

Western Alaska Economic Diversification Strategy

Local Decisions About Local Economies

Division of Community and Business Development
Department of Community and Economic Development

June 2002

Prepared with funding from U.S. Economic Development Administration



Tony Knowles, Governor

Alaska **Department of Community
and Economic Development**

Division of Community and Business Development

P.O. Box 110809, Juneau, AK 99811-0809

Telephone: (907) 465-2012 • Fax: (907) 465-3767 • Text Telephone: (907) 465-5437

Email: GoNorth@dced.state.ak.us • Website: www.dced.state.ak.us/cbd/

June 1, 2002

Dear Fellow Alaskan:

The enclosed report is offered to you as a tool in your efforts to strengthen the economic self-sufficiency of your family, your community, and your region. This report does not provide any easy answers, for there are no easy answers. It does provide some ideas for looking around your community to better recognize the opportunities and potential opportunities that may exist. It also provides information to help you consider what direction you and your community should take.

The desire for a healthy economy – an economy that provides opportunities for young and old alike to meet their goals for economic self-sufficiency – is one we all share. What that economy looks like, however, varies from one community to another, and so each community must make its own choices. It is my sincere hope that this report will help you to make wise choices, and to achieve your goals.

Sincerely,



Pat Poland, Director
Division of Community &
Business Development

Executive Summary

In recent years, the local and regional economies of Western Alaska have been rocked by poor salmon returns and lower salmon prices. This catastrophe focused attention on the economy of a region characterized by small and isolated communities, the general lack of an economic base apart from commercial fisheries, and a dependence on subsistence and transfer payments. Within the region, local conditions vary greatly from the relatively well-developed cash economies to the subsistence-dependent villages. Residents would benefit greatly from a more diversified and resilient local and regional economy. However, there are no easy answers, and no "one size fits all" solution. This document is intended to help local leaders and area residents better understand the economic landscape, and the opportunities that may hold the greatest promise for the future.

Economic opportunities for three types of communities are discussed: villages, hubs, and cash economies. Key points are as follows:

Villages Subsistence is the foundation of village economies, and residents generally have few opportunities to earn cash. Cash is needed; not only for everyday necessities but also to support the operations of local utilities and infrastructure. Economic opportunities may be found in arts & crafts and small businesses, and local leadership must focus on keeping the cost of utilities manageable.

Hubs Throughout the region, service/transportation hubs have developed where residents of surrounding villages travel to access medical care, regional organizations, and government services. Hubs are typically larger than villages and provide more opportunities for employment and small business development. The support services for in-region travelers can be expanded to attract tourists.

Cash Economies Fisheries will continue to be important to the cash economies, although extensive changes will be needed to regain a competitive position in the world-wide market for salmon and other species. Western Alaska is largely undeveloped for the visitor industry, and may become an attractive destination for adventure travelers. Future opportunities in mining and oil & gas are largely dependent on global market conditions and decisions made by outside business interests.

Supporting information is provided in four appendices:

- Guidelines for evaluating a small business idea.
- Major demographic and economic characteristics, by census area.
- Results of a survey of commercial fishermen regarding job training.
- Summary of economic development plans developed locally within the past ten years.

Table of Contents

I. Western Alaska Economies

Introduction	1
Western Alaska Region	2
Community Characteristics Matrix for Village, Hub, and Cash Economies	2
The Composition and Distribution of Wealth in the Regional Economies	3
Population Growth and Out-Migration	3
Sources of Income	4
The Importance of Capital Improvement Projects	5
Economic Base versus the Private Support Sector	6
The Framework for Economic Diversification	7

II. Economic Opportunity for a Village Economy

Promote Import Substitution	7
Enhance Existing Economic Base	9
Build Capacity and Workforce Skills	9
Promote Appropriate High-Yield Public Investment	10

III. Economic Opportunity for a Hub Economy

Import Substitution in a Hub Economy	12
Enhancing the Economic Base of a Service Hub	13
Capacity Building in Hub Economies	14
Public Investment in Hubs	14

