

APPENDICES

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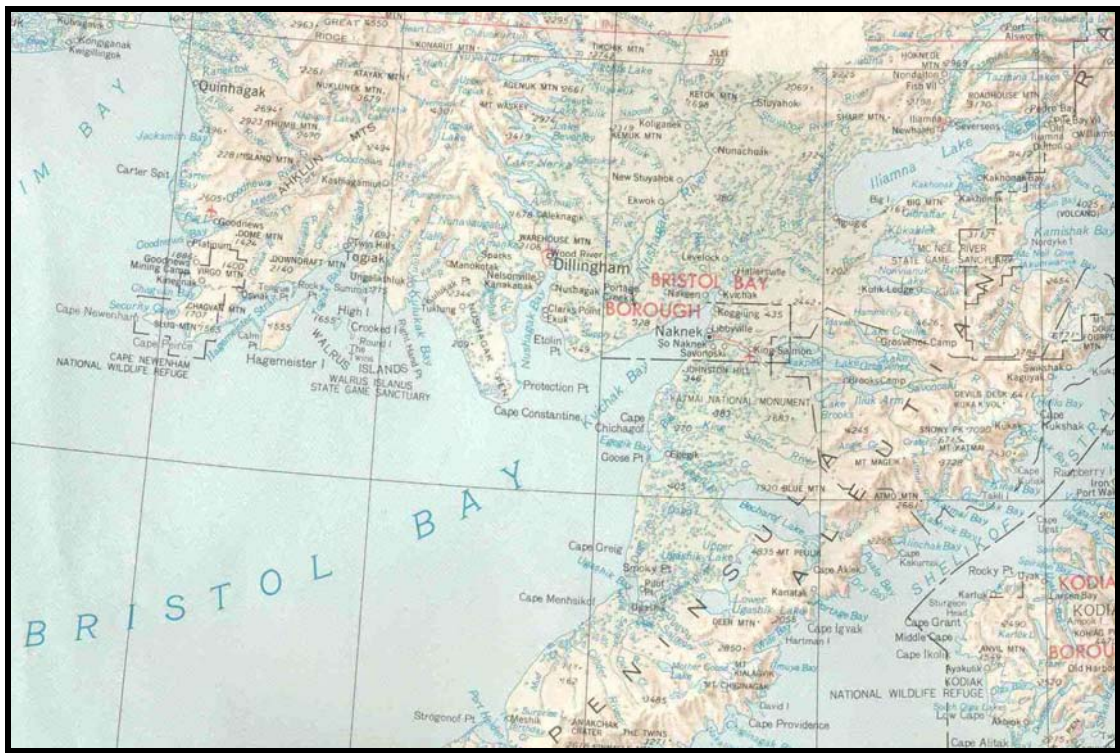
APPENDIX A: THE BRISTOL BAY REGION

The Bristol Bay Region

Bristol Bay is a world unto itself—a stunning landscape of mountains, lakes and rivers. Within the region are five national parks and wildlife refuges, designated wilderness areas, as well as a number of state parks and state wildlife protection areas. Bristol Bay is known for its abundant fish and wildlife, including salmon, bear, moose, caribou, walrus, and whales. Recreational fishing and hunting draw many people to the region in the summer and fall.



Aleut, Alutiq, Athabascan, and Yup'ik cultures are all represented in Bristol Bay. Traditional practices, languages, crafts, languages, and subsistence lifestyles continue to be a strong part of community life. The region also continues to be influenced by Russian culture, and Russian Orthodox churches are present in many communities. Bristol Bay's rivers and streams support the world's largest red salmon run, and the commercial salmon industry has been a dominant influence on local culture and economy.



Regional Economic Conditions

For over a century, Bristol Bay and Alaska's wild salmon industry dominated world salmon markets. Beginning in the mid-1990s, reduced runs and competition from farmed salmon have combined to dramatically reduce earnings from the salmon industry. As a result, the entire Bristol Bay economy has experienced severe disruption. In three out of the last five years, the Bristol Bay area has been declared an economic disaster area. In 1997 and 1998, both the state and federal governments declared the area an economic disaster because of failed salmon returns. Then in 2001, the region was declared a State economic disaster because of not only low salmon returns but weak salmon prices. The list below summarizes the current conditions of the regional economy:

- In smaller Bristol Bay villages, there are few cash jobs, and only a handful of year round jobs with a growing demand for cash services (public services, private goods)
- Substantial reliance on government programs (social services, public works)
- Subsistence activities remain strong
- An economy in transition: from resource based (fishing, subsistence), to service based (tourism, government services). Skills needed to succeed in these two sectors are quite different.
- Lack of entrepreneurial models and experiences
- Of the jobs available in the region, relatively few are taken by local residents, due to conflicts with other activities, or lack of training. This is particularly true regarding tourism related jobs.
- With declines in traditional economic sectors, support is growing in the region to explore the area's potential for oil and gas and for mining, as well as to encourage new approaches to commercial fishing and tourism.

Regional Social Conditions

Table 1 provides a comparison between selected Bristol Bay communities and Anchorage and Alaska. Note that in each of the urban communities, the median household income is significantly higher than in Bristol Bay villages. The percentage of people below the poverty line is much higher in the villages. In addition, the percentage of the population under the age of 18 is much higher in the villages than the state as a whole. This demographic has many implications for the range and level of public services.

The list below summarizes characteristics of the region's social setting:

- Close family ties, access to subsistence resources and other dimensions of village life are strong attractions; at the same time, like all of rural Alaska, Bristol Bay communities have high levels substance abuse, suicide, accidental death, and domestic violence.
- The lack of jobs and business opportunities mean a large percentage of young people leave the region to pursue educational opportunities and find a way to support themselves and their families.
- Deep ties to the land and traditional cultural values, but weakening as generations go by.

- “Two worlds problem”—again, like all of rural Alaska—there is frequently a gap between the expectations of villages and those of the world outside. Deep cultural differences, due to a very rapid shift over the last hundred years from traditional subsistence lifestyles to a cash economy, set up divisions between generations within the village, and create challenges for community development.

