Monument, Katmai National Park, and Lake Clark National Park. Annual recreation visitation (including Alaska residents and nonresidents) to these parks decreased dramatically in 2020. Visitation at Lake Clark National Park decreased by 71%, Katmai National Park visitation decreased by 39%, and Aniakchak National Monument visitation decreased by 64%. Data are not available for Alagnak Wild River.

Table 16. National Park Annual Recreation Visits, SWAMC Region, 2019 - 2020

Study Area	2019 Annual Visitation	2020 Annual Visitation	2019 - 2020 Change	2019 - 2020 % Change
Aniakchak National Monument	100	36	- 64	- 64.0%
Katmai National Park	84,167	51,511	- 32,656	- 38.8%
Lake Clark National Park	17,157	4,948	- 12,209	- 71.1%
Total	101,424	56,495	- 44,929	- 44.3%

Source: National Park Service Visitor Use Statistics, Annual Park Recreation Visits.

COVID Impacts to Visitor Industry

Alaska's visitor industry experienced dramatic decline as worldwide travel was halted by efforts to stop the spread of COVID-19. The loss of the 2020 visitor season results in an estimated loss of 1,400 jobs across visitor-related sectors in Southwest Alaska resulting in a \$40 million reduction in wages compared to the 2019 visitor season.⁴

HEALTH CARE

Many of the health centers and community clinics in Southwest Alaska are operated by a tribal health care organization or another Federally Qualified Health Center (FQHC), community-based providers that receive federal funding to provide primary care in underserved areas. The following tribal health care organizations operate in the region:

- Aleutian Pribilof Islands Association
- Bristol Bay Area Health Corporation
- Eastern Aleutian Tribes
- Kodiak Area Native Association
- Southcentral Foundation

Regional hospital infrastructure includes the Kanakanak Hospital in Dillingham, operated by BBAHC, and the Providence Kodiak Island Medical Center. Southwest Alaska residents often travel to Anchorage for specialty care or procedures not available in-region.

Local Tax Impacts

Borough and city governments across the SWAMC region levy various taxes as a component of their municipal budgets. In 2019, sales tax accounted for the highest share of total tax revenue (60%), followed by raw fish tax (33%). Changes in raw fish tax revenue generally reflect resource availability, value, and company allocations across processing plants, which can cause significant swings in revenue to any one community year-over-year.

(See table on next page)

⁴ McKinley Research Group. *The Economic Impact of COVID-19 on Alaska's Visitor Industry - 2020*. May 2021.

**Table 17. Local Government Tax Revenue by Tax Type, SWAMC Region, FY2019
(\$ Thousands)**

Study Area	Sales Tax	Bed Tax	Alcohol/ Tobacco/ Marijuana Tax	Raw Fish Tax	Other Tax	Total Tax Revenue
Aleutians East Subregion	\$3,555.9	\$16.7	\$2.1	\$6,320.4	\$395.5	\$10,290.5
Aleutians West Subregion	\$11,805.9	\$183.8	-	\$6,338.7	-	\$18,328.4
Bristol Bay Subregion	-	\$136.1	-	\$2,305.3	-	\$2,441.4
Dillingham Subregion	\$2,935.4	\$233.6	\$543.7	\$233.7	\$79.8	\$4,026.2
Kodiak Subregion	\$13,147.3	\$314.8	\$425.4	\$0.0	\$1,409.1	\$15,296.6
Lake and Peninsula Subregion	\$1,080.8	\$240.7	-	\$2,800.8	\$59.9	\$4,182.3
SWAMC Region	\$32,525.2	\$1,125.7	\$971.2	\$17,999.0	\$1,944.3	\$54,565.4

Source: Alaska Department of Commerce, Community, and Economic Development.

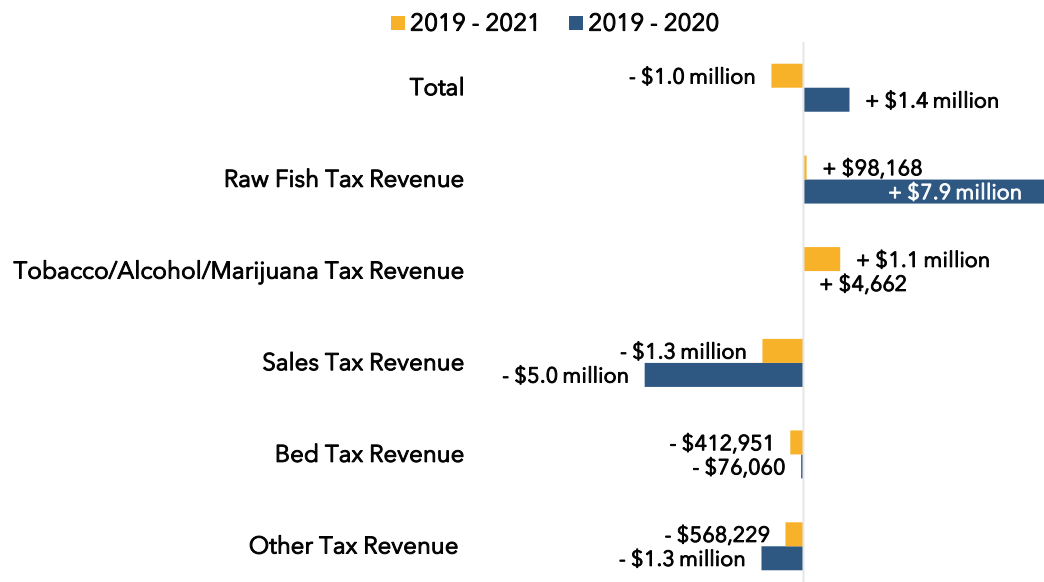
Local tax revenues are generally reported based on a fiscal year running from July to June. For example, FY2019 represents revenue from July 2018 through June 2019. Due to this reporting cycle, the impacts of COVID-19 on local tax revenue are distributed over the last quarter of FY2020 (April-June 2020) and FY2021.

Total tax revenue collected by local governments across the SWAMC region increased by 3% between FY2019 and FY2020, primarily driven by a 44% increase in raw fish tax revenue. Between FY2019 and FY2020, this overall increase in fish tax revenue offset declines in sales tax revenue. Tax revenue collected by regional governments in FY2021 reflects continued impacts of the pandemic.

While the overall decline in sales tax was offset by increases in raw fish tax revenue, changes in revenue were uneven across the region.

- The Aleutians West and Lake and Peninsula subregions collected increased fish tax revenue, although this increase did not outweigh declines in sales and bed tax receipts.
- Despite increased sales tax revenue, Aleutians East and Dillingham subregion governments experienced overall tax revenue decline due to lower raw fish tax revenue.
- Bristol Bay and Kodiak communities saw overall increases in tax revenue in FY2021 compared to FY2019 (up \$517,000 and \$615,000, respectively).
- The Dillingham subregion experienced the greatest tax reduction by percentage (down 9% in FY2021 compared to FY2019).

Figure 7. Change in Local Government Tax Revenue by Tax Type, SWAMC Region, FY2019-2020 and FY2019-FY2021



Source: Alaska Department of Commerce, Community, and Economic Development.

Federal Pandemic Mitigation Funding

The federal government provided broad economic relief in response to the economic impacts of the COVID-19 pandemic through two primary acts.

CARES Act (2020)

The Coronavirus Aid, Relief, and Economic Security (CARES) Act was enacted in March 2020 to provide direct economic assistance, establish a variety of relief programs, and provide funding directly to impacted organizations. Programs established to provide funding to the private sector included Paycheck Protection Program (PPP) and the Injury Disaster Loan (EIDL) program. Organizations also received additional funding through the act, including Tribal Relief Funding and supplemental Indian Housing Block Grant funding.

In 2021, the Coronavirus Response and Consolidated Appropriations Act continued many programs established under the CARES Act, and added new phases, allocations, and guidance for these programs.

American Rescue Plan Act (2021)

Enacted in March 2021, the American Rescue Plan Act (ARPA) provided further funding for workers, families, small businesses, state and local governments, and industries affected by the COVID-19 pandemic. ARPA continued many of the programs started by the CARES and

Consolidated Appropriations acts, including the PPP, the EIDL program, Tribal Relief Funding, and Indian Housing Block Grants (IHBG). In addition to continuing programs that were originally established by the CARES Act, ARPA established Coronavirus State and Local Fiscal Recovery Funds.

The following section describes a selection of funding provided to organizations in Southwest Alaska under these federal relief acts.

Table 18. Selected Federal Pandemic Mitigation Funding, SWAMC Region, 2020-2021

Funding Type	Total
Paycheck Protection Program	\$65,672,635
Economic Injury Disaster Loans	\$957,295
Economic Injury Disaster Advances	\$782,000
State and Local Fiscal Recovery Funds	\$5,693,705
Tribal Relief Funds	\$287,194,348
Indian Housing Block Grants	\$12,280,995
Economic Impact Payments to Individuals	\$66,856,500
Select Southwest Region Federal Pandemic Mitigation Funding Total	\$439,437,478

Sources: U.S. departments of the Treasury and Housing and Urban Development.

PAYCHECK PROTECTION PROGRAM

The Paycheck Protection Program (PPP) was established under the CARES Act to provide small businesses with the funding and resources needed to maintain their payroll, hire employees, and cover applicable overhead. Small businesses were granted funding to pay up to eight weeks of payroll costs, including benefits, as well as interest on mortgages, rents, and utilities. A second round of PPP funding was authorized by ARPA. A total 1,336 PPP loans valued at \$66 million were approved to businesses in the SWAMC region. More than two-thirds (67%) of loans were made to businesses in the Kodiak Island Borough.

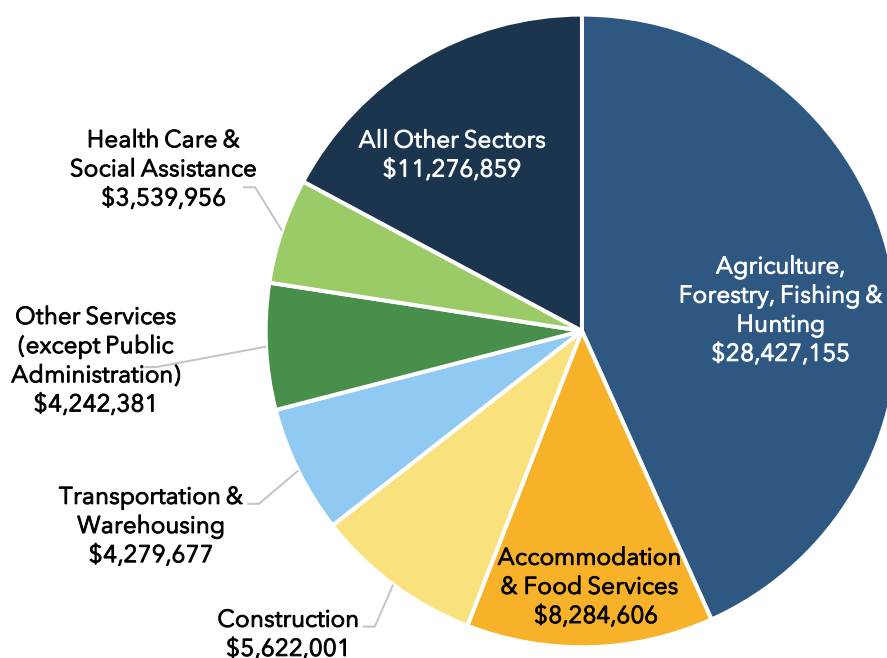
Table 19. Paycheck Protection Program Loans, SWAMC Region, 2020-2021

Study Area	Number of PPP Loans	Value of Loans
Aleutians East Borough	109	\$4,745,124
Aleutians West Census Area	68	\$3,790,478
Bristol Bay Borough	81	\$6,234,092
Dillingham Census Area	131	\$7,015,652
Kodiak Island Borough	902	\$41,901,168
Lake and Peninsula Borough	45	\$1,986,122
SWAMC Region Total	1,336	\$65,672,635

Source: Small Business Administration, Paycheck Protection Program Data, 2021.