IV. Economic Opportunity for a Cash Economy

Community Development Quota Groups	15
The Salmon Industry	15
Restructuring the Salmon Industry	16
Diversifying into the Halibut, Groundfish and other Fisheries	19
Expanding Tourism	20
Energy	22
Transportation Infrastructure	23
Expanding the Oil & Gas and Mining Industries	24
Expanding Agriculture	25
Expanding Wood Products	25

Appendix A: Evaluating Your Business Idea

Appendix B: Census Area Economic Snapshots

Appendix C: Job Training Attitude Survey, Western Alaska Fisheries Disaster Region

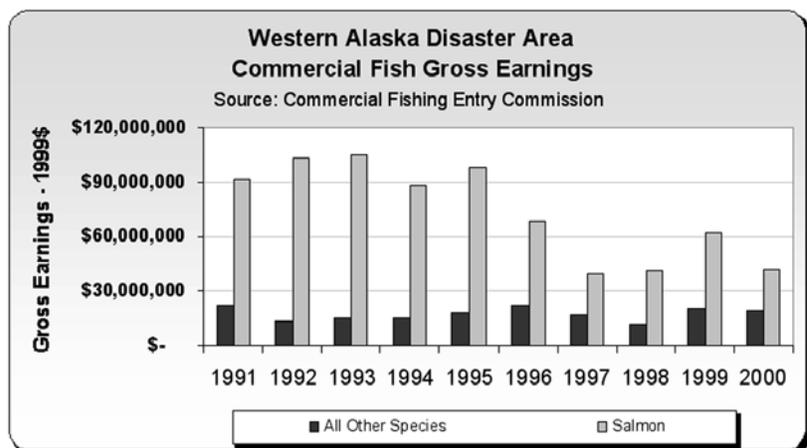
Appendix D: Area Plans and Studies

Western Alaska Economies

Introduction

Over the last five years, the communities and residents of western Alaska have been hit hard by a series of poor to disastrous fishing seasons. Poor salmon returns, depressed prices, and competition from international fish farms have dealt a series of blows to communities dependent on salmon harvesting. The chart below shows the large decline in gross earnings from salmon versus the other species commercially fished.

Even before these difficult times, small communities were struggling to support basic utility services. The loss of household incomes rapidly translates into lost operating income for local services. At a time when the state and federal governments are investing hundreds of millions of dollars in infrastructure, the needed community income to support existing and new infrastructure is seriously threatened. A snapshot of the economies of eight census areas in Western Alaska can be found in Appendix B.



In a survey of fishing crews conducted by the Department of Community and Economic Development, residents of Western Alaska indicated they are ready to make changes to help them deal with these adverse economic times. Almost 40 percent of respondents indicated they were willing to engage in other kinds of employment, and 49 percent would be willing to temporarily leave their community to earn income for their families. Complete survey results are provided in Appendix C.

Past planning in the region has largely focused on fisheries and tourism. A summary of past plans is provided in Appendix D. The focus of this document is identifying economic opportunities at three different levels: the village economies, the rural transportation/services hub economies and the cash economies. The following table identifies key characteristics that are common to each type of economy.