Regional Resilience

A resilient community has the ability and the resources to adapt to changing circumstances. Resiliency is influenced by the natural environment, attitudes towards change, community cohesiveness, cooperative problem solving, leadership resources, available infrastructure, human resources, and economic structure and diversity.

Despite the challenges, Bristol Bay continues to be home to a resilient culture and the residence of many talented and energetic people who have great affection for their land and who have prospered in this area for generations.

Regional Population

Table 1 lists the Bristol Bay communities with their most recent population estimates, percent of part or all Alaska Native, median household income, percent of adults not working, percent of individuals in poverty, membership in regional organizations, and classification as distressed or non-distressed communities by the Denali Commission.

Dillingham is the largest community with an estimated population in July 2003 of 2,373. Only eight of the Bristol Bay communities have an estimated population of 200 residents or more. Twelve Bristol Bay communities have been classified as “distressed” according to criteria set by the Denali Commission. The percent part or all Alaska Native ranges from a low of 30.1 percent in King Salmon to a high of 96 percent in New Stuyahok. Median household incomes range from a low of \$19,583 in Kokhanok to a high of \$92,297 in Chignik Lagoon. According to Census 2000 the percent of individuals 16 years and older that are working ranges from a high of 73.8 percent in Egegik to a low of 28.4 in Iliamna. Across Alaska as whole, 71.3 percent of individuals 16 years or older participate in the workforce.

Population estimates for June 30, 2003 show that the population of the region is centered in the community of Dillingham, which has an estimated population of 2,373 (DCED 2004). As of June 30, 2003, the Dillingham Census Area has an estimated population of 4,912, the Bristol Bay Borough estimated population was 1,105, and Lake and Peninsula Borough’s population was estimated to be 1,628. Net migration is the net effect of in-migration and out-migration on an area’s population in a given time period, expressed as an increase or decrease. All three areas lost population in terms of net migration between April 1, 2000 and June 30, 2003. The Dillingham Census Area, Bristol Bay Borough, and Lake and Peninsula Borough lost 184, 205, and 213 residents, respectively.

Regional Income

Decrease in Personal per Capita Income

Per capita personal income is a measure of economic well-being. The amount of goods and services that people can afford is directly related to their personal income. At one time Bristol Bay Borough's personal per capita income was more than twice as high as the U.S. personal per capita income. However, the gap between the Bristol Bay Borough and the U.S. has closed. Furthermore, the Dillingham Census Area and the Lake and Peninsula Borough have not been able to keep pace with either the U.S. or Alaska.

In 2002, the per capita person income (PCPI) for Alaska was \$32,899 (Figure 1). Alaska ranked 12th in the U.S. and was 106 percent of the PCPI national average. This compared to the Bristol Bay Borough which had a PCPI of \$39,474, ranked second in the State. This PCI was 128 percent of the national average. This compared to the Dillingham Census area which had a 2002 per capita personal income of \$27,323 placing it 17th in the state. Dillingham's Census Area's PCPI was 88 percent of the national average of \$30,906 and reflected an increase of 1.2 percent over 2001.

In contrast, in 2002 in the Lake and Penn Borough in 2002, the PCPI was \$21,783 which ranks Lake and Peninsula Borough as 25th of the 27 boroughs or census areas in Alaska. The PCPI was 70 percent of the national average and 66 percent of the state average. The 2002 PCPI reflected an increase of 2.9 percent over 2001.

Components of Personal Income

Personal income has three components: earnings; dividends, interest and rent; and transfer payments. Earnings as a component of total personal income for the State of Alaska accounted for 68.2 percent of total personal income (Table 3). In 2002 in Bristol Bay Borough, earnings

accounted for 66.4 percent of total income. In 1992, earnings in Bristol Bay Borough accounted for 81.8 percent of total earnings. Earnings in 2002 in Dillingham Census Area accounted for 69.0 of total personal earnings, while in Lake and Peninsula Borough, they accounted for only 58.3 percent. In 1992, earnings accounted for 71.8 percent.

Transfer payments are income payments by government and businesses to individuals and nonprofit institutions for which no current services are performed. Transfer payments include retirement and disability insurance benefit payments, medical benefit such as Medicare and Medicaid, income maintenance benefits, unemployment insurance benefit payments, veterans benefit payments, and federal education and training benefits. Transfer payments in 2002 accounted for approximately 16 percent of total personal income for the State of Alaska. In contrast to the state, transfer payments accounted for a greater percentage of per capita personal income for the Bristol Bay region (Bristol Bay Borough: 16.9 percent; Dillingham Census Area: 20.2 percent; Lake and Peninsula Borough: 27.8 percent).

Regional Subsistence and the Village Economy

In addition to its cultural significance, subsistence is the foundation of many village economies, because there are few opportunities in some villages to earn cash. Subsistence offsets the high cost of living in villages within the Bristol Bay region. One of the paradoxes of subsistence is

that today cash is needed to engage in a subsistence lifestyle. According to a 1999 report by the National Resource Council (NRC) on CDQ communities, a household income of at least \$20,000 to \$25,000 per year is needed to engage in subsistence.

The NRC report points out that the subsistence economy today runs on snow machines, motorized aluminum fishing vessels, four wheel all terrain vehicles, manufactured fishing and hunting gear, fossil fuels, camping equipment, imported cold weather clothing, and even airplanes. According to the NRC, integration of cultural traditions with modern technologies and goods is taking place in some Western Alaska communities. Changes in lifestyle including settlement patterns in the villages, improved safety, and health, the availability of technology, and the desire for other market goods that reduce the time available for subsistence activities have contributed to the increasing importance of cash for participating in subsistence lifestyle.