Borrowers operating in the Agriculture, Forestry, Fishing and Hunting sector (predominately commercial fishermen), received 43% of loans made to Southwest Alaska businesses, followed by Accommodation and Food Service businesses (13%).

Figure 8. Paycheck Protection Program Loans by Sector, SWAMC Region, 2020-2021



Source: Small Business Administration, Paycheck Protection Program Data, 2021.

ECONOMIC INJURY DISASTER LOANS

Created by the CARES Act, the EIDL program provides economic relief to businesses with fewer than 500 employees and nonprofits experiencing temporary revenue loss. EIDL loans are low-interest, fixed-rate, long-term loans, and may be used to fund operating expenses, other ordinary business expenses, and to pay business debt occurred at any time. The Small Business Association (SBA) approved 82 COVID-19 EIDLs worth nearly \$1 million in the SWAMC region.

The CARES Act also established an EIDL Advance program to provide quick relief for applications waiting to be processed by the federal SBA. Under the program, applicants could receive \$1,000 per employee, up to \$10,000, to cover immediate payroll, mortgage, rent, and other specified expenses. The EIDL advances do not need to be repaid, unlike EIDL loans. Additional funding for the EIDL Advance program was authorized by the ARPA.

In the SWAMC region, 237 EIDL Advances valued at \$782,000 have been approved. Loans and advances to Kodiak Island Borough businesses represent the largest share of funding to Southwest organizations.

Table 20. Economic Injury Disaster Loans, SWAMC Region, 2020

Study Area	EIDL Loans	EIDL Loan Recipients	EIDL Advances	EIDL Advances Recipients
Aleutians East Borough	\$3,037	2	\$22,000	6
Aleutians West Census Area	\$45,818	4	\$36,000	10
Bristol Bay Borough	\$64,913	8	\$119,000	29
Dillingham Census Area	\$39,076	5	\$49,000	19
Kodiak Island Borough	\$744,115	57	\$506,000	155
Lake and Peninsula Borough	\$60,337	6	\$50,000	18
SWAMC Region Total	\$957,295	82	\$782,000	237

Source: Small Business Association, Economic Injury Disaster Loan Data, 2020.

CORONAVIRUS STATE AND LOCAL FISCAL RECOVERY FUNDS

Coronavirus State and Local Fiscal Recovery Funds (SLFRF), established under ARPA, provide eligible governments with funding to respond to impacts of the COVID-19 pandemic. Recipients of SLFRF funds may use the revenue to replace lost public sector revenue, respond to the public health and economic impacts of the pandemic, provide premium pay for essential workers, or invest in infrastructure. Funds are allocated based on the population of the borough or census area, using the latest available population data from the U.S. Census Bureau. The Kodiak Island Borough received the largest portion of SLFRF funds in the SWAMC region, receiving \$2.5 million of the \$5.7 million distributed in the region.

Table 21. Coronavirus State and Local Fiscal Recovery Funds, SWAMC Region, 2021

Study Area	SLFRF Funds
Aleutians East Borough	\$648,173
Aleutians West Census Area	\$1,094,338
Bristol Bay Borough	\$162,383
Dillingham Census Area	\$954,875
Kodiak Island Borough	\$2,524,709
Lake and Peninsula Borough	\$309,227
SWAMC Region Total	\$5,693,705

Source: U.S. Department of the Treasury, State and Local Fiscal Recovery Funds Data, 2021.

TRIBAL RELIEF FUNDING

In the SWAMC region, \$287 million in funding from the CARES Act and ARPA have been distributed to tribal governments. This funding may be used to support households and businesses struggling with economic impacts, maintain vital public services, and make investments to support recovery. Tribes in the Dillingham subregion received the largest portion of this funding, at \$85 million. Lake and Peninsula subregion received \$16,285 in funding per tribal citizen. The average funding amount per tribal citizen in the SWAMC region was \$11,713.

Table 22. Tribal Relief Funds from ARPA and CARES Act, SWAMC Region, 2020-2021

Study Area	Total ARPA Enrollment Allocation	Total ARPA Employment Allocation	Total CARES Act & ARPA Funding	Total CARES Act & ARPA Funding Per Tribal Citizen
Aleutians East Subregion	\$10,824,418	\$7,000,000	\$32,480,823	\$13,970
Aleutians West Subregion	\$16,159,809	\$6,407,054	\$36,492,948	\$10,514
Bristol Bay Subregion	\$4,571,862	\$2,000,000	\$12,789,457	\$13,024
Dillingham Subregion	\$37,808,645	\$12,000,000	\$84,745,418	\$10,435
Kodiak Subregion	\$26,569,873	\$9,000,000	\$56,962,471	\$9,981
Lake and Peninsula Subregion	\$18,217,612	\$15,000,000	\$63,723,231	\$16,285
SWAMC Region Total	\$114,152,219	\$51,407,054	\$287,194,348	\$11,713

Source: U.S. Department of the Treasury, CARES and ARPA Relief Funding to Tribes, 2021.

INDIAN HOUSING BLOCK GRANT

The CARES Act and ARPA included additional IHBG funding to tribes. IHBG allocations are commonly pooled across a region and deployed by regional housing authorities to construct and maintain housing, among other uses. Funding from both acts was eligible for use to prevent, prepare for, and respond to the impacts of the COVID-19 pandemic. In addition to the three regional housing authorities operating in the SWAMC region, six tribes receive IHBG funding individually rather than pooling funding with their respective housing authority. Including CARES Act and ARPA funds, organizations in the SWAMC region received an additional \$12.3 million in IHBG funding in federal fiscal year (FFY) 2020 and 2021.

(See table on next page)

Table 23. Indian Housing Block Grant CARES Act and ARPA Funding, SWAMC Region, FFY2020-FFY2021

Study Area	CARES Act Funding	ARPA Funds	Total Funding
Aleutian Subregion	\$877,271	\$1,968,098	\$2,845,369
<i>Aleutians Housing Authority</i>	<i>\$811,711</i>	<i>\$1,840,451</i>	<i>\$2,652,162</i>
<i>Saint Paul Island</i>	<i>\$65,560</i>	<i>\$127,647</i>	<i>\$193,207</i>
Bristol Bay Subregion	\$1,512,591	\$3,344,107	\$4,856,698
<i>Bristol Bay Regional Housing Authority</i>	<i>\$1,448,418</i>	<i>\$3,210,663</i>	<i>\$4,659,081</i>
<i>Egegik</i>	<i>\$15,455</i>	<i>\$35,007</i>	<i>\$50,462</i>
<i>Nondalton</i>	<i>\$33,263</i>	<i>\$63,430</i>	<i>\$96,693</i>
<i>Pedro Bay</i>	<i>\$15,455</i>	<i>\$35,007</i>	<i>\$50,462</i>
Kodiak Subregion	\$1,401,376	\$3,177,552	\$4,578,928
<i>Kodiak Island Housing Authority</i>	<i>\$1,362,230</i>	<i>\$3,101,390</i>	<i>\$4,463,620</i>
<i>Karluk</i>	<i>\$15,455</i>	<i>\$35,007</i>	<i>\$50,462</i>
<i>Ouzinkie</i>	<i>\$23,691</i>	<i>\$41,155</i>	<i>\$64,846</i>
SWAMC Region	\$3,791,238	\$8,489,757	\$12,280,995

Source: U.S. Department of Housing and Urban Development.

HOUSING ASSISTANCE

Federal COVID-19 relief acts addressed housing issues through a mix of relief funding and moratoriums of eviction and mortgage delinquency.

The CARES Act included a residential eviction moratorium (ended in August 2021) and mortgage forbearance for homeowners with loans backed by the Federal Housing Administration (FHA), U.S. Department of Agriculture (USDA), or Veterans Administration (VA).

The Coronavirus Response and Consolidated Appropriations Act established the Emergency Rental Assistance (ERA) program, providing funding for households unable to pay rent and utilities. A second round of ERA funding was authorized under the Consolidated Appropriations Act of March 2021. The Alaska Housing Finance Corporation (AHFC) administered ERA funding through the Alaska Housing Rent Relief (AHRR) program, which disbursed \$191.6 million as of December 2021. Program disbursements by region are not available as of this report's release.

Authorized by the ARPA, the Homeowner Assistance Fund (HAF) was created to prevent mortgage delinquencies and defaults, foreclosures, loss of utilities, and displacement of homeowners experiencing financial hardship due to COVID-19. Eligible fund uses included assistance with mortgage payments, homeowner's insurance, utility payments, and others. Homeowners do not have to repay funds received.

ECONOMIC IMPACT PAYMENTS (EIP)

The Economic Impact Payments (EIP) program was passed in March 2020 as part of the CARES Act. Payment amounts were calculated based on household income, with payments beginning to phase out at \$75,000 for single filers, \$112,500 for heads of household, and \$150,000 for those married filing jointly.

Two Economic Impact Payments were made in 2020 (\$1,200 and \$600) and another was made in early 2021 (\$1,400). Fully eligible individuals received a total of \$3,200 in EIPs. No further EIPs are expected.

Combined, SWAMC region residents received an estimated \$66.9 million in EIP program payments, including all three rounds of stimulus.

Table 24. Estimated Federal Economic Impact Payments, SWAMC Region, 2020-2021

Study Area	Estimated Number of Recipients	Estimated Stimulus Amount
Aleutians East Borough	2,870	\$8,015,500
Aleutians West Census Area	2,800	\$8,962,360
Bristol Bay Borough	600	\$2,000,600
Dillingham Census Area	3,615	\$11,497,280
Kodiak Island Borough	9,780	\$33,194,260
Lake and Peninsula Borough	995	\$3,186,500
SWAMC Region Total	20,660	\$66,856,500

Note: Data based on 2019 IRS filing for SWAMC region residents and includes all three individual payment rounds.
Source: McKinley Research Group estimates.

Lessons Learned

Through executive interviews and a regional resident online survey, community stakeholders were asked to share their perspectives on the impact of the pandemic on their community, business, household, or institution, as well as lessons learned from their experience. These viewpoints are organized under SWAMC's four economic development goals – A. Resource Development and Management, B. Infrastructure Development and Maintenance, C. People and Partnerships Networking, and D. Quality of Life.

A. Resource Development and Management

Seafood Industry Response

Seafood harvesting and processing are critical to the region's economy and were significantly hurt by the pandemic. At the start of the pandemic, many coastal residents were afraid the seasonal influx of harvesters and seafood workers would bring the virus into their communities. In April 2020, the City of Dillingham asked the governor to consider closing Bristol Bay's commercial fishery to protect the community from the pandemic, and some feared there would not be a 2020 season.