Table 1: Community Characteristics Matrix for Village, Hub and Cash Economies

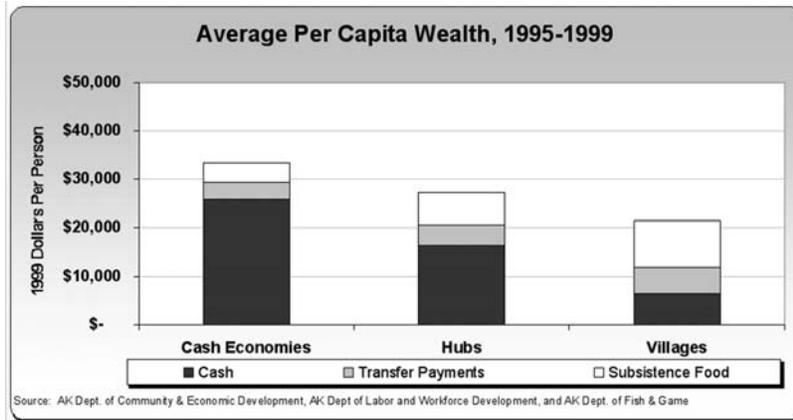
Descriptive Factors	Village	Commercial/Service Hub	Cash Economy
Employment	Mostly part-time or seasonal	Jobs are government-based, mixture of part-time and full-time	More full-time jobs, more private sector jobs
Air Transportation	Mail planes	Connections to villages and urban areas	Jet service
Law Enforcement	VPSO	Police, trooper post	Substantial presence of various law enforcement entities
Health Care	Village clinic, health aide	Subregional clinic, physician's assistants	Hospital, doctors and dentists
Private Enterprise	Fuel, non-perishable food, video rental	General stores, tradesmen, services, child care, food service, B & B	Large-scale lodging, variety of food service, chain stores
Education	Village school	School district office, vocational training	College campus
Subsistence	Substantial dependence	Reduced dependence	Cultural subsistence
Real Estate	HUD housing, little office or commercial space	Commercial space, rental housing, non-HUD homes	Active real estate market
Government Agencies	Visits by agency staff for program delivery or project oversight	Some offices of state and federal agencies in the community	Greater presence of state and federal agencies
Economic Mix	Average household income made up of: 31% cash economy 26% transfer payments 43% subsistence	Average household income made up of: 45-51% cash economy 20% transfer payments 29-36% subsistence	Average household income made up of: 52-83% cash economy 7-17% transfer payments 7-31% subsistence



Western Alaska

For purposes of this discussion "Western Alaska" includes the following areas: Dillingham Census Area, Lake and Peninsula Borough, Bethel Census Area, Bristol Bay Borough, Wade Hampton Census Area, Nome Census Area, Aleutians East Borough and the western portion of Yukon-Koyukuk Census Area.

The Composition & Distribution of Wealth in the Regional Economies



The chart below illustrates how the distribution and composition of wealth varies between village, hub, and cash economies. The chart is an approximation that uses census area data from Bristol Bay Borough for the cash economy, Bethel and Nome data for the hub economy and Wade Hampton data for the village economy. Most of the economic data about western Alaska is broken down by census area and

does not permit a separate analysis of individual communities. Census area averages tend to mask the wide differences in income among communities. Cash income is concentrated in the commercial fishing communities and the new regional hubs, such as the City of Bethel. In one report, village income was 75 percent less than the average income for the entire census area (Huskey, 1992). Moreover, within the villages, non-native professionals – primarily teachers – earn a disproportionate share of the employment income (Huskey, 1992).

The components of wealth are cash, transfer payments and a replacement value for subsistence foods. Cash is the money received from employment, rents, and interest, and is primarily gained from commercial fishing and fish processing. Transfer payments are money paid to individuals by government for benefits such as medical care, income assistance, and retirement payments. More importantly, the Alaska Permanent Fund Dividend is the most dominant transfer payment and the fastest growing. In the villages, the Permanent Fund Dividends can exceed 20 percent of the total income from all sources. A replacement food value of \$12 per pound is set for the subsistence foods harvested. The replacement value does not include the social and cultural values of subsistence use, and is based on an out-of-court settlement for subsistence food losses after the Exxon-Valdez oil spill.

Examples of cash economies are the communities of Naknek, King Salmon, and Dillingham. The communities of Bethel and Nome are good examples of hub economies, where growth is primarily in the transportation, retail trade and service sectors. Village economies are primarily organized around subsistence activities. There, cash opportunities are usually small and seasonal. Examples would be Akiak, Koyuk, Levelock, New Stuyahok, Hooper Bay, and Kaltag.