In order to maintain a subsistence lifestyle, numerous activities and sources of income are combined: commercial fishing and hunting, making of crafts, dividends from Native corporations and the Alaska Permanent Fund, participation in the National Guard, state construction projects, loans from government agencies and fiscal institutions, firefighting, and transfer payments from Aid to Families with Dependent Children. In many Alaska communities the Alaska Permanent Dividend Fund is the most dominant and fastest growing transfer payment. In some villages, the Permanent Fund can exceed 20 percent of the total income from all sources. However, transfer payments like the Permanent Fund or the longevity bonus are the result of public policies which can change significantly almost over night.

The goal of an economic development strategy is to bring outside dollars into a community and then to keep those dollars circulating from one person to the next, as long as possible within the community. In Village Alaska dollars move out at almost the same rate they move in. For example, many individuals in rural Alaska have no choice but to spend their Permanent Dividend checks in hub communities like Dillingham or in Anchorage. While this may be good for Dillingham and Anchorage, it is not good for the local community.

Subsistence is an important economic activity for many households. However while subsistence may provide economic benefits, the cost of living (particularly fuel and energy costs) is still a major concern in Bristol Bay communities threatening the sustainability of communities that do not have a strong cash economy. One reason that utility costs in villages are so high is because fixed maintenance and operating costs are divided among a small group of people.

As a local economy grows and becomes more developed, there may be more opportunities to produce goods and services locally. According to the EDA, economies have two major sectors:

The **traded sector**, which is that portion of the economy such as commercial fishing and processing that competes in markets beyond the immediate area. These activities pull money into the local economy and help generate income to support the **non-traded** portion of the economy like general stores, video stores, beauty salons, snow machine repair. A problem encountered over and over again in Alaska communities is that if there are not enough jobs in the traded sector bringing money into a community, jobs do not develop in the non-traded sector. This is one reason why it is so difficult for villages that rely heavily on subsistence to develop non-traded businesses and jobs.

In a study conducted by Northern Economics, Inc. evaluating the socioeconomic impacts of the CDQ program it was found that while the number of jobs may be considered a measure of

“success” of economic progress, the goal of many communities in Western Alaska may include the desire to maintain subsistence activities.

Regional Employment

Employment data are usually considered an important component of a regional or community profile and economic development planning. Employment data can provide the foundation of the economic analysis of your community or region. A community’s economic activity and well-being is often a function of the number and types of jobs available.

Change in the number of jobs over time is often considered a key measure of economic performance. In Alaska communities the type and availability of subsistence is also a foundation to the local economy. In many Alaska communities, however, it is not just the number and type of jobs available that is important, but also whether or not these jobs can be shared by more than one individual and whether or not the job is structured so that workers can participate in subsistence activities.

Table 4. Personal Income for Alaska, Bristol Bay Borough, Dillingham Census Area, and Lake and Peninsula Borough, 1999

Place	Per Capita Personal Income		Total Personal Income		Components of Total Personal Income		
	(\$)	Rank	(\$1,000s)	Rank	Dividends, Earnings (%)	Interest, and Rent (%)	Transfer Payments (%)
Alaska	32,799	12	21,040,260	47	68.2	15.8	16.0
Bristol Bay	39,474	2	45,040	25	66.4	16.7	16.9
Dillingham CA	27,323	17	136042	17	69.0	10.9	20.2
Lake and Peninsula	21,783	25	34,569	26	58.3	13.9	27.8

Source: U.S. Bureau of the Census, Census 2000.

Source: Values calculated by Northern Economics, Inc.

Regional Challenges

Geographically Isolated

The communities of Bristol Bay are geographically isolated. Few roads connect the major communities within the Dillingham Census Area, Bristol Bay Borough, and Lake and Peninsula Borough. Except for roads between Dillingham and Aleknagik, King Salmon and Naknek, and a bridge and road upgrade between Nondalton, Iliamna, and Newhalen, there are no other roads connecting the communities. The small size and remoteness of most Bristol Bay villages increases the cost of living and limits opportunities for market activity.

Transportation

Transportation is provided via Anchorage by frequent small commuter aircraft flights and jet flights to Dillingham and King Salmon. Travel between the communities is similarly provided by small commuter aircraft, floatplanes, snowmachine or by boat. The primary shipping method is tug and barge or small transfer vessels. Shipping is concentrated in small port facilities at Naknek and Dillingham, and the shipping season lasts about 120 days.

Federal and State Disaster Area

The Bristol Bay salmon fishery is the world's largest wild salmon fishery, and historically it has been one of the most lucrative in terms of harvest and product value. However, in 1997 and 1998, expected runs failed to appear and, in spite of diminished supply, prices paid to harvesters fell to new lows when adjusted for inflation. Federal disaster relief funds were provided to the region in both 1997 and 1998 as ex-vessel revenues fell to less than a third of the average over the previous five years.

The severity of the Bristol Bay salmon crisis is demonstrated clearly by the decline in ex-vessel value from 1978 through 2002. Figure 4 shows that the inflation adjusted ex-vessel value has fallen from the 1980's trends of over \$200 million to less than \$25 million in 2002.¹

In more recent years, harvests and revenues have improved somewhat, but prices remain at historic low levels and the prospects for improved prices, due to huge increases in farmed salmon production, are slim. Lack of economic growth, out-migration, and the decline of traditional fishing related resource employment resulted in hardships for many families in Bristol Bay communities. Remote rural communities are in a constant state of flux. Political and programmatic boundaries seldom coincide with economic boundaries. Workers, businesses, and consumers readily move across jurisdictions taking their economic impacts with them. This situation is particularly true of the Bristol Bay area where economic conditions and forces move resident and non-resident workers across political boundaries.

Decline in Local Tax Revenues

As shown in Figure 4, the landed ex-vessel value of landings has declined almost 90 percent. Since some boroughs earn approximately 3 percent of ex-vessel value in fish taxes, community revenues have similarly fallen. In Bristol Bay Borough, for example, budget reserves earned from fish taxes have fallen from \$27 million in 1998 to just \$3 million in 2001 (pers. comm., George

¹ Huskey, L., and Morehouse, T.A. Development in remote regions:What do we know? Arctic, 1992, 42, 2, 128-137;p.134.