Regional leaders reported that processors made significant efforts to work with the communities where they are located. Processors and city and municipal leaders held weekly meetings across the Southwest region, and seafood companies collaborated with communities to develop safety procedures on how to isolate processing workers from the community. Differences in workforce composition (local employees versus imported seasonal workforce) meant seafood companies had varying abilities to isolate their workforces from surrounding communities.

In addition to municipalities and tribal health organizations, the seafood industry drove much of the regional response to COVID. Seafood industry leaders had early insight into the coming impacts of COVID-19 because of dependence on industrial reprocessing in China. The industry also had some previous experience responding to potential infectious disease outbreaks, due in part to previous preparation in recent years for a possible Ebola outbreak. Seafood companies mobilized a response as early as January 2020. Industry members quickly came together to set up a working group (Alaska Fishing Industry Safety and Health – AFISH) to share resources and coordinate with government officials. Industry stakeholders, including seafood processing companies, United Fishermen of Alaska (UFA), Pacific Seafood Processors Association (PSPA), At-Sea Processors Association (ASPA), Alaska Seafood Marketing Association (ASMI), Bristol Bay Regional Seafood Development Association (BBRDSA), and others, communicated with government health authorities, coastal communities, and harvesters, working with the State and

industry partners to develop Mandate 17, setting safety regulations that made a 2020 fishing season possible.

Some regional officials reported there were challenges due to a lack of understanding at the State and federal levels about the fishing industry and how it operated in rural Alaska. One leader noted that managing the fishing fleet is probably the most challenging part of implementing a coordinated response. Seafood associations were very helpful in fleet communications regarding compliance with emergency regulations. The fishing industry was the only industry to have individual workforce protection mandates for harvesters, who are self-employed. Harvesters were required to change everything in how they operated, from quarantines to enforcing social distancing on vessels. Many harvesters reduced their time fishing or did not fish in 2020 due to the increased regulations and difficulty finding crew. Two facilities in the region were forced to close due to COVID outbreaks in January 2021, the Trident processing facility in Akutan and UniSea's Unalaska facility.

With less harvesting activity, communities in the Southwest region also experienced a significant decline in sales tax revenues due to COVID-related business closures and reduced economic activity by consumers.

Visitor Industry Response

Stakeholders see the visitor industry playing an important role in diversifying the region's economy. The pandemic disrupted travel throughout the world, and Alaska, and particularly Southwest Alaska, was at a distinct disadvantage due to its isolation. With cruise ships banned and highway borders closed, travelers had to rely on airplanes and very limited ferry service to reach the region. Once visitors arrived in Alaska and wanted to travel to the SWAMC region, they experienced even further restrictions, including quarantine and COVID testing requirements.

These pandemic responses effectively resulted in no tourism season in 2020, and only a slight improvement in 2021 for wildlife sightseeing, and guided fishing and hunting trips. Lodges closed down or shortened their seasons. Some lodges have permanently closed due to the pandemic. One visitor industry stakeholder stated they needed to pivot their marketing program away from their traditional European and Australian clients to attract more U.S. and Alaska visitors. Some optimism exists for the 2022 season, but recovery is expected to be slow. In some communities, local accommodations were able to sustain their operations by providing housing for seasonal workers (i.e., construction, seafood processing) who needed a place to quarantine before starting their work.

B. Infrastructure Development and Maintenance

Interview participants identified several types of infrastructure, including the supply chain, transportation, and broadband internet access, as key to increasing the region's resilience.

Supply Chain and Transportation

Transportation was one of the most significant challenges in the SWAMC region during the COVID-19 pandemic. The SWAMC region is large, and subregions have different transportation connections. In response to the pandemic, village communities were given the option to adopt their own travel mandates and restrictions. Local restrictions varied, resulting in inconsistent air service and access to supplies in early stages of the pandemic. The SWAMC region's ferry service had been experiencing hardships prior to COVID-19 due to budget cuts, but the pandemic exacerbated these challenges. All communities struggled due to the limited transportation options in the region.

With the sudden rupture of transportation linkages, communities also found themselves scrambling for food and supplies. In many communities, small regional airlines are the primary or only artery for access to health services and supplies such as food and medical equipment. Communities that normally received scheduled air service were severely impacted when Ravn Alaska airline filed for bankruptcy in the first week of April 2020. Communities in the Bristol Bay region, on the Alaska Peninsula, and in the Aleutians lost their scheduled linkages to Anchorage, leaving smaller airlines with smaller aircraft to pick up where possible.

"The pandemic pointed out our community's weaknesses: air transportation was a complete failure, the reduction in ferry service was a huge shock, the just-in-time economy and supply chain disruptions are a problem for Alaska with regard to supplies, food, lumber, fuel. The cost of fuel is an issue: many villages buy fuel a couple times a year and may be locked in at high rates."

Sand Point leaders reported they had to arrange other transportation for their community's public safety officers. Residents of some communities, such as Unalaska/Dutch Harbor, resorted to coordinating their own charter flights using social media to identify passengers. For communities that typically receive air service through smaller scheduled and chartered flights, such as those in the Iliamna Lake/Lake Clark subregion or the smaller villages in Bristol Bay or on Kodiak Island, air service was halted or radically cut back at the start of the pandemic.

In response to the Ravn bankruptcy, regional leaders worked with Alaska Airlines, TSA, and the State to expedite the federal process allowing Alaska Air to provide air service from the Cold Bay airport.

Broadband Internet Access

The pandemic universally revealed the essential nature of broadband internet access and the lack of access for many residents of the Southwest region. Many critical pandemic adaptations relied heavily on affordable high-speed internet access, including remote work, access to public notices and emergency broadcasts, local government meetings, application processes for federal and other aid, and online education. Additionally, some businesses and organizations needed to shift more of their operations, such as online retail and restaurants, onto internet platforms since customers and clients could not shop or attend to their business in-person.

"Public notices don't happen through newspapers anymore. Agencies just expect that people are picking up information from the web and websites and that is a complication for Alaska."

One-third (33%) of regional resident survey respondents said difficulties with "limited or no internet access" were issues for them during the pandemic. Regional residents stated their sources of pandemic information with highest use were "emails" and "social media" (each 58%). This is an important change from decades past and something governments and organizations need to take seriously in disseminating information.

Regional leaders reported that in some communities, many households do not have internet access and many lack technical skills. In a region where monthly household internet bills can range from approximately \$100/month to as much as \$1,000/month or more, quality and equitable internet access directly affects residents' education, economic opportunities, and quality of life.

C. People and Partnerships Networking

Stakeholders identified some of the strengths and challenges in the region's response to the pandemic in the areas of leadership and communications, awareness of local powers and emergency response plans, awareness of funding opportunities, and regional partnerships.

Identified Leadership and Communications

Awareness of key authorities in the event of a crisis is essential, but many community leaders did not know which state agencies to contact when the pandemic began. Unlike a disaster with a specific location and time of event, such as an earthquake, the pandemic was an unfamiliar and sustained disaster. Many stakeholders mentioned they were not aware of a clearly identified authority serving as a center of command for disaster response. Leaders in the region initially did not know how to proceed with initiating a coordinated

"It took us a while to get organized. We kept waiting for the State to tell us what to do."

response. Some stakeholders described uncertainty about who should be monitoring conditions and providing direction during the COVID-19 crisis.

In the early days of the pandemic, communication with state and federal officials was delayed and fraught with inconsistent messaging. Healthcare organizations reported they experienced initial frustration with the rapidly changing information landscape and having to change/correct messaging almost as soon as it was distributed. One interviewee described it as a “swirling pot” of mixed messages at the very onset. Healthcare

organizations were directly receiving operational guidance from the CDC, Homeland Security, Alaska Department of Health and Social Services (DHSS) Division of Public Health, public health nursing, DHSS Alaska Section of Epidemiology, and Incident Command leaders.

“There was a communication disconnect between the State, commercial fishing companies, and the healthcare organization in developing the company’s COVID mitigation plan. Canneries worked out a State-approved plan without consideration of healthcare capacities.”

Fisheries and seafood industry representatives reported that early efforts to collaborate with the State’s incident command structures were challenging, and they found that the State of Alaska’s Unified Command initially had limited understanding of the seasonality and scale of Alaska’s fisheries.

With the pandemic being a health crisis, most local municipalities, schools, industry, and individual community members looked to their healthcare organizations for relevant, up-to-the-minute guidance. However, healthcare organizations did not have the authority to order travel restrictions, quarantines, mask ordinances, or other regulations that were needed to protect the public. The crisis required collaboration across levels of government, healthcare providers, the seafood industry, nonprofits, and members of the public.

“Overall, the State did a good job at proactively communicating with us and supporting our needs. Public health ended up being a great resource and conduit for information.”

State travel mandates were seen as the most important to keeping communities safe; however, people recognized the importance of establishing lines of communication early between local and tribal governments, the Borough (where applicable), and the State to have a meaningful say in policies and priorities.

Most stakeholders thought once the state found its footing, the DHSS Division of Public Health deserved high marks overall for providing healthcare organizations and local government officials with up-to-date, meaningful, and honest communication. The DHSS Alaska Section of Epidemiology received accolades for engagement regarding outbreaks, contact tracing, and providing healthcare organizations with prompt support.

"The pandemic forced us to become more efficient and effective as an organization. It pushed us to examine our processes and make improvements. It provided the catalyst we needed."

Those who responded to the regional resident survey on the pandemic response gave a "very effective" rating to the leadership shown by their local healthcare providers (63%), city government (52%), school districts (47%), and tribal organizations (40%), followed by the State (30%) and federal (26%) agencies.

Awareness of Local Powers and Emergency Response Plans

Some leaders were not initially aware of their community's existing emergency plans or whether they had the proper authority to create emergency orders. However, once they began working from their plans, local officials found they had a framework for more effectively managing emergency response. City managers who participated in interviews said that declaring an emergency gave their administrations more latitude in making decisions about how to redistribute funds, made it possible to have online public meetings, and provided access to public health and hospital information that was not usually available.

"Most cities, including ours, didn't even know that the disaster plan or Emergency Operations Plan that was sitting on our shelves was relevant."

"There was a lot of confusion about the proper role of municipalities, and Title 29 was not very helpful. This would be a good roundtable discussion at the next SWAMC conference, then communicate effective changes to the state delegation."

By enacting their disaster plans, officials found that emergency orders were better received by the public. Before enacting emergency operating plans, public meetings in several communities became a common forum for expressing frustration. Leaders said that, beyond the structure their plans provided, working from their disaster plans had the additional benefit of reassuring the public that officials had the

authority to pass emergency ordinances regarding mask mandates, travel restrictions, delaying due dates for utility bills, and other emergency response decisions. One community leader noted that while enacting their disaster plan "didn't make everybody happy, it created a more orderly process that calmed things down."

Healthcare organizations had operational emergency preparedness plans and/or an Incident Management Systems infrastructure in place. As was the case with local government, healthcare providers found that their emergency response plans provided structure that was beneficial during the crisis, with predefined processes for meeting expanded, emergent healthcare needs. Internal communication structures (staff

"One of the key weaknesses in the very beginning was knowledge about the authorities and the roles and who all the players were and should be."

huddles, daily staff briefings, etc.) proved essential to making prompt decisions and coordinating the provision of health services.