Population Growth and Out-Migration

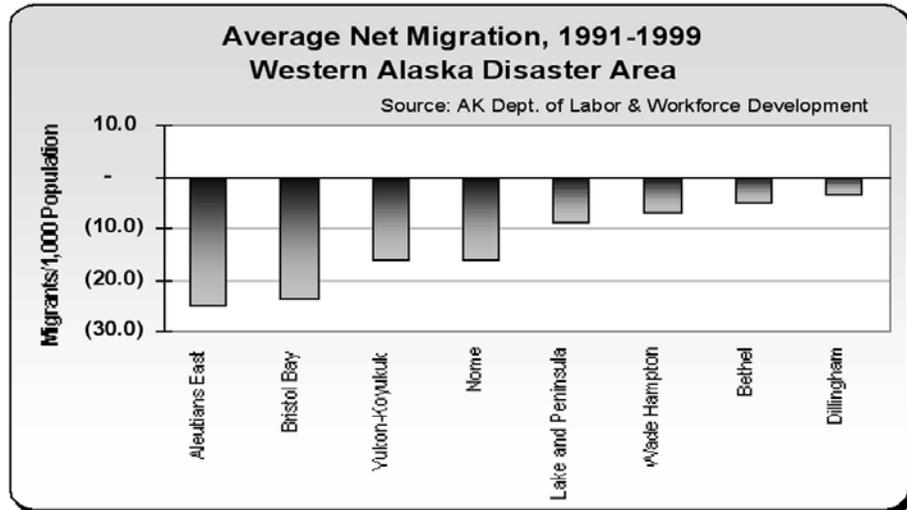
Even though there has been an out-migration of residents over the last decade, the population of Western Alaska is growing due to high birth rates. At the same time, however, more people have left the region than have moved to the region. One effect of this trend is that the median age (the age at which half the population is older and half



the population is younger) for Western Alaska is lower than in other parts of the state. This trend is even greater in small communities, where the median age is 22.8 years in Nunapitchuk and 19.6 years in Stebbins. In contrast, the median age is 32.8 years in Dillingham and 32.9 years for the entire state.

The economic reality in most communities is a lack of jobs or income-producing activities. However, a younger and growing population suggests that many more jobs and

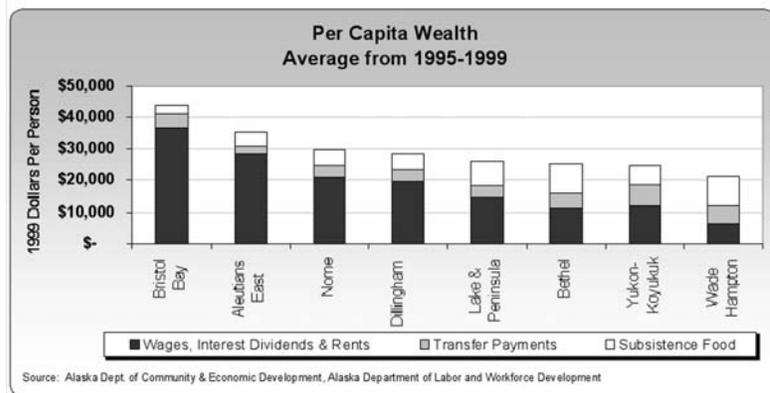
income-producing activities are needed over current levels. For example, one YK delta community in 1990 had a population of 153 people, and 37% of the population was age 18 or younger. In 2000, the same community had a population of 208, and 41% of the population was age 18 or younger. If these trends are projected another ten years, in 2010 this community will have a population of 283 people, with 46% age 18 or younger.



Each adult will carry a greater proportion of the community's need for productive labor – bringing income into the community, providing child care and serving as teachers, providing leadership for the community, and maintaining the community's infrastructure.