Castenada). If this trend continues, community governments in the Bristol Bay Region may face bankruptcy in the coming years. In a Northern Economics study of the salmon disasters in 1997 and 1998, borough managers reported significant impacts related to or caused by the declines in local revenues, including declines in programs and in basic services such as public safety, emergency medical services, roads, and docks supported by the boroughs. In addition, business owners reported that demand for goods has decreased, and the viability and competitiveness of small local businesses is in question.

In addition to borough fish taxes, some Bristol Bay communities such as Chignik Bay, Pilot Point, and Egegik have a city raw fish or salmon and other seafood landing tax. Tribal governments have a somewhat more guaranteed funding stream from the United States Bureau of Indian Affairs. As local tax revenues decline, tribal entities become more important as governing entities and service providers. The role of tribal entities in local economic development is vital.

High Cost of Fuel and Energy

Local economies in rural Alaska have also been hard hit by the rising costs of fuel and electricity, and by the State of Alaska budget shortfall. All of these factors affect the health and well-being and economic survival of rural Alaska communities and residents.

Regional Opportunities

Elements of Change

In Fall 2003, Bristol Bay sponsored a planning summit focused on “Managing Change.” The purpose of the collaborative planning summit was to include Bristol Bay communities in a discussion of economic forces in the region and to anticipate the benefits and impacts of regional change so communities could adapt to these changes. Several economic development opportunities in the Bristol Bay region were identified:

- Changes in the fishing economy and potential of restructuring of the Bristol Bay fishery
- Proposed development of on/offshore oil and gas
- Copper and hard rock mining
- Infrastructure development
- Sport fishing, hunting, tourism, and eco-tourism

In order for residents to respond to these changes, the summit emphasized the need for regional and local economic development plans. These plans need to address the following diversification strategies:

- Create more competitive businesses
- Diversify the economic base with local businesses that create new wealth or retain wealth in the community
- Provide work force retraining/relocation assistance
- Promote lower-cost energy

- Promote affordable, sustainable infrastructure.

Workforce Education and Training

Workforce education and training is one of the foundations of both regional and local economic development. It may be important to include a project related to workforce training in a community and economic development action plan. In light of the Bristol Bay region's distressed fishing economy, a growing number of local fishermen want to be trained for alternatives jobs. In 2001, a job training survey of Western Alaska fishers was conducted by the DCED as part of an EDA grant. The survey serves as the basis for planning and developing job training programs. There was an unexpectedly high level of interest in job training, and many respondents indicated interest in new kinds of employment, to replace or supplement current employment in commercial fishing.

The most popular training choices were construction work and mechanics. These were followed by training in computers, electrical skills, transportation, building maintenance, office administration, metal work, and accounting. Job training opportunities for displaced fishers and other residents are available through the Bristol Bay Campus of the College of Rural Alaska/University of Alaska Fairbanks.

The Bristol Bay Campus partners with the new Southwest Alaska Vocational/Technical Education Center (SAVEC) in King Salmon. This training facility, which was renovated by the Bristol Bay Housing Authority in 1998-2001, provides class offerings ranging from building construction trades to information technology. SAVEC is expected to play a major role in training area villagers for jobs in mining exploration, according to the BBNA CEDS (2004).

Restructuring of Bristol Bay Fishery

Over the last decade, a fundamental shift has occurred in the economics of the Bristol Bay salmon fishery. It no longer appears that prices paid to harvesters move up or down with changes in quantity fished to the same degree as in prior years. If the salmon industry undergoes significant changes, then it is inevitable that associated communities will also experience significant changes. If for example, the number of active participants in the salmon fishery decreases from 50 percent of the adult population of a community to 10 percent and no other jobs fill the void, then there is a significant likelihood that population will decrease as unemployed fishers leave to search out gainful employment elsewhere.

The decline in population will be felt not only as fishers leave, but will be magnified as underemployed workers in service sectors and government sectors also leave the community. These long run impacts are likely to be manifested over a period of several years and can result in dramatic changes in the continued viability of the community, particularly for those communities in more remote areas.

Alaska Natives in the region possess a wealth of knowledge and skills as fish harvesters. These traditional skills in the subsistence economy, however, may not provide the financial resources and entrepreneurship to compete on an equal footing with participants whose experience is in market based economies. An organization such as Alaska Growth Capital, a community development finance institution, can help provide access to capital for local participation in a market-based economy.

In the years to come, Alaska salmon fisheries, especially Bristol Bay fisheries, face their greatest challenge—to remain viable in a global marketplace dominated by low-cost farmed fish. The prolific increases on world markets of farmed salmon from Norway, Chile, and Canada have been well-documented, as has the downward trend in salmon prices resulting from the increase in supply.

As shown in Figure 5, when quantities fell in the mid-1980s, ex-vessel prices paid to harvesters jumped significantly. When big production increases occurred in 1989 through 1996, prices dropped to low levels. However, in 1997 when production plummeted, prices barely moved. While prices jumped in 1998, the increase was relatively small. The production decrease in 2000 and 2001 were accompanied by even lower prices. After adjusting for inflation, ex-vessel prices for Bristol Bay sockeye salmon have declined from a peak in 1989 of \$2.55/pound to just \$0.41 in 2001.

In the last year or two, the market has shown some renewed interest in wild salmon. However, there is no guarantee that this interest will extend to all Bristol Bay products or producers. Early reports indicate that the base price in 2004 is \$0.40, with bonuses being paid for iced fish. The fishery still faces extraordinary challenges on the most basic levels.

These impacts add to concerns expressed by local fishers that the structure of the fishery (based on regulations and recent values) favors newer and more modern vessels, and therefore non-residents with greater access to capital. Further, most processing jobs associated with the short, intense sockeye season are of little benefit to the local economy. Currently most of the processing labor used in the regional fishery is done by non-Alaska residents who are provided transportation to and from the processing facility as well as room and board at the plant. When local residents do choose to work at processing facilities, they most often live and eat away from the plant. In general, the overall compensation package for residents is not enough to attract them into the processing work force—they believe they are better off free to participate in subsistence and other activities than working long hours for relatively low wages at the plant.