Awareness of Funding Opportunities

Among those who tried to access federal relief, there was a lot of difficulty with clarity of eligibility, rules, and process, as well as understanding how and where to get guidance. Regional leaders reported they initially struggled to interpret how relief funding could be used. Alaska Municipal League (AML) was praised for sharing relevant information with municipalities on sources of relief funding and the appropriate use of funds. Leaders also approved of the Department of Health and Social Services (DHSS) decision to have funding applications and disbursements of CARES funds to nonprofits handled by Alaska Community Foundation, which was more efficient than processing them through DHSS or other government agencies. This was a funding distribution structure that local leaders hope will be preserved in future crises.

Strengthened Regional Partnerships

Several stakeholders reflected that the pandemic drew their local organizations closer and advanced collaboration in ways that would be beneficial to continue. A high level of engagement arose when addressing pandemic challenges. Several key actors in the region played important roles in the fast-moving environment: municipal and tribal governments, public and tribal healthcare providers, seafood processors and industry associations, airlines, school districts, Bristol Bay Regional Seafood Development Association (BBRDSA), AML, and SWAMC, among others.

"The pandemic was a great way to get stakeholders together. Together but six feet apart."

"Something which I undervalued was the potential that established, positive inter-organizational relationships can bring to successfully navigating a crisis. Energies spent building and maintaining these relationships should never be considered wasted efforts."

to address emerging public concerns, and navigate implications for local industry – typically commercial fishing. Based on their experiences during the pandemic, some leaders stressed the need for communities to understand how to run a local EOC.

Established relationships with entities within the travel infrastructure (i.e., regional airlines, private air

In some communities, existing, positive relationships with local government, tribal organizations, and healthcare organizations were collectively leveraged to form local Emergency Operations Center (EOC) teams. EOC teams met regularly (weekly or more often, as needed) to review community infection rates, assign tasks, develop communication strategies

"The first group that stepped up and started meeting with the state and all that were the nonprofits. There wasn't a realization that really they have no authority to do anything. All they can do is just share information."

carriers, local transport entities) proved vital as the pandemic progressed, village-specific travel restrictions were enacted, and the need to distribute COVID testing and vaccines increased.

One city manager said the community, lacking a Chamber of Commerce, needed an organization focused on business support to help get information out, and credited SWAMC for its help stepping into that role during the pandemic.

Building Relationships Between Health Sector, Industry, and Communities

The pandemic reduced barriers, with industry members collaborating with their competitors, healthcare providers, municipalities, and other partners. Healthcare providers worked with commercial fisheries and other employers to mitigate the pandemic's impact on employee and community health. Routine meetings with processors were critical to keeping communities safe, allowing them to share emerging information, discuss changing policies, and logistics associated with clinical care (i.e., COVID testing, contact tracing, vaccination, medical care and quarantining for COVID-positive individuals). These working relationships were frequently described by interviewees as "positive and productive partnerships."

School district employees across the region were highly involved in community planning and response efforts during the pandemic. All regional leaders who participated in interviews mentioned they were in frequent contact with their school district to monitor local pandemic rates, discuss safety measures, and determine the need for school closures.

However, some healthcare entities in the region were faced with service expectations by industry that they could not initially deliver. Prior to the commercial fishing season, commercial fishers had to submit COVID mitigation plans to the State for review and approval. Unfortunately, the State approved plans without communicating with the medical community regarding local capacity to implement the plans.

D. Quality of Life

While the COVID-19 disaster was initially a public health issue, the wide range of issues that arose when so many aspects of normal life were interrupted made it difficult for community members and officials to know how best to respond. Residents were faced with fear and great uncertainty as to how to protect themselves and their families from COVID-19.

At the same time, many people experienced financial losses, due to business closures, and lower quality of life, due to school closures and virtual education, difficulty finding childcare, quarantines and travel restrictions, food insecurity, risk of eviction or mortgage default, concerns about utility costs, and difficulty with transportation within and between their communities. Some volunteer programs, particularly in small communities, stopped operating, impacting

ambulance services, fire departments, youth groups/clubs, elder services, recycling, and community cleanup. Isolation increased as residents followed social distancing guidelines and were encouraged to reduce their social activities and travel.

Household Economic Well-being

One in five residents said their household is much worse off financially due to the pandemic, and another 30% said they were slightly worse off. Some residents lost income due to business closures, reduced work hours, lower fisheries participation, and low salmon prices.

One-quarter of community survey respondents reported they had trouble trying to access COVID relief funds. The top challenges residents experienced included confusion about application requirements or eligibility criteria (53%), difficulty communicating with a relief agency (44%), not knowing how to find resources (44%), and not enough time to complete their applications (39%).

Housing Security

Nearly a third of the region's residents said that rent or mortgage relief programs were important to their households during the pandemic, and about one in five (21%) said the eviction moratorium was important. In response to the pandemic, several housing security programs were created at the federal and local levels, including an eviction moratorium, and rent and mortgage relief funding programs.

Food Security

As "panic buying" and supply chain disruptions affected availability of food and other household supplies, rural residents were left at a particular disadvantage. Resources were scarce in Anchorage, Kodiak, and other hub cities in the initial weeks and months of the pandemic, but impacts were more extreme in other rural communities. Many communities in the SWAMC region are reliant on scheduled air service and marine transport for food delivery to local stores; other area residents have their shopping done for them in Anchorage (either by commercial services or by family or friends) and delivered to local airlines for delivery. More than one-third of residents (36%) said that limited access to groceries had a major impact on their household during the pandemic.

Many households rely to some extent on subsistence or personal use harvest for a portion of their annual food supplies, although the degree of reliance varies across the region. The tendency to have food stored for winter likely served as an advantage to some households during the initial months of the pandemic. However, half of the region's residents who participated in the survey reported that COVID-related challenges limited their ability to harvest subsistence foods.

Some SWAMC communities used CARES Act or other funding sources to provide residents with food boxes or grocery store gift cards to ensure food security for residents. Forty percent of regional residents reported that food donations were important to their households during the pandemic, and 30% said that free or reduced meals through schools were important.

Social Connection

A strong sense of community inspired the region's residents to find ways to help one another during the crisis, such as making masks or delivering meals and groceries to vulnerable residents. However, social distancing measures increased feelings of isolation for many community members. One resident who participated in the survey said that when dropping off supplies for people in their community, they felt they "could not even talk to

"We look forward to and love our community potlatches. It brings our community closer. The community became more isolated, no communication, no family get-togethers, no friends just stopping by to see how you are!"

people; we had to knock on the door and leave. It was heartbreaking in a small community." More than half of regional residents (57%) said that separation from family and friends in their communities had a major impact on their households, and separation from family and friends outside their communities had a major impact on 69% of households.

Health Services

Some communities, by virtue of their remote locations and limited services available, faced challenges with access to reliable health care. The SWAMC region has clinics, but overburdened hospital services, and transportation restrictions amplified the public health crisis. Many residents delayed care as travel became challenging and healthcare organizations were forced to postpone non-emergency procedures (i.e., medical, dental; behavioral health). Nearly one-third of residents (30%) said that limited access to medical care had a major impact on their household during the pandemic.

Even considering reduced patient revenues, two of the five healthcare entities noted they ended 2020 in decent fiscal shape. However, they are bracing for future economic fallout related to the increase in COVID-related visits by commercial fishermen. These may not be reportable as Federally Qualified Health Clinic (FQHC) qualified visits, which could decrease funding. Current FQHC federal funding

"Our staffing challenges significantly deepened after the first year of the pandemic. Staff are leaving or not wanting to work as much. We are facing unanticipated personnel costs associated with travel employees – if we can get them."

formulas are based on strict definitions of patients and visits – definitions which do not presently consider commercial fishing as seasonal work. Staff burnout and the cost of travel employees

are other impacts still being experienced. There was consensus that even after the pandemic passes, the region's public health providers will face long-term economic impacts.

Some healthcare organizations were challenged to develop new methods of health outreach and connection that are anticipated to continue after the pandemic. One entity developed a new approach to responding to a behavioral health crisis by outsourcing a crisis line to an out-of-state entity and providing follow-up through local tele-behavioral health providers.

"Increased bandwidth is critical to build telehealth infrastructure necessary for accessing basic and specialty care. This will cost us more; we do not necessarily have the funding to do this on our own."

The pandemic demonstrated that telemedicine is a solid "must" for the future of rural healthcare delivery. One healthcare provider noted that increased internet bandwidth in the region will be critical for the success of telehealth. Additionally, the pandemic has shown the need for upgrading healthcare facilities in the region, particularly in those areas where a small clinic provides care to most of the population.

Education and Childcare Systems

Education delivery was significantly impacted during the COVID pandemic, and childcare options, already limited in many Southwest Alaska communities, were further reduced as social distancing and closures took effect. One regional leader said the community was blindsided by the impact of the childcare issue and worked with the school district to help connect residents with childcare providers, but very few providers operated in their community even before the pandemic.

"The pressure around working and childcare was very bad."

The pandemic drew attention to the importance of the education system and childcare to the economy, as many people were forced to reduce their working hours or drop out of the labor force due to a lack of childcare options and in-person school. More than half (59%) of respondents in the community survey reported their households were impacted by COVID-related K-12 school closures and the transition to distance learning, and 41% were impacted by pre-K closures (35% and 22%, respectively, said school and childcare closures were major impacts). Respondents identified key challenges their households experienced due to the pandemic, including not enough internet access or bandwidth for work-from-home or online education (49%), not enough personal space (35%), not enough devices (21%), insufficient time to help children with school work (18%), limited access to internet due to closures of public facilities (17%), and limited access to afterschool programs (15%).

Strategies to Build Future Resilience

Economic development districts, including SWAMC, prepare Comprehensive Economic Development Strategy (CEDS) documents to guide economic prosperity and resiliency in their region. CEDS bring together organizations, local governments, and private industry to articulate and plan for the economic direction of the region. The concept of economic resilience – the ability to avoid, withstand, and recover from economic shifts, natural disasters, and other events – must be incorporated into each CEDS.

SWAMC's current 2020-2024 CEDS establishes its economic development goals, objectives, and strategies. While SWAMC continues to work on many items to strengthen the region's economic development opportunities, such as mariculture development, energy efficiencies and projects, training and education, and social issues awareness, the following strategic recommendations are offered as opportunities to build the region's resiliency to meet its CEDS goals of:

- A. Resource development and management,
- B. Infrastructure development and maintenance,
- C. People and partnerships networking, and
- D. Quality of life.

These resiliency recommendations were developed after an examination of the secondary data research, resident survey results, and stakeholder interviews.