Sources of Income

Throughout Western Alaska, household income is a mix of wages, transfer payments, and subsistence harvests. The following chart shows how these components vary by census area. Per capita wealth



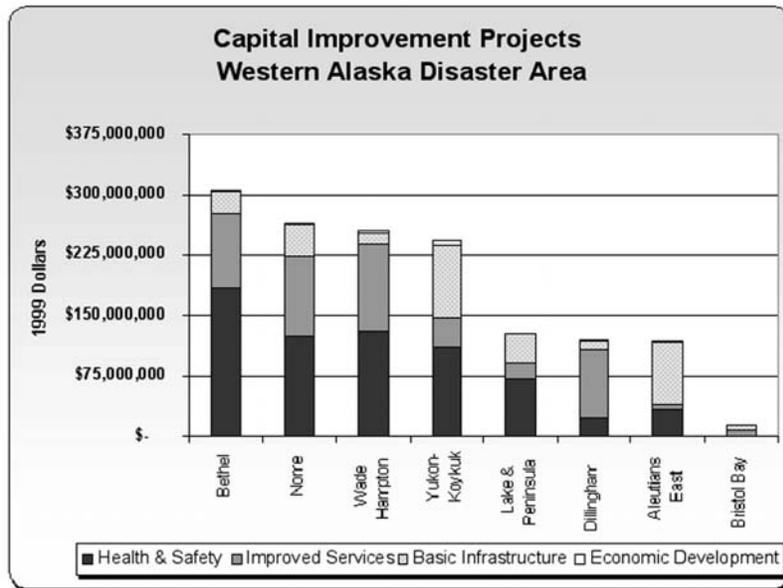
is greater in census areas where there are cash economies, even when allowances are made for the replacement value of subsistence foods.

“Transfer payments” per person are increasing in all census areas and are highest in Yukon-Koyukuk and Wade Hampton census areas. The increase in transfer payments can work against economic sustainability. According to a 1988 study by Knapp and Huskey, the growth in transfer payments led to an increase in population of three times the number that could be supported in the region without transfer payments. That is, the economic resources available from earned income and subsistence harvests are only adequate to support one-third the number of people actually living in the region. The growing need for more cash will have to come from new economic development or greater transfer payments.

The young and growing population will also put even more pressure on limited subsistence resources, which are a major part of household economies. If new economic opportunities or greater transfer payments are not available, then out-migration will most likely increase.

The Importance of Capital Improvement Projects

More and more capital improvement projects are underway and are being built in smaller and more remote villages.



Funded and planned capital improvement projects are currently \$1.45 billion. Local funds are generally sufficient to operate the existing capital projects, but routine maintenance is often deferred and results in the premature loss of facilities. In general, no funds are being set aside to replace the facilities. The chart below shows the distribution of capital improvement projects and the dominance of projects for health and safety, improved services, and basic infrastructure. This dominance reflects a long-standing public policy to improve the

standard of living in rural Alaska, regardless of the underlying economic base. It also reflects federal policies that prohibit the funding of projects for individual businesses and the reality that viable economic opportunities are scarce. The capital improvement projects are generally concentrated in census areas dominated by villages and hub economies. More capital improvement projects are further increasing the need for cash for operation and maintenance.

Examples of economic development projects include a halibut processing plant, airport

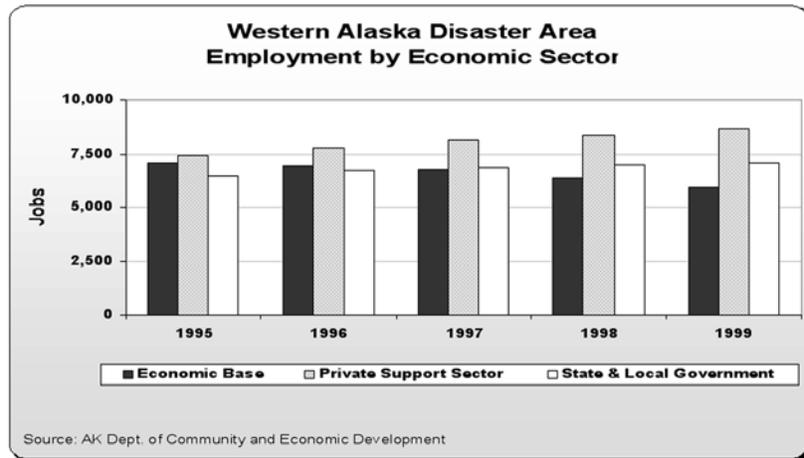
improvements and a road to access the Donlin Creek gold deposit. Health and safety projects include water and sewer facilities, new health clinics, and the replacement of bulk fuel tanks. Improved services include local roads, boardwalks, homes, schools and electric utility upgrades.