An additional structural challenge facing the Bristol Bay salmon fishery is Alaska's salmon allocation system, which has promoted "a race for fish." The system forces the fishing fleet into shorter seasons that target only the most profitable and highest volume species. Under this system, the successful commercial fishers and fish processors have tended to be those with the greatest financial resources, whose traditions and histories are based on market economies rather than subsistence economies.

While limited-access programs did limit the number of vessels and set nets that could participate in the salmon fisheries, more licenses have been issued than are actually necessary to harvest the available fish, even in years of abundance. Therefore, while the number of participants is limited, the race still exists, the field is still too crowded to provide all participants adequate incomes, and the winners remain those with the fastest and best vessels and equipment.

As with commercial fish harvesting, the fish processing industry requires a great deal of capital. The processor that is able to purchase and process the most fish during the short seasons is likely to generate the greatest profit. In order to process greater shares of the harvest, processors developed multiple processing facilities and use large vessels (tenders) to purchase fish on the grounds and bring them to their plants. If all other factors are equal, the processor with greater access to capital will generally be able to secure a larger portion of the processing market.

Exacerbating these conditions is the high cost of production at fish processing facilities in the Bristol Bay region, which leads many facilities to minimize the processing steps they undertake in the primary production process, and which contributes to decisions to forego processing of lower value species. Production costs in the region are relatively high compared with the production costs in Southcentral and Southeast Alaska and in the Lower 48 states. The higher production costs are caused primarily by the high cost of energy in the region and the high cost of transporting final products and production inputs, such as labor and packaging materials.

The relatively high production costs, reliance on outside labor and capital, local dependence on fishery revenue, declining projected future run size, and an expanding world supply of farmed salmon seriously threaten the continued economic viability of the Bristol Bay salmon fishery under present management structures.

Proposed Development of On/Offshore Oil and Gas

As a result of the downturn in the fishing industry, some organizations in the Bristol Bay region are supporting opening the area to oil and gas development. No wells have been drilled in the Bristol Bay area since the mid-1980s, and no oil or gas has been produced there. However, in 1995, the U.S. Geological Survey estimated that the Alaska Peninsula had a 1-in-20 chance of containing 447 million barrels of oil and 1.4 trillion cubic feet of gas.² Legislation was passed by the Alaska State Legislature so the State can offer Bristol Bay oil and gas leases in October 2005. According to the preliminary findings, the State of Alaska is offering an exploration license within the Bristol Bay basin for approximately 737,000 acres made up of both state-owned and Native-owned lands. The State is proposing to amend the September 1996 decision that closed “all submerged land” in and around Bristol Bay, from Ugashik Bay north to the western boundary of Kulukak Bay. The decision would be amended to allow exploration licensing within Nushagak Bay, but with the stipulation that exploratory drilling can only be carried out directionally from onshore locations.

Exploration licenses have a term of 10 years and can range from 10,000 to 500,000 acres.

Pebble Copper

Large scale mining can have significant economic, social and environmental impacts at the regional and local level, according to case studies by the World Bank. At a local level, a mine has the potential to benefit the local population through creating direct and indirect employment, skills transfer, enhancing the capacity of health and education services, improved infrastructure, and small and medium business opportunities. In January 2004, Northern Dynasty Minerals Ltd. announced that the Pebble gold-copper minerals deposit near Lake Illiamna has estimated gold resources of 26.5 million ounces and an estimated copper resource of 16.5 billion pounds.³ Northern Dynasty has a 100 percent interest in the Pebble resource lands.⁴ These new estimates make Pebble the largest gold resource in North American and the second largest copper deposit.

It is estimated that the project will require 1,200 to 2,000 workers during construction and 600 to 1,000 in production. Although the project is on state lands, BBNC owns mineral lands near the upcoming development site. Past exploration work by Tech Cominco and Northern Dynasty

² Cathy Brown. March 17, 2004. “Bristol Bay Oil, Gas Leasing Measure Clears Legislature.” Juneau Empire.

³ Bradner, Tim. “Pebble Now State’s Biggest Gold Mine.” Alaska Journal of Commerce. February 2, 2004.

⁴ Liles, Patricia. “Mining News: Activity Kicks Up Another Notch at Pebble.” Petroleum News. May 9, 2004.

has sparked a claim staking rush in the area. According to Petroleum News, geologists believe that Pebble is just one resource in a much larger porphyry system. As a result, over 500 square miles of land has been staked in the area around the Pebble resource.⁵ The community of Iliamna is located about 15 miles south of the project. Iliamna has an airport with two paved runways, 4,800-foot and 5,080-foot.

The State of Alaska Department of Transportation and Public Facilities (DOT&DP) has a contract with Peratrovich, Nottingham and Drage (PN&D), an Anchorage engineering consulting firm, to survey possible road routes and port sites for a potential road from the Pebble deposit to Cook Inlet. PN&D is also taking into account the potential energy needs of the mine in its transportation analysis which could require between 100 megawatts and 150 megawatts of power.

The ore will either be trucked to the port or transported through a slurry pipeline. According to an article in Canadian Mining News, Northern Dynasty has committed \$15 to \$20 million this year for the collection of engineering and environmental data for completion of a Bankable Feasibility Study as well as submission of a federal Environmental Impact Study.⁶

Infrastructure Development

One of the pillars of economic development is improvements to infrastructure. Infrastructure includes transportation improvements—road construction, trails, port and harbor development, boat storage and dock facilities, airport improvements—sewer and water system upgrades, and power system improvements.

Infrastructure development projects present opportunities for regional collaboration on funding strategies and local employment opportunities. Villages can contract to do their own new road construction and train and use their own residents for operation and maintenance of village utilities.