Goal A: Resource Development and Management

Strategic Recommendation 1: Maintain Functioning Commercial Fisheries

Importance to the Region	Residents and communities across the SWAMC region – including those where fisheries directly occur, as well as inland communities whose residents participate in commercial fisheries – have high reliance on fisheries for personal income that drives municipal tax revenues and regional economic activity. Impacts to commercial fisheries, particularly during key high-intensity seasons, can have significant and enduring impact on the regional and local economies.
Key Message in Future Disaster or Economic Challenge	<i>Commercial fisheries are the biggest economic driver in the Southwest Region.</i>
Strengths in the COVID-19 Pandemic	<ul style="list-style-type: none"> • The seafood processing industry was well-resourced and highly motivated for successful pandemic management to avoid capital/risk in failed operations. • Seafood companies banded together to form the A-FISH group, which coordinated with state agencies' Unified Command; developed share protocols; shared resources and ideas. • Community leadership and fishery organizations joined shared calls to hear concerns in advance of fishing seasons, particularly in Bristol Bay. • Certain communities developed shared and/or municipally managed quarantine facilities, which aided continuity and safety of seafood operations. • The fishing industry liaison from Unified Command eased communications. • The seafood industry, particularly the processing sector, signaled early and strong willingness to respect community and health mandates and needs. • Close coordination from some legislative offices aided in accessing direct information from administration decision makers.
Weaknesses/Risks Identified	<ul style="list-style-type: none"> • Some state emergency officials (Unified Command) had limited understanding of fishery specifics (i.e., difference in operation scale and seasonality). • Seafood industry mitigation plans – even for fishing operations in the offshore environment – were dependent on community/shoreside resources for support for COVID testing, managing positive cases, and transportation. • Early lack of familiarity/lack of confidence by emergency managers affected perceptions of reputable/reliable seafood industry leads. • Timing of relief funding applications and reliance on broadband for application submission were problematic for seafood harvesters. • Necessity for closed campuses/isolation from communities further exacerbated the difficult work of recruiting seafood harvesting and processing workers to remote Alaska.
Mechanisms to Retain in Future Disasters/Economic Challenges	<ul style="list-style-type: none"> • Coordination between seafood industry and community leaders, through regular meetings and shared briefings. • Coordination between seafood industry and state Unified Command, through designated fishing industry liaison and regular calls/briefings. • Shared quarantine spaces in communities.

Strategic Recommendation 1: Maintain Functioning Commercial Fisheries (cont'd)

Tools to Build Future Resilience (1- to 3-Year Action Plan)

- Develop a simple seafood industry reference guide for emergency managers, to include seasonality, scale of different industry subsectors, and trusted industry partners in emergency response.
- Assess/identify quarantine options for individual communities. Formalize/memorialize options for quarantine and/or other emergency housing in communities.
- Identify mechanism and have plan in place to activate technical/application support for relief resources and funds.

Potential SWAMC Role(s)

- Identify funding/manage development of seafood industry reference guide, including key contacts at seafood trade associations.
- Facilitate community conversations around best practice quarantine/emergency housing options.
- Develop a resource describing the regional seafood industry to aid policymakers and regional leaders with fast-paced response situations. A summary of the timing of the state's fisheries, typical openings, and description of the processing labor force in each region would help policymakers.

Essential Partners

- Pacific Seafood Processors Association
- At-Sea Processors Association
- United Fishermen of Alaska
- Community Development Quota organizations

Strategic Recommendation 2: Support Ongoing Seasonal Tourism

Importance to the Region	Seasonal tourism, including hunting and fishing, helps diversify the Southwest Alaska economy. Tourism activities are distributed across the small towns and villages of the region and flow of visitors extends over a 6-month+ period. This is an important mechanism for new dollars and entrepreneurialism in the region.
Key Message in Future Disaster or Economic Challenge	<i>Support for the tourism industry increases economic diversification, building resiliency to economic shocks in other sectors.</i>
Strengths in the COVID-19 Pandemic	<ul style="list-style-type: none"> • Enough flexibility in community response allowed operators to modify plans to sustain activity. • Nature of activity (i.e., outdoor, outspread, small groups, remote environments) allowed for relatively safe operation of tourism businesses during pandemic. • Distributed ownership model that enabled individual companies to weigh risks and operate accordingly.
Weaknesses/Risks Identified	<ul style="list-style-type: none"> • Visitor industry is highly dependent on small aviation. • Travel mandates and constraints to travel presented a complex tapestry for individual operators to navigate. • Consumer confidence in safety of travel posed challenges to travel industry broadly. • Cruise ship cancellations dramatically impacted visitor volumes. • Impacts to ferry service hampered independent travel. • Capital and relief mechanisms/ability to access funds tended to favor larger and established organizations that have more capacity to pursue funds than small operators.
Mechanisms to Retain in Future Disasters/Economic Challenges	<ul style="list-style-type: none"> • Community communication with tribal and public health to understand health risks and design travel and other mandates that allow for continued visitor activity.
Building Resilience (1- to 3-Year Action Plan)	<ul style="list-style-type: none"> • Deploy additional marketing to attract travel-ready market segments and utilize nimble methods, like social media. • Continue support of entrepreneurial ventures. • Assess current position and visitor marketing in the region by local and statewide direct marketing organizations, cruise companies, and ferries. • Engage with Alaska Native Heritage Center's Alaska Native Cultural Tourism plan to expand market awareness and promotion.
Potential SWAMC Role(s)	<ul style="list-style-type: none"> • Advocate for marketing funding for operators. • Promote responsible tourism to help minimize visitor impacts on small communities at risk from the virus. • Convene tour operators to develop regional tour packages. • Advocate for National Park infrastructure improvements. • Promote ecotourism.
Essential Partners	<ul style="list-style-type: none"> • Alaska Native Heritage Center • Alaska Travel Industry Association • Katmai Service Providers, Inc. • National Park Service • Other industry organizations such as Professional Hunters and Guide • Air carriers

Goal B: Infrastructure Development and Maintenance

Strategic Recommendation 1: Improve Broadband Capacities

Importance to the Region	Many critical pandemic adaptations relied heavily on affordable high speed internet access, including remote work, access to public notices and emergency broadcasts, local government meetings, application processes for federal and other aid, and online education. Internet access is critical to communications and business development in the 21 st Century.
Key Message in Future Disaster or Economic Challenge	<i>Internet access is essential to access relief funding and spread information, as well as business competitiveness.</i>
Strengths in the COVID-19 Pandemic	<ul style="list-style-type: none"> • In communities with adequate internet access, service allowed school-from-home and work-from-home, preventing the spread of COVID-19 while maintaining productivity. • Initiatives were already underway to improve broadband access in the region.
Weaknesses/Risks Identified	<ul style="list-style-type: none"> • Internet access in the region is of poor quality/speed and often expensive, limiting ability to work from home. • Limited technical skills hampered virtual education delivery, access to federal funding, and other programs.
Mechanisms to Retain in Future Disasters/Economic Challenges	<ul style="list-style-type: none"> • Continued and increased flexibility to provide remote education, work from home, and access information and funding.
Building Resilience (1- to 3-Year Action Plan)	<ul style="list-style-type: none"> • Capitalize on funding opportunities for broadband access improvement. • Continue support for further tribal broadband funding for Southwest Alaska communities. • Implement "Broadband-in-a-Box" plan.
Potential SWAMC Role(s)	<ul style="list-style-type: none"> • Continue to educate and advocate with Alaska's congressional delegation and State of Alaska. • Connect communities to funding opportunities and operational plans that best suit their community. • Convene stakeholders to identify strategic funding partnerships.
Essential Partners	<ul style="list-style-type: none"> • Tribal and other local governments • Internet service providers • Federal funding agencies

Strategic Recommendation 2: Improve Supply Chain Systems

Importance to the Region	The region is largely unconnected by roads and dependent on air and water transportation. Supply chain linkages outside the region are critical to providing the household goods, food, [subsistence materials], heating fuel, and medical supplies to respond to emergencies.
Key Message in Future Disaster or Economic Challenge	<i>Maintaining essential air and waterborne transportation is critical to the flow of people, goods, and fuel into the region. Infrastructure to warehouse goods, including temperature-sensitive medical supplies and food, could build resilience and mitigate food insecurity.</i>
Strengths in the COVID-19 Pandemic	<ul style="list-style-type: none"> • The region's subsistence lifestyles and rich natural resources lend resiliency in addressing food security. • Many communities were able to organize and prioritize delivery of emergency food to households. • Tribal health and community clinic infrastructure is an asset in delivery of medications and other emergency medical supplies to communities. • Local governments and transportation providers collaborated to expedite FAA approval process for new air service.
Weaknesses/Risks Identified	<ul style="list-style-type: none"> • Many communities reliant upon diesel fuel sources for energy lacked sufficient fuel storage to weather long supply chain interruptions. • No land road access in-region limited transportation options. • Capacity of community air transportation infrastructure restrained ability to handle more cargo. • Reduced ferry service further exacerbated community access. • Small air carriers were vulnerable to unexpected changes in revenue.
Mechanisms to Retain in Future Disasters/Economic Challenges	<ul style="list-style-type: none"> • Strong relationships between regional and local governments and air and marine transportation providers.
Building Resilience (1- to 3-Year Action Plan)	<ul style="list-style-type: none"> • Assess need for and capacity to provide added food and materials storage for emergency purposes. • Enhance necessary fuel storage capacity. • Seek opportunities to incorporate renewable energy solutions. • Restore, augment, and enhance regional transportation services.
Potential SWAMC Role(s)	<ul style="list-style-type: none"> • Monitor and promote energy-related funding opportunities. • Advocate for increased funding to meet the energy needs of the region. • Advocate for ferry system funding and routes serving Southwest Alaska. • Advocate for essential air service designation in the region.
Essential Partners	<ul style="list-style-type: none"> • Alaska Energy Authority • Denali Commission • Tribal and local governments • State of Alaska Department of Transportation & Public Facilities • Transportation providers and freight carriers

Goal C: People and Partnerships Networking

Strategic Recommendation 1: Maximize Capture of Federal and Other Support Funding

Importance to the Region	Hundreds of millions of dollars were made available through federal funding mechanisms to address emergency preparedness, response, and economic relief. Communities', the region's, and individual residents' ability to capture those available funds represents a crucial benefit and significant economic opportunity.
Key Message in Future Disaster or Economic Challenge	<i>Increased capacity to support awareness of, applications to, and effective spending of these available emergency resources and relief is critical and time sensitive.</i>
Strengths in the COVID-19 Pandemic	<ul style="list-style-type: none"> • Considerable federal energy was behind making funds available. • State guidance was critical and highly valued. • Tribes were able to access and distribute funds to tribal citizens. • Some communities created central organizations to efficiently distribute relief funding. • Applications and disbursements of CARES funds to nonprofits handled by Alaska Community Foundation, rather than DHSS or other government agencies, was considered an efficient process.
Weaknesses/Risks Identified	<ul style="list-style-type: none"> • Communication with state and federal officials was delayed and fraught with inconsistent messaging. • Application deadlines conflicted with seasonal work of regional residents. • People involved in seasonal work had limited or no access to communication infrastructure needed to complete applications. • Timing of relief funding applications and reliance on broadband for application submission were problematic for seafood harvesters, and other seasonal operators. • Regional residents had limited access to banking and financial institutions that were critical partners in deploying several relief mechanisms (i.e., PPP). • Relief provided through employers, or to business owners, excluded households not participating in the cash economy. • Leaders needed help identifying financial resources relevant to their communities' needs and accessing and understanding the appropriate use and eligibility of funding sources.
Mechanisms to Retain in Future Disasters/Economic Challenges	<ul style="list-style-type: none"> • Early and regular communication with state and local partnerships.
Building Resilience (1- to 3-Year Action Plan)	<ul style="list-style-type: none"> • Strengthen communication networks between tribal, municipal, and state organizations/governments. • Create a plan describing how technical assistance/funding support can be provided to residents and businesses, including key partners. • Inform federal officials of unique characteristics of the region in implementing federal funding mechanisms.
Potential SWAMC Role(s)	<ul style="list-style-type: none"> • Advocate for regional needs and funding relevant to region's needs. • Provide technical assistance to communities and regional organizations. • Develop tools and materials to build awareness of and ease access to funding. • Ensure regional CEDS encompasses all communities.
Essential Partners	<ul style="list-style-type: none"> • Nonprofit organizations acting as fiscal agents for relief funding • Financial services sector