Economic Base versus the Private Support Sector

Throughout this paper, the private support sector refers to businesses that provide local goods and services, such as grocery stores and air taxis. The economic base refers to businesses that bring new money into a community, such as tourism, commercial fishing, and seafood processing.

Until recently, commercial salmon fishing and seafood processing was the primary source of cash income in the economic base. Normally, the economic well being of commercial fishing and seafood processing would carry over into the businesses in the private support sector. Thus, the recent declines in commercial salmon fishing should precede losses in the businesses providing transportation, retail trade, and services. However, just the opposite is occurring.

Increases in the Permanent Fund Dividend (PFD) and government spending are allowing income made from transportation, retail trade and services to grow. As a result, the regional economies are facing a triple threat. The traditional economic mainstay is in decline (commercial salmon fishing and processing), most of the recent economic growth is in the private support sector, and the continued growth in transfer payments such as the PFD is uncertain. Transfer payments are dependent on public policies, which can change significantly over time. Recent examples are the reductions in the PCE (power cost equalization) subsidy, the federal five-year limit on welfare benefits, and the debate on capping the Permanent Fund Dividend. Drawing an example from the chart "Per Capita Wealth" on page 4, the PFD represents 21% of non-subsistence household income in the Wade Hampton Census Area. A change in dividend policy by the Alaska Permanent Fund would greatly reduce household income and the ability to support local trade and services. At the same time, more and more capital improvement projects are further increasing the need for cash to operate and maintain facilities.



The Framework for Economic Diversification

Economic diversification is dynamic. The primary goal is to help residents accept that economic change will be more frequent and widespread than before. Within this context, the basic strategy is to:

- create more competitive businesses,
- diversify the economic base, or businesses that create new wealth,
- provide work force retraining/relocation assistance,
- promote lower-cost energy, and
- promote affordable infrastructure.

Most important, nearly all diversification opportunities, large and small, are worthy of consideration – especially in the village and hub economies. Currently, the best opportunities in the hub and cash economies are developing the ground fisheries, restructuring the salmon industry, developing more non-resident tourism, promoting Native arts, and increasing local hires within federal agencies. There are also small opportunities to expand agriculture and wood products. New mining, oil, and gas developments have a large economic potential, but global factors and decisions outside the region will primarily control the timing of these new ventures. It is assumed that

- improving economic conditions will be made in small increments,
- these increments may fall short of restoring local economies to historic highs,
- out-migration (more people leaving a community than moving in) will continue,
- work force improvement programs are best if they address statewide employment opportunities,
- new business ventures will be complicated by subsistence needs, and
- new ventures must be locally-driven to be successful.

Economic Opportunity for a Village Economy

Promote Import Substitution, Including Protection of Subsistence

Import substitution refers to substituting locally-produced goods and services for those brought in from outside the community. Import substitution keeps more dollars in the community, where they may circulate from one local person to another, rather than sending dollars outside the community. At the village level, an example of import substitution is subsistence hunting and fishing, as opposed to the purchase of meat from a store in Anchorage. As an economy becomes more developed, and the size of the local market grows, there are more opportunities to efficiently produce goods locally.

Subsistence In a village, much of the economic activity is at the household level, and consists of the basic needs of daily life – food, clothing, and shelter. In the past, there was little importation of food. Families depended on the subsistence harvest of fish, game, and wild plants. Even today, the cost of transportation makes imported food very expensive, and the distance from markets reduces the freshness and quality of imported foods. The protection of subsistence resources is essential for families to maintain adequate nutrition at a reasonable cost. And as the harvest of fish and game is shared within the village, it allows for an efficient use of labor.