In a July 2004 inventory of community development priorities for Bristol Bay communities, completed by Bristol Bay Native Association, airport and road upgrades and construction ranked highest in the transportation category. Airport projects called for new runway or upgrade and/or resurfacing of existing runways, construction of crosswind runways, and/or relighting existing runways. Some villages reported new road construction and upgrades to existing roads.

Port and harbor improvements ranked second with projects ranging from new dock construction, existing harbor dredging and seaplane dock construction. Heavy equipment purchase needs included snow removal equipment, cats, graders, and fuel trucks. Water and sewer projects are the most common type of community utility projects, with 18 of 31 villages currently planning some form of water or sewer initiative. Water and sewer project needs included redeveloping existing wells, installation of water and sewer service lines, water treatment improvements, lagoon containment improvements and expansion, water source studies, evaluation and testing of existing resource, and sanitation feasibility studies. Power generation is also a priority including alternative energy production.

⁵ Ibid

⁶ Bradner, Tim. "Massive Mine Gains Momentum." Canadian Mining News, April 13, 2004.

Sport Fishing, Hunting, Tourism and Eco-tourism

Tourism offers Bristol Bay a growing avenue for economic development. The region has abundant tourism resources, spectacular landscapes, a fascinating and complex history, three distinct Native cultural traditions, volcanoes, unspoiled wilderness, and a diverse set of State and National Parks and Refuges. In addition to 7,500 residents, Bristol Bay is home to abundant wildlife—225,000,000 salmon, 25,000 walrus and 10,000 brown bears plus fresh water seals, beluga whales, ospreys, eagles and many other species.

The challenge for Bristol Bay has been the fact that few local residents and local communities have been the beneficiaries of tourism growth. This is beginning to change. Village corporations have begun to lease land for fishing and hunting camps and lodges. In villages like Togiak, the community is working with a local lodge to offer village tours, which has increased craft sales. Several enterprising individuals have begun tourism businesses, including B&B's, a flight service, and a Dillingham-based saltwater sport fishing charter service. The Nushagak cooperative river management program, carried out by the Nushagak river villages, is a great success, creating local jobs, revenue to the corporations and helping to reduce conflicts between sport fishing, subsistence, and local life.

Several exciting new initiatives are now underway to continue the expansion of local benefits from tourism. One is a plan for better cooperative marketing and tours. If villages and village tourism businesses cooperate in packaging and marketing their products, the regional tourist market expands and provides additional jobs and income. Bristol Bay Native Corporation is helping with this tourism initiative, working through the Bristol Bay Visitors Council (BBVC). Partners include BBVC members such as Bristol Bay Native Association, as well as two local Chambers of Commerce, villages, tourism businesses and the Nushagak-Mulchatna Land Trust. Outcomes include a “branding program” to promote tourism as well as local arts and crafts and commercial fish, and plans to develop tour packages linked to local, village based and businesses.

Another set of ongoing tourism-based projects are two cultural and visitor centers. One is planned in Dillingham. This project—to be called the Harvey Samuelson Community Center—is being developed in partnership with the Choggiung Corporation, the Curyung Tribe, the City of Dillingham, and the Boys and Girls Club. It will include a visitor information center, the Sam Fox museum, an arts and crafts store, community meeting space, and in a separate wing, a youth center. The facility will serve as both a destination and a gateway to activities in surrounding villages, and will give visitors new reasons to spend time and money in Bristol Bay.

The second facility, at the Iliamna airport, is being developed by the Nilavena Tribal Consortium in partnership with the National Park Service and BBVC. This 2,500 square-foot facility will include space for visitor information, cultural and natural history displays, and distance learning center and community meeting space. According to ADF&G figures, the Mulchatna River and Lower Talarik Creek support more than 3,000 and 1,000 angler days per year. Many of these days are high-value days associated with non-resident tourism. The Mulchatna caribou herd is renowned for its productivity and the number of “trophy” class animals. Hunting pressure has nearly tripled in the past decade from 1,400 hunters annually to more than 4,000 hunters annually in some years.

■ APPENDIX B: BUSINESS FUNDING & TECHNICAL ASSISTANCE RESOURCES

TECHNICAL ASSISTANCE						
ORGANIZATION	SERVICE	CONTACT	ADDRESS	TELEPHONE	FAX	E-MAIL
Alaska Minority Business Development Center www.tananachiefs.org	Business counseling. Nominal hourly fee based on sliding scale.	Lloyd Allen, Program Director Tanana Chiefs Conference, Inc.	122 First Avenue Suite 600 Fairbanks, AK 99701-4897	907 452-8251 ext. 3277 OR 800 478-6822 ext. 3277	907 459-3957	lallen@tanachiefs.org
Alaska Rural Development Council http://ardc.alaska.edu	Technical assistance in working with regulatory agencies; Community Forums	Chuck Akers, Executive Director	UAA 3211 Providence Drive, ADM #279 Anchorage, AK 99508	T: (907) 786-4660	F: (907) 786-4662	ancja@uaa.alaska.edu
Alaska Small Business Development Center (Statewide Office)	Business counseling, Business training seminars, Library Resources	Bill Bear, Rural Director <i>Rural Outreach</i>	430 W. 7 th Avenue Suite 110 Anchorage, AK 99501	907 274-7232 OR 800 478-7232	907 274-9524	anwsbl@uaa.alaska.edu
Alaska Village Initiatives www.akvillage.com		Thomas Harris, President CEO	1577 C Street, Suite 304 Anchorage, AK 99501	907 274-5400 OR 800 478-2332	(907) 263-9971	avi@akvillage.com
Anchorage Convention and Visitors Bureau www.anchorage.net			524 W. 4th Avenue Anchorage, Alaska 99501	907 276-4118	907 278-5559	info@anchorage.net
Bureau of Indian Affairs - Indian Reservation Roads Program www.doi.gov/bureau-indian-affairs.html		Art High	P.O. Box 25520 Juneau, AK 99802	907-586-7386	907-586-7357	
Bristol Bay Economic Development Corporation (BBEDC)			PO Box 1464 Dillingham, Alaska 99576	907 842 4370 or 800 478 4370	907 842 4336	