Strategic Recommendation 2: Strengthen Emergency Operations Center Structures

Importance to the Region	Emergency Operation Centers (EOC) (or parallel structures in municipal code) are a powerful tool for enabling rapid and efficient response to emergencies or rapidly evolving conditions. EOCs help direct specific incident operations; acquire, coordinate, and deliver resources to incident sites; and share information about the incident with the public.
Key Message in Future Disaster or Economic Challenge	<i>Continued training on EOC best practices will position communities for effective disaster response.</i>
Strengths in the COVID-19 Pandemic	<ul style="list-style-type: none"> • Communities with strong EOC structures and the training to activate them quickly fared better in managing the constantly changing needs of pandemic response. • State guidance was critical and more effective with frequent communication with state and local partnerships.
Weaknesses/Risks Identified	<ul style="list-style-type: none"> • Communities had varying familiarity with and preparedness (in municipal code and training) to activate and avail themselves of the tools provided by an EOC. • In some communities, outdated municipal code hampered response and blurred clear powers of authority. • Tenure, experience, and training of municipal employees and/or tribal administrators impacted their ability to use EOC tools effectively. • Some communities lacked communications and facilities infrastructure to support an EOC.
Mechanisms to Retain in Future Disasters/Economic Challenges	<ul style="list-style-type: none"> • Structure of EOC is essential to address crises management.
Building Resilience (1- to 3-Year Action Plan)	<ul style="list-style-type: none"> • Increase training on how to activate an EOC and strengthen preparedness, including clarity on powers of authority and roles. • Conduct emergency drills to enhance preparedness. • Leverage health care providers' networks and capabilities.
Potential SWAMC Role(s)	<ul style="list-style-type: none"> • Provide resources such as emergency management toolkits or guides, updates on essential services, public health guidelines, best practices and tips for developing employee policies, and available financial resources. • Develop a list of important emergency management contacts at the State and regional levels for businesses and community members.
Essential Partners	<ul style="list-style-type: none"> • Local governments • State of Alaska (Health and Social Services, Public Safety, and others) • Federal Emergency Management Agency

Strategic Recommendation 3: Continue Building Communications between Industry and Communities

Importance to the Region	Collaboration between businesses, health care organizations, nonprofits, and other local institutions facilitate a coordinated and efficient response. Collaboration would also improve crises communications.
Key Message in Future Disaster or Economic Challenge	<i>Effective communication regarding emergency plans will ensure organizations have the capacity to meet objectives.</i>
Strengths in the COVID-19 Pandemic	<ul style="list-style-type: none"> • A-FISH established and broadened communication between seafood industry and local government. • Collaboration fostered stronger relationships within and across sectors. • School districts, health organizations, and others communicated in new ways with communities. • Health, education, businesses and government services were delivered in innovative ways (i.e., virtual learning, telemedicine, online shopping).
Weaknesses/Risks Identified	<ul style="list-style-type: none"> • Limited communication/coordination activating emergency response plans contributed to misinformation, confusion, inefficiency, and ineffectiveness.
Mechanisms to Retain in Future Disasters/Economic Challenges	<ul style="list-style-type: none"> • Continue to embrace innovations in service delivery and enhanced communications within and across sectors.
Building Resilience (1- to 3-Year Action Plan)	<ul style="list-style-type: none"> • Help build productive community networks and relationships with a broad range of stakeholders to improve crisis coordination and communication. Institutionalize or systemize, where possible, the strong collaborations between the seafood industry and municipal, tribal, and healthcare leaders in the region. • Work with partners to develop an emergency communications plan that identifies local organizations with the capacity to lead regional communications and response planning. • Develop and periodically update a list of regional and community emergency contacts to assist organizations outside the region offering assistance. • Host online versions of community emergency response plans. Through local contacts and public outreach, solicit interest from community members to participate in a volunteer program to develop an online information library for community emergency response plans. • Use common platforms for hosting webinars or online meetings.
Potential SWAMC Role(s)	<ul style="list-style-type: none"> • Serve as a hub for relaying and interpreting information flowing between the government, industry, nonprofits, and residents to support the region's economic recovery and resilience. • Help inform residents about local businesses they can support during and after a disaster.
Essential Partners	<ul style="list-style-type: none"> • Industry associations • Local businesses • School districts • Health organizations • Local government

Goal D: Quality of Life Initiatives

Strategic Recommendation 1: Enhance Childcare Services and Support

Importance to the Region	Parents' ability to work is often directly related to childcare availability. Impacts to these services can limit the number of hours parents work, reduce labor force participation, and/or drive out-migration of young families. Parents may be forced to work less than they would like to, or even decide to move away from communities without childcare options.
Key Message in Future Disaster or Economic Challenge	<i>Childcare should be viewed as critical infrastructure for workforce and community development. COVID-19 exposed more clearly the need for systemic change regarding childcare services. These services impact quality of life, but also workforce and community development. Enhanced childcare access supports labor force participation and helps families stay in the region.</i>
Strengths in the COVID-19 Pandemic	<ul style="list-style-type: none"> • Some school districts operated established public pre-kindergarten programs. • Some communities operated established Head Start programs.
Weaknesses/Risks Identified	<ul style="list-style-type: none"> • Pre-pandemic, childcare options were chronically limited in the region. • Lack of state-licensed care limits families' access to state childcare cost subsidies. • High cost of living resulted in added costs for sanitization and other supplies. • Functional capacity was reduced due to social distancing/mitigation efforts and labor force availability. • Provision of quality early education is limited by the lack of a skilled workforce.
Mechanisms to Retain in Future Disasters/Economic Challenges	<ul style="list-style-type: none"> • Enhanced support to increase access to quality, affordable childcare.
Building Resilience (1- to 3-Year Action Plan)	<ul style="list-style-type: none"> • Secure funding support for childcare infrastructure development. • Support workforce development for early childhood educators. • Develop or attract new and expanded after-school programs.
Potential SWAMC Role(s)	<ul style="list-style-type: none"> • Elevate childcare workforce development as an economic development initiative. • Advocate for additional funding to support childcare sector development. • Connect in-region organizations to childcare workforce training opportunities. • Advocate for state childcare licensure policy review to better understand implications for Southwest Alaska.
Essential Partners	<ul style="list-style-type: none"> • School districts • Childcare providers • After school program providers • Native associations/tribal non-profits • thread (Alaska's Child Care Resource and Referral Network)

Appendix A: List of Stakeholder Interviewees

- Alice Ruby, Program Manager, Bristol Bay Economic Development Corporation (Dillingham)
- Alvin Osterback, Mayor, Aleutians East Borough
- Amber Kraft, Interpretation and Education Program Manager, Katmai National Park and Preserve (King Salmon)
- Anne Bailey, Administrator, Aleutians East Borough
- Chris Hladick, Interim City Manager, City of Dillingham
- Erin Reinders, City Manager, City of Unalaska
- Frances Leach, Former Executive Director, United Fishermen of Alaska
- Jordan Keeler, City Administrator, City of Sand Point
- Justine Gunderson, Administrator, Native Village of Nelson Lagoon
- Kristina Andrew, Economic Development Program Manager, Bristol Bay Native Association (Dillingham)
- Layton Lockett, City Manager, City of Adak
- Nathan Hill, Chief Administrative Officer, Lake and Peninsula Borough
- Nicole Kimball, Vice President, Pacific Seafood Processors (Anchorage)
- Pat Branson, Mayor, City of Kodiak
- Scott Habberstad, Director of Sales and Community, Alaska Airlines (Anchorage)
- Shannon Harvilla, Principal, Naknek Elementary and Bristol Bay Middle/High School
- Sinclair Wilt, Vice President, Alyeska Seafoods (Unalaska)
- Stacey Simmons, Director of Operations, Kodiak Brown Bear Center & Lodge (Kodiak),
- Stephanie Madsen, Executive Director, At-Sea Processors (Seattle)
- Tom Panamaroff, Regional and Legislative Affairs Executive, Koniag, Inc.
- Virginia Hatfield, Executive Director, Museum of the Aleutians (Unalaska)

Appendix B: Regional Resident Online Survey Results

Table 25. Which of the following areas is your primary residence?

Borough/Census Area	% of Total	% of Population
Aleutians East Borough	14%	10%
Aleutians West Census Area and Pribilof Islands	30%	20%
Bristol Bay Borough	5%	3%
Dillingham Census Area	12%	17%
Kodiak Island Borough	21%	45%
Lake and Peninsula Borough	10%	5%
Other Alaska resident (outside Southwest Region)	8%	-
Other U.S. resident (outside Alaska)	-	
Not a U.S. resident	-	

Table 26. Did you work in any of the following boroughs or census areas in 2020?

Borough/Census Area	% of Total
Aleutians East Borough	14%
Aleutians West Census Area and Pribilof Islands	30%
Bristol Bay Borough	7%
Dillingham Census Area	11%
Kodiak Island Borough	20%
Lake and Peninsula Borough	11%
None of these	12%

Table 27. How would you rate the following entities' response to the COVID-19 pandemic in 2020? (%)

	Very Effective	Somewhat Effective	NET Effective	Not Effective	Don't Know/ Not Applicable
Local healthcare providers	63%	29%	91%	4%	5%
City government	52%	33%	85%	8%	7%
State government	30%	53%	83%	11%	6%
School district	47%	35%	82%	8%	10%
Federal government	26%	50%	76%	18%	7%
Privately owned businesses (local stores, service providers)	26%	49%	75%	13%	13%
Tribal organizations (local tribal organization, regional tribal organization)	40%	32%	72%	11%	17%
Seafood companies	36%	34%	70%	12%	18%
Native corporations (regional and village)	29%	35%	64%	13%	23%
Telecom providers (telephone and internet)	22%	38%	60%	18%	21%
Borough government	26%	31%	57%	8%	35%

Table 28. How important were the following factors in keeping your community safe from COVID-19 in 2020? (%)

	Very Important	Somewhat Important	NET Important	Not Important	Don't Know/ Not Applicable
State travel mandates for residents (including quarantine and testing requirements)	72%	20%	93%	5%	2%
State-mandated quarantine and testing protocols for other essential workers	66%	26%	93%	4%	4%
Personal adherence to behaviors such as wearing a mask, frequent handwashing, social distancing	74%	17%	91%	7%	2%
State-mandated quarantine and testing protocols for seafood industry workers coming into Alaska	73%	18%	91%	6%	3%
Local COVID testing capacity	72%	19%	91%	5%	4%
Employer COVID regulations/requirements	64%	24%	88%	7%	6%
Local COVID treatment capacity	62%	24%	86%	7%	7%
Local control over travel into your community	65%	17%	83%	13%	4%
Limitations of public gatherings	58%	22%	81%	16%	4%
Business closures	40%	39%	79%	17%	4%
Closures of public facilities and offices (recreational facilities, municipal buildings, DMV, and others)	48%	30%	78%	18%	4%
School closures	49%	27%	76%	18%	6%

Table 29. Overall, how much of an impact has COVID-19 had on your household in the past 12 months?

	% of Total
Major impact	48%
Minor impact	46%
NET Impact	94%
No impact	5%
Don't know/not applicable	1%

Table 30. How much of an impact, if any, did each of the following COVID-related changes have on your household in 2020? (%)

	Major Impact	Minor Impact	NET Impact	No Impact	Don't Know/ Not Applicable
Separation from family/friends outside your community	69%	22%	91%	8%	2%
Separation from family/friends in your community	57%	32%	89%	9%	2%
Business closures or restrictions	43%	46%	89%	9%	2%
Restrictions on travel outside your community	61%	26%	87%	9%	3%
In-home quarantine requirements for residents returning to their communities	45%	37%	82%	15%	3%
Closure of public facilities like pools, gyms, and libraries	39%	40%	79%	14%	7%
Changes in availability of air service	49%	29%	78%	16%	5%
Limited access to groceries/supplies	36%	38%	74%	22%	4%
Limited access to medical care	30%	42%	72%	25%	3%
Limited ability to travel for work	41%	27%	68%	25%	7%
K-12 school closures/distance learning	35%	23%	59%	25%	16%
Limited ability to harvest subsistence foods	24%	26%	50%	41%	9%
Childcare closures (pre-K)	22%	18%	41%	32%	28%

Table 31. How did the COVID-19 pandemic impact your household financially in 2020?

	% of Total
Our household is much worse off financially	20%
Our household is slightly worse off financially	30%
NET Worse	50%
COVID-19 had no financial impact on our household	37%
Our household is slightly better off financially	8%
Our household is much better off financially	2%
NET Better	10%
Don't know	3%

Table 32. Which of the following were challenges for your household because of COVID-19? (Select all that apply)

	% of Total
No or limited opportunities to participate in community events (church services, club/group gatherings, community celebrations, other)	56%
Not enough internet access/bandwidth for work-from-home/school-from-home	49%
Not enough personal space for work-from-home/school-from-home	35%
Not enough devices for work-from-home/school-from-home	21%
Not enough time to help children with school-from-home	18%
No or limited access to internet due to closures of public facilities like libraries, schools, and city hall	17%
No or limited access to previously used afterschool programs for children K-12	15%
None of the above	14%

Table 33. How important were the following COVID-19 relief programs for your household? (%)

	Very Important	Somewhat Important	NET Important	Not Important	Not Available	Don't Know/ Not Applicable
Federal stimulus payments to individuals and dependent children	47%	26%	73%	15%	5%	7%
Local Government Assistance: Utility relief	40%	20%	60%	14%	3%	23%
State of Alaska AK CARES Grant	37%	11%	48%	16%	5%	31%
Tribal financial assistance	32%	13%	45%	12%	8%	34%
Food donations (through a church, food bank, non-profit, etc.)	29%	11%	40%	19%	4%	36%
Local Government Assistance: Business or personal grant(s)	25%	14%	38%	19%	6%	36%
Expanded/increased unemployment insurance	24%	14%	38%	21%	6%	34%
Federal CARES Act Fisheries Assistance Grant	25%	12%	37%	14%	6%	44%
Paycheck Protection Program (PPP) support through my employer or a business I own/operate	23%	11%	34%	13%	9%	44%
Local Government Assistance: Rent/mortgage relief	20%	11%	31%	21%	7%	41%
Free or reduced meals through schools	18%	12%	30%	19%	8%	43%
Rent/mortgage relief (from the Alaska Housing Finance Corporation)	19%	10%	29%	14%	8%	49%
Local Government Assistance: Property tax forgiveness	16%	12%	27%	17%	14%	42%
SBA Economic Injury Disaster Loan (EIDL)	19%	6%	25%	18%	7%	51%
Eviction moratorium	11%	10%	21%	22%	5%	53%

Table 34. Did your household receive any other forms of relief or support?

	% of Total
Yes	13%
No	87%

Table 35. Did you experience any difficulty trying to access COVID relief?

	% of Total
Yes	24%
No	41%
Did not try to access any relief	35%

Table 36. Which of the following difficulties did you experience when trying to access COVID relief? (Among those who tried to access relief)

	% of Total
Application requirements and/or eligibility rules were not clear	53%
Did not know how to apply or find resources to help	44%
Difficulty communicating with granting agency, loan organization or municipality	44%
Not enough time to complete my application and submit online	39%
Limited/no internet access	33%
Could not provide required application documents in a timely manner	28%
The application was too difficult	22%
Application deadlines conflicted with my seasonal work	17%
Other	17%

Table 37. Which of the following sources did you use to access COVID-19 information regarding available resources? (Select all that apply)

	% of Total
Emails	58%
Social media (Facebook, etc.)	58%
Word of mouth	50%
Public meetings (in-person, teleconference, or videoconference/webinar)	45%
Television	38%
Radio announcements	34%
Community bulletin board/flyers	33%
Newsletters	32%
Local newspapers	24%
Text messages	21%
Other	8%

Table 38. Are you or a member of your household a Tribal health beneficiary?

	% of Total
Yes	50%
No	50%

Table 39. How did any household members access COVID-related testing, treatments, or vaccination through the following entities? (%)

	Yes	No	Don't Know
Tribal health entity (APIA, BBAHC, EAT, KANA, or others)	73%	25%	2%
Nontribal health entity	50%	44%	5%

**Table 40. In which industry are you employed?
(Select all that apply)**

	% of Total
Employed	
Government (local, state, federal)	30%
Fishing/seafood	17%
Local or regional tribal entity	14%
Education	11%
Native corporation	11%
Nonprofit social services	9%
Transportation (air or marine, including warehousing and trucking)	9%
Health care	6%
Maritime trades (mechanics, refrigeration, welding, net building, etc.)	5%
Accommodations (hotels, lodges, or B&Bs)	4%
Construction	4%
Restaurant/bar	4%
Visitor industry services	4%
Retail (grocery, clothing, or other stores)	3%
Mariculture	1%
Childcare	1%
Other (employed)	7%
Not Employed	
Retired	6%
Unemployed	4%
Stay-at-home parent or caregiver	2%
Don't know	1%

Is there anything else about your experienced during the 2020 COVID-19 pandemic you'd like to share? (Verbatim Responses)

- A lot of things weren't applicable to me (eviction restriction, rent relief, etc.), but I saw how important they were to people in my community and wish I could have expressed that some way in this survey. I felt like I was saying "don't know" or not saying something was important just because I didn't use it.
- All help is appreciated as we are on an island with no store with less than 200 people, but the advantage is that we are on our own island with less than 200 people.
- Because I was an essential worker, and chose not to work, I received no unemployment. Also, my salary supported my business, and because I operated it at a loss, was not able to receive any funding.
- Chinese will pay for what they did.
- Continuing unemployment subsidies have hindered our attempts to hire employees.
- COVID shut down the island and closed many businesses and several could not reopen. Others struggle to make up the lost revenue. An alternative plan besides totally shutting down the island for the length of time it was should have been considered and implemented sooner. The Netflix people were allowed to come to film a show, but still not other travelers; not sure what the difference was.
- Critical and noncritical services were greatly impacted by the lack of volunteers to support the service. Residents were averse to volunteering due to fear of exposure to COVID. Services that were impacted were the ambulance service, fire department, youth groups/clubs, elder services, recycling projects, community clean-up, and other similar programs/projects.
- Encourage all people to be vaccinated including children. Require masking all over. Make vaccinations mandated to travel.
- How I wish for the lifting of restrictions, like opening businesses, public places, especially church done sooner and number of people meeting.
- I and my family are lucky to have gained rather than lost as so many have. I commend all those serving on the front lines throughout. Only with their continued service will we get past these trying times.
- I could not sleep. I would wake up every 3 hours. Praying for everyone; the news was not helping; it made it worse. The stress of it was so overwhelming, every time I went to work, the anxiety would intensify all over again, with all the stress of having to stop community gatherings. We look forward to and love our community potlatches. It brings our community closer. I am a big hugger, like some people shake hands -- I give hugs. This made me feel like I was a foreigner; it made me so sad, like I was not welcome anymore. I had to wear a mask to drop off supplies for community members. We live in a village with 157-250 depending on the fishing season. It even got worse -- we could not even talk to people, we have to just drop off supplies and knock on the door and leave. It was heartbreaking in a small community and degrading for all of us. The community became more isolated, no

communication, no family get togethers, no friends just stopping by to see how you are! The isolation causes you to start second-guessing yourself and brings on a deep depression within your soul and heart! I was raised with giving love, honoring, respecting others. I am a very happy person; I feel like I lost that; I will not ever get it back. COVID-19 really took it out of me. I believe in honoring yourself, respecting yourself, loving yourself, and believing in faith. My quote "I LOVE YOU ALL IN A NEVER-ENDING CIRCLE."

- I feel as if too many people, including our local and state government, are not taking the Delta variant as seriously as when the pandemic first began. The increase in positive numbers is disheartening.
- I feel that the Kodiak community did a fantastic job of informing us about all aspects of COVID issues, and still is. Islanders have embraced mask wearing and other protections quite readily with no instances of negative reactions. I also commend local seafood processors for their proactive stance. I believe strongly that COVID threats and necessary protections are not going away for a long time.
- I operate a wilderness lodge that did not operate in 2020. We will operate in 2021.
- I think the community of Unalaska/Dutch Harbor did a fantastic job of trying to keep our community members safe. It was challenging at times, but it was worth it.
- I think the government's response to the COVID pandemic will go down in history as the worst thing that has ever been visited on the American people. The lockdowns, the school closures, mask wearing, etc., has all been a panic response to what has been proven to be a 99 percent and greater survivable virus. NOTHING has been said about the suicides, drug use, alcohol abuse, child abuse etc. that has resulted from the lockdowns and school closures. There are early treatments that could have saved thousands of lives. My experience was just watching in awe of the panic that the government and media induced in people. And watching in disbelief at the people who are truly sheep and believe everything they are being force-fed on social media and television and mainstream media.
- I'm originally from the Pribilof Islands but reside full-time in Anchorage. The entities in my hometown have gone above and beyond to restrict travel to its former residents at a rate that is wholly unnecessary. Community members continue to berate and shun those who aren't likeminded in their thinking and aren't willing to accept other people's differences in opinion. It's sad how divisive a single issue can affect those who live urban versus those who live rurally. I know it's a public health concern, but when we're already on track to receive vaccines, you'd think that the restrictions would be lifted -- provided individuals have already received the vaccine. The municipality killed more business than we've gained. Anchorage's local government is a sham and it speaks for itself.
- Inability to help my kid in the city with local grocery services. Lack of goods due to rural location. Truly no access to outer world without internet and travel restrictions caused choices between caregivers/ parent to kid responsibilities/ personal care and community services.