ORGANIZATION	SERVICE	CONTACT	ADDRESS	TELEPHONE	FAX	E-MAIL
First Alaskans Institute www.firstalaskans.org	Capacity-building of Alaska Native peoples and their communities; policy and leadership development; education	Jason Metrokin	606 E Street, Suite 200 Anchorage, Alaska 99501	907 677-1700	907 677-1780	info@firstalaskans.org
Natural Resource Conservation and Development Service www.ak.nrcs.usda.gov	Assistance with conservation, development and use of natural resources.	Shirley Gammon, State Conservationist	U.S. Department of Agriculture 800 W. Evergreen, Suite 100 Palmer, AK 99645	907 761-7780	907 761-7790	shirley.gammon@ak.usda.gov
Southwest Alaska Municipal Conference		Wanetta Ayers, Executive Director	3300 Arctic Blvd., Ste. 203, Anchorage, AK 99503	907-562-7380	907-562-0438	
US Small Business Administration www.sba.gov/ak/medak.html		Susan Roggenkamp, Assistant District Director	222 W. 8th Ave., Suite 67 Anchorage, AK 99513-7559	1-800-U-ASK-SBA OR 907 271-4536 OR 800 755-7034	202 481-5711	susan.roggenkamp@sba.gov

FUNDING SOURCES						
ORGANIZATION	SERVICE	CONTACT	ADDRESS	TELEPHONE	FAX	E-MAIL
Administration for Native Americans Grants www.anaalaska.org	Federal Agency: provides financial assistance to tribes and ANCSA communities for projects which will provide jobs, promote economic well-being, self-sufficiency and community health.	P.J. Bell, ANA Project Manager	Native American Management Services, Inc. Administration for Native Americans, Region III 11723 Old Glenn Hwy., Suite 201 Eagle River, AK 99577	T: (907) 694-5711 or Toll Free: (877) 770-6230	907 694-5775	director@anaalaska.org
Alaska Department of Commerce Community & Economic Development (DCED)						
DCCED Municipal & Regional Assistance Division (MRAD)		Ralph Andrew, Local Government Specialist	Dillingham Office PO Box 790 / Dillingham, AK 99576	907 842 5135	907 842 5140	
DCCED Div. of Community & Business Development Office of Tourism www.dced.state.ak.us/tourism/		Caryl McConkie, Development Specialist	P.O. Box 110809 Juneau, AK 99811	907 465-2012	907 465-3767	caryl_mcconkie@dced.state.ak.us
DCCED Div. of Community & Business Development Development Section		Ruth St. Amour, Development Specialist II	550 W. 7th Ave., Suite 1790 / Anchorage, AK 99501	907 269-4527	907 269-4539	Ruth_St.Amour@commerce.state.ak.us
DCCED: <i>Loan Assumption Programs</i> Assists purchasers in the assumption of a loan of various types, including small businesses.						
DCCED: <i>Rural Development Initiative Fund Loan Program</i> Small business loans to expand employment opportunities in rural Alaska. Anchorage T: 907-269-8150 Fax: 907-269-8147 Juneau T: 907-465-2510 Fax: 907-465-2103 E-mail: investments@dced.state.ak.us						

ORGANIZATION	SERVICE	CONTACT	ADDRESS	TELEPHONE	FAX	E-MAIL
<p><i>DCCED: Small Business Development.</i> A guide intended to help make your business a success. http://www.commerce.state.ak.us/dca/smallbus/home.htm</p>						
<p><i>DCCED: Developing Alaska Rural Tourism.</i> Assists Alaska's rural regions in the development of the local visitor industry. http://www.commerce.state.ak.us/oed/dart/home.htm</p>						
<p><i>DCCED</i> <i>Small Business Economic Development Southeast Alaska Revolving Loan Fund</i> http://www.dced.state.ak.us/dca/edrg/EDRG_BrowsePage_Template.cfm?Program_Name=Southeast+Alaska+Revolving+Loan+Fund http://www.jedc.org/rlf.htm</p>	<p>Makes direct loans to new and expanding business that cannot qualify for traditional bank financing</p>	<p>Margaret O'Neal, Director</p>	<p>Juneau Economic Development Council; 612 West Willoughby Avenue, Suite A Juneau, AK 99801</p>	<p>907-463-3662 888-393-3662</p>	<p>907-463-3929</p>	<p>moneal@jedc.org</p>
<p><i>DCCED</i> <i>Mini-grant Assistance Program</i> www.dced.state.ak.us/cbd/grt/blockgrants.htm</p>	<p>Economic and/or comm. development projects, including projects using natural resources.</p>	<p>Jo Grove, Program Coordinator</p>	<p>Div. of Community & Business Dev. 209 Forty Mile Ave. Fairbanks, AK 99701-3100</p>	<p>907-452-4468</p>	<p>907 451-7251</p>	<p>Jo_Grove@dced.state.ak.us</p>
<p>Alaska Growth Capital</p>	<p>Provides alternative financing to Alaska businesses</p>	<p>Jason Evans, VP Lending</p>	<p>2121 Abbott Road, Suite 101 Anchorage, AK 99507</p>	<p>907-349-4904</p>	<p>907-349-4924</p>	<p>jevans@alaskagrowth.com</p>
<p>Alaska InvestNet www.alaskainvestnet.org</p>	<p>Confidential service which matches investors and entrepreneurs</p>	<p>Deborah Marshall, Director</p>	<p>612 W. Willoughby Ave., Suite A Juneau, AK 99801-1732</p>	<p>907 463-3662 OR 888 393-3662</p>	<p>907 463-3929</p>	<p>dmarshall@jedc.org</p>

ORGANIZATION	SERVICE	CONTACT	ADDRESS	TELEPHONE	FAX	E-MAIL
The Denali Commission www.denali.gov	Provides critical utilities, infrastructure, and economic support throughout Alaska		510 L. Street Anchorage, AK 99501	907-271-1414	907-271-1415	
First Nations Development Institute www.firstnations.org	provides training, technical assistance loans and grants in economic development to tribes and ANCSA communities	Jeff Jeffers, Director of Grant Making	11917 Main Street Fredericksburg, VA 22408	540 371-5615	540 371-3505	jjeffers@firstnations.org
Rasmuson Foundation www.rasmuson.org	Invests in well-managed Alaskan-based organizations that provide a unique public service	Rosie Ricketts	301 West Northern Lights Blvd. Suite 400 Anchorage, AK 99503	907-297-2700	907-297-2770	rricketts@rasmuson.org
United States Department of Agriculture (USDA) www.rurdev.usda.gov	(see below)	Dean Stewart - USDA Rural Development	800 W. Evergreen, Suite 201 Palmer, AK 99645	907 761-7722	907 761-7793	dstewart@rdmail.rural.usda.gov
<i>USDA: Rural Business Enterprise Grants</i> Finance and facilitate development of small and emerging private business enterprises in rural areas						
<i>USDA: Rural Business Opportunity Grants</i> Assist with costs of providing economic planning for rural communities, technical assistance for rural businesses, or training for rural entrepreneurs or economic development officials.						
<i>USDA: Value-Added Agricultural Product Market Development Grants (VADG)</i> http://www.reeusda.gov/smallfarm Funds feasibility studies, business plans and capital start-up for 'Value-added' businesses that add 'value' to food products by, for example, drying, canning, juicing, combining ingredients, handcrafting, and unique packaging and marketing techniques).						

Business Basics

Questions to Answer Before Starting a New Small Business



What makes a successful business venture?

- *Products & People*
- *Markets*
- *Price & Operations*
- *Attitude*

Use these worksheets to help assess if your business idea is feasible.

OVERVIEW

Give a short description of your business venture:

Briefly put into words the personal, village or regional resources that will contribute to your venture's success:

- Land
- People
- Financial
- Other

Business Basics

Questions to Answer Before Starting a New Small Business

A successful business involves:

- *Personal dedication*
- *A team effort*
- *Knowing your competition*

PRODUCT & PEOPLE

- What products or services will you offer?
- Who else is offering this product or service in your region or statewide? In other words, who will be your competition?
- How does the quality of your products or services compare to similar ones? In other words, what is your competitive edge?
- What seasonal constraints, if any, will restrict your venture?
- Who will create the product or provide the service?
- Will running your business be a full or part-time job?
- How many other people will you employ, either directly (for example, by hiring them as a staff person) or indirectly (for example, by purchasing a product from them for resale)?
- Who will you hire or contract with? What will be fair compensation for their work?
- How much do you expect to pay yourself?
- If you will be selling a product, who will create the product?
- How much will it cost you to purchase it from them?

Business Basics

Questions to Answer Before Starting a New Small Business

A successful business means knowing:

- *The demand for your product*
- *Your customers*
- *Your partners*
- *How to connect your product to your customer*

MARKETS

- Where will your customers come from? The local area, region, state and/or out-of-state?
- What is the demand for your product or service? What steps have you taken to figure this out?
- What kind of customer will be interested in your venture? List words that describe them.
- How will you reach these customers? List five means by which you will advertise your product or service.
- Do you have a dependable Internet connection? Will you use the Internet to either publicize or sell your product or service?
- Who will you partner with to promote your venture?
- Will you need assistance from another entity, such as a booking agent or wholesaler, with filling or taking orders?
- Is your product or service only available in your local area, or will it be transported to your customers? For example, a general store or a bed & breakfast will sell goods primarily in your local area. A value-added salmon processing factory will transport goods to your customers, wherever their location.
- If your product or service will be transported, how will you get it to your customers? Will this add a significant cost? How reliable is the transportation? How often will you have to ship?

Business Basics

Questions to Answer Before Starting a New Small Business

A successful business plan involves:

- Pricing your product to fit your market
- Accurately anticipating your costs
- Knowing when you will break even

PRICE & OPERATIONS

- Will you need to purchase equipment or upgrade a facility in order to start your business? If so, what will these start-up costs total? \$ _____
 - How will you pay for the start-up costs of your venture? Will you approach a bank or other lending entity for a loan, or use personal savings?
- What will it cost you per year or season to operate your venture? You should include all operating costs such as:
 - Personnel \$ _____
 - Fuel \$ _____
 - Transportation \$ _____
 - Utilities \$ _____
 - Insurance \$ _____
 - Food \$ _____
 - Equipment \$ _____
 - Other \$ _____
- Estimate your operating costs and expenses per year or season: \$ _____
- How much of your product or service will you be able to offer per year/season?
 - How much will your customers be willing to pay for your product or service? \$ _____
- *If you are considering a business with many products, such as a general store, you can estimate prices for a handful of items.
 - Is your price comparable to your competition's prices?
 - How have you arrived at the right price?
 - Estimate your revenues for a year of operation: \$ _____
- Will your venture break even? If not in the first year, how many years do you estimate it will take to break even?
 - Subtract yearly revenues from expenses. Will your business make a profit? How much more will you need to earn annually to make a profit? \$ _____

Business Basics

Questions to Answer Before Starting a New Small Business

A successful business depends on:

- *Motivation*
- *Perseverance*
- *Your attitude and passion towards the business*

ATTITUDE

◦ Does your venture fit with community priorities? Will others in your community welcome and support your business venture?

◦ How long do you imagine persevering with your venture, even if you do not turn a profit?

◦ What motivates your business venture? (e.g. profit, community benefits, cultural benefits, etc.)

ACTION

If, after answering these questions, you feel like your business venture is feasible, assistance with start-up financing and business planning is available. See the *Business Funding and Technical Assistance Resources* appendix for a list of resources and websites, including information on small business loan programs.

Appendix D – New Stuyahok EPA IGAP Long-Range Plan

For a copy of the New Stuyahok EPA IGAP Long-Range Plan, please contact the New Stuyahok Traditional Council or the City of New Stuyahok.