- It impacted the community where they were so scared of the pandemic that there was a lot of animosity amongst the village with having to quarantine and having to be tested and the travel to get health care and coming back to quarantine.
- It was terrifying to respect all boundaries and had to wear masks in public places and during lockdown or hunker-down. Our Village Council did a tremendous job for their immediate response to prevent it from spreading.
- It would have been nice to have the State's support on our local village mandates. We had issues with one of the Air Taxi's, even though we had village lockdowns, the air taxi was still bringing people to and from our village. The air taxi was aware of our village lockdowns; it all came down to making money for the air taxi.
- Just wasn't able to visit my mom and siblings in another state.
- Local restrictions were excessive and caused a lot of anger and depression. Many people ended up leaving town.
- Masks didn't work. We followed all the protocols and still caught it.
- More professional presentation of local mandated quarantine information distribution at the airport.
- Mr. Lockett made it quite difficult to get on and off the Island during the initial outbreak of COVID-19. My business was severely impacted by this. I understand why those measures were put in place, and he did keep everyone on the island safe and COVID-free, even the most vulnerable members of our community. COVID-19 travel restrictions put in place on Adak cost me 50% of my business income in 2020. I am glad the travel restrictions have been relaxed as we learn more about the virus. Even after my substantial Income loss in 2020, I applaud our city manager for his hard work and tireless vigilance in keeping our community COVID -19-free. Thank You.
- My business would not still be here without PPP, AK CARES grants, and local grants. However, I applied for and received far less than I now know I could have asked for, and I wish there were an additional opportunity for funding. I feel like the state response to COVID was unorganized and not helpful -- state employees were instructed to continue working, masks were not required until far into the pandemic, and even at the municipal level, businesses were often left to make their own decisions regarding mask requirements.
- My entire household tested positive in January when my husband and I were working for the seafood industry here in Akutan. Our kids were living with us in the plant; we went home to the village after the breakout of COVID happened.
- One of the local police officers that was the go-to guys here seemed not to take the whole thing seriously at all...
- One thing that bothers me is that the Alaska Native Medical Center runs out of the elder's flu shot. In this time of COVID, I think all should be done to protect elders and if our health care cannot provide this simple flu shot for elders something should be done about this.
- Our local mandates were in place for the duration of the last year, with a line to call if there were people/businesses not complying. There seemed to be NO repercussion for non-

compliance including restaurants and businesses that did not enforce the mask mandate. There should have been consequences.

- Pandemic should not be political.
- People going overboard -- excess shopping for some of the supplies and foods.
- Restricting social activities and creating a small social bubble were very difficult. Self-quarantine and waiting for test results were at times close to a month; working from home was a real challenge. Workplace COVID safety protocols changed the communication with staff, clients, and communities to a virtual platform. Church and public meetings went virtual. Changed personal schedules going to the post office and grocery store when less crowded.
- SWAMC has done a great job communicating and providing information to communities.
- The city of Unalaska made good efforts to keep COVID to a minimum but did not make it clear to people coming into town off the planes that they must quarantine. People did not take it seriously and many ignored the quarantine because of the casual handing out of paper flyers to people coming off the planes into the airport. The city mandates could have been presented to the public coming off the planes in a more professional manner. Many people did follow the city mandates, but many did not and I think it was mostly due to the casual manner the city mandate information was handed out to people coming off the plane. Sloppy airport protocols.
- The issue with state support for our local village mandates. We had issues with the air taxis not following our local village lockdowns. One local air taxi was still bringing people in and out of the village when we had a lockdown only allowed for emergency/medical travel only.
- The lack of a unified federal response needlessly caused the United States to lead the world in the number of deaths. It also caused severe damage to the economy.
- The pressure around childcare and working from home was very bad.
- The state mandates were extremely difficult to interpret in order to keep our village safe from outside influences! The fisheries interpreted them as having carte blanche and being exempt from having to do the things to keep the village safe. Not all of them, but some of the lodges, from outside, had the same attitude! There was no way to perform enforcement of the mandates. Our cannery, OBI, operated as a Pickup Station only, last year, but is planning to operate in full capacity this year. Even though the virus is on the rise, even with the vaccine, I am not seeing the governments doing anything about trying to keep the villages safe.
- The State of Alaska did very good up to this year when the governor did away with the emergency declaration!
- There was a lot of confusion about the proper role of municipalities, and Title 29 was not very helpful. This would be a good roundtable discussion at the next SWAMC annual conference. There needs to be some type of debriefing to learn from each other - the good, bad and ugly or mostly confusion. That would be a great role for SWAMC to facilitate and communicate effective changes to state delegation. Thank you.

- This has been challenging and changing the way we live! Consistently worrying about our elders, children and others to not get sick and to stay strong and continue to love and support each other!
- This has been horrible.
- Took in grandchild so that mother can work, and grandchild can have an education.
- Very thankful for receiving the Alaska Cares Act Grant in 2020; this grant was vital for my small business during the pandemic.
- Was disappointed that the community of Kodiak didn't grant economic relief to seafood businesses. The State of Alaska SBA loan program was at capacity in less than 24 hours and didn't provide nearly enough money to impacted businesses. Greatly appreciated local testing and vaccination efforts and a special thanks to Tribal Health for everything they did to keep us all healthy and safe.
- We are thankful for all the help financially that is still going on through tribes and Native corps. The Aleut region was well-prepared and for the most part kept people safe from catching the virus.
- When COVID started, our community (Dillingham) imposed severe lockdown measures for residents and seafood workers alike (mandatory travel form, quarantine...). The 2020 fishing season went well - some workers tested positive, but they quarantined or left town, and no local folks ever tested positive. We had NO local cases at all until September 2020, and at that time only one. Restrictions (mandatory testing prior to flying into town, quarantine, travel form, etc.) are STILL in place for nonvaccinated people. Many local businesses, especially those affiliated with tourism, sportfishing, sport hunting, are suffering. Many have said that if they cannot operate this year, they'll lose their business. Many are choosing not to come to DLG at all, thus affecting the local economy. Many residents are operating from a position of fear. As far as I know there were only one or two hospitalizations from DLG in the past 15 months. Federal and state relief payments are good, but it's beginning to look like local government and local fishermen are happy to stay locked down since they're being well taken care of financially. Local folks have delayed outside medical appointments and travel to see family due to the restrictions upon returning to town. I'm all for being careful, but believe we need to allow healthy people to return to normal life and work. Thanks.

Appendix C: List of Regional Plans

United States

- City of Madelia, Minnesota Economic Resiliency Plan, Region Nine Development Commission Planning Staff:
- <https://www.rndc.org/wp-content/uploads/2018/08/Madelia-Economic-Resiliency-Plan-2018-FINAL.pdf>
- Economic Resilience Planning Evaluation Tool, U.S. Department of Housing and Urban Development: <https://files.hudexchange.info/resources/documents/Economic-Resilience-Planning-Evaluation-Tool.pdf>
- Economic Resiliency Strategy for the Future, Snohomish County Office of Economic Recovery and Resiliency:
- <https://www.snohomishcountywa.gov/DocumentCenter/View/78754/Economic-Resiliency-Strategy-for-the-Future?bidId=>
- Disaster Resilience, A National Imperative, National Academy of Sciences: <https://www.nap.edu/catalog/13457/disaster-resilience-a-national-imperative>
- Regional Resilience Toolkit, Environmental Protection Agency:
- https://www.epa.gov/sites/default/files/2019-07/documents/regional_resilience_toolkit.pdf

Alaska

- Southeast Alaska Resilience Plan, Southeast Conference:
- <https://www.seconference.org/wp-content/uploads/2021/02/Getting-to-2022-Short-Term-Southeast-Alaska-Resilience-Plan-updated-Feb-8.pdf?4db2ab&4db2ab>
- State of Alaska Emergency Operations Plan, State of Alaska Department of Military and Veterans Affairs, Division of Homeland Security & Emergency Management: <https://www.poa.usace.army.mil/Portals/34/docs/AKdistrict/StateofAlaskaEmergencyOperationsPlan2011.pdf>
- State of Alaska Disaster Response Plan, State of Alaska Department of Environmental Conservation:
- <https://dec.alaska.gov/spar/ppr/contingency-plans/disaster-response-plan/>

Anchorage

- *Anchorage Comprehensive Emergency Operations Plan*, Municipality of Anchorage: https://www.muni.org/Departments/OEM/Plans/Documents/2015_CEOP%20protected.pdf
- *Anchorage Economic Resiliency Task Force Recommendations*, Economic Resiliency Task Force: <https://aedcweb.com/wp-content/uploads/2020/05/ERTF-Recommendations-Letter-to-Mayor-Berkowitz.pdf>

SWAMC

- SWAMC Goals, Objectives, and Strategies - 2021 Annual CEDS Update, Southwest Alaska Municipal Conference:
- <https://swamc.org/wp-content/uploads/2021/06/2021-Goals-Action-Plan-Update.pdf>
- "Broadband-in-a-Box" for Tribal Last Mile, Alaska Tribal Broadband, LLC.: <https://swamc.org/wp-content/uploads/2021/09/SWAMC-Broadband-Plan-2021-FINAL.pdf>

Kodiak

- *Kodiak Emergency Operations Plan*, Kodiak Emergency Services Organization, Local Emergency Planning Committee, and Emergency Services Council: <https://www.city.kodiak.ak.us/emergencypreparedness/page/breakdown-emergency-operations-plan>
- *Kodiak Rural Regional Comprehensive Economic Development Strategy*, Kodiak Area Native Association:
- <http://kodiakhealthcare.org/wp-content/uploads/2020/05/DRAFT-Kodiak-Rural-Regional-CEDS-2015-2020-2020.pdf>

Dillingham

- *City of Dillingham Emergency Operations Plan*, City of Dillingham: https://www.dillinghamak.us/sites/default/files/fileattachments/public_safety/page/4571/dillingham_eop_final2.pdf

Aleutians East

- Akutan Tribal Council Local Economic Development Plan, University of Alaska Center for Economic Development: <https://static1.squarespace.com/static/59f6b60bcf81e02892fd0261/t/5f4d80b5f411ba612>

[1b30afa/1598914745053/Akutan+Tribal+Council+Local+Economic+Development+Plan-Final.pdf](https://static1.squarespace.com/static/59f6b60bcf81e02892fd0261/t/5f4d805de159c33203523c87/1598914662713/APIA+Regional+Economic+Development+Plan-Final.pdf)

- *Aleutian Pribilof Island Regional Economic Development Plan*, University of Alaska Center for Economic Development:
- <https://static1.squarespace.com/static/59f6b60bcf81e02892fd0261/t/5f4d805de159c33203523c87/1598914662713/APIA+Regional+Economic+Development+Plan-Final.pdf>

Aleutians West

- Aleutian Pribilof Island Regional Economic Development Plan, University of Alaska Center for Economic Development:
- <https://static1.squarespace.com/static/59f6b60bcf81e02892fd0261/t/5f4d805de159c33203523c87/1598914662713/APIA+Regional+Economic+Development+Plan-Final.pdf>
- City of Unalaska Emergency Operations Plan, Unalaska Department of Public Safety: <https://www.ci.unalaska.ak.us/publicsafety/page/emergency-operations-plan>
- St. Paul Island Comprehensive Economic Development Strategy: 2017-2022, Agnew Beck Consulting and Northern Economics, Inc.: https://stpaulak.com/wp-content/uploads/2021/12/St_Paul_Island_CEDS_7-13-17.pdf

Lake and Peninsula

- Lake And Peninsula Borough, Resolution 10-10, Emergency Operation Plan: https://www.lakeandpen.com/UserFiles/Servers/Server_745787/File/res%2010-10.pdf

Bristol Bay

- *Bristol Bay Comprehensive Economic Development Strategy: 2017-2021*, Bristol Bay Native Association, Economic Development Program: https://bbna.com/wp-content/uploads/2021/03/2021_CEDS_UPDATE_FINAL_3-22-2021_reduced.pdf

McKINLEY RESEARCH GROUP, LLC

3800 Centerpoint Drive, Suite 1100 • Anchorage, AK 99503 • (907) 274-3200
801 West 10th Street, Suite 100B • Juneau, AK 99801 • (907) 586-6126

info@mckinleyresearch.com • mckinleyresearch.com