Truly fresh fruits and vegetables are a rare and expensive treat in remote villages. For at least a seasonal substitution of imported produce, families may choose to maintain home gardens. Even tomatoes may be grown in a sunny window during the long days of summer.

Village economies generally have few opportunities for earning a cash income. Subsistence activities greatly enhance the viability of village economies by substituting labor – which is in ready supply – for cash – which is in short supply.

Manufacture of Household Goods Although the opportunities for import substitution for clothing and household items are limited, there are ways to substitute labor for cash. Sewing, quilting, knitting, carpentry, and carving are all skills that can turn raw materials such as fabric and wood into clothing and household items for little cost. For someone with time and sewing skills, it is much cheaper to buy fabric and make the family's kuspuks than it is to buy kuspuks at the village store that were made in Anchorage. By making extra kuspuks to sell at the village store, that person may also reduce the cost of living for other families.

While it may be difficult for locally-made items to compete on price with third world manufacturers, local producers may provide higher quality items or better-designed items. Products made in other places are often not designed to withstand Alaskan winters, and a locally made item may work better. This applies to everything from hats to sleds for snowmachines. Locally-made items may simply be effective substitutes that keep dollars in the community rather than going to an out-of-town or out-of-state supplier. In addition to reducing costs for the household, such activities may also produce income from the sale of extra items.

Individuals can identify opportunities for import substitution by looking around at the goods and services they use themselves, and considering their source. Some items could be made from scratch using local resources. Some items could be imported as raw materials, with value added locally. Another way to identify opportunities is to talk to elders. Earlier generations had little choice but to be self-sufficient. Ask elders what they used in the days before the village store sold laundry detergent, pop, or paper towels.

Tips on evaluating a new opportunity can be found in Appendix A.

Enhance Existing Economic Base

The economic base is businesses that generate new wealth, or bring new dollars into the community. Examples are industries that export products or services, such as commercial fishing and mining, and industries that serve people outside the community, such as non-resident tourism.

Generally, a village has little in the way of an economic base. Where there is a source of industry nearby, such as mining or timber, the local economy has grown into a cash economy. A village, by definition, has a greater economic component from subsistence and a reduced component from the cash economy.

Subsistence The value of subsistence for villages creates a need for natural resource management, which may then create opportunities for capitalizing on those skills. For example, a local resident may decide to go to college to study natural resource management. Those studies, combined with traditional knowledge, may help that person develop land use policies for his village corporation, or get a job with a government agency.

Arts & Crafts Traditional arts and crafts may provide opportunities for the export of local goods. Much of the raw materials needed are available from the surrounding environment, and skills can be learned from elders and master craftsmen. While many items may be made for personal or local use, there is also a market for such items outside the villages.

Many visitors to Alaska want to purchase hand-crafted items and Alaska Native artwork. It is not necessary to have direct contact with these purchasers. High-quality items may be sold in visitor centers in hub communities, such as the Nangucuilnguq Arts and Crafts Center in Togiak or the Yupiit Piciryarait Cultural Center in Bethel. Major visitor destinations such as Anchorage and Juneau offer a wide range of sales outlets for high-quality arts and crafts.

Support for Business Travelers Every community has at least an occasional visitor – public health nurses, airport or utility maintenance workers, traveling staff from non-profits and government agencies. These visitors may spend money in a village if given the opportunity. If they are aware of a local store, they may purchase drinks or snacks. They may buy locally-made items such as crafts or food products. First-time visitors may not know what is available in a community, and may not know how to find out – finding a way to tell them can create additional sales for local businesses.

Build Capacity and Workforce Skills

Capacity building refers to increasing people's skills, abilities and knowledge to lead productive lives. It includes not only job skills training, but also skills in effective local government, critical thinking skills, and the ability to plan and prepare for the future.

Life in a village requires many of the same skills as life in a large, urban community – the city government needs to function effectively, employees need appropriate workplace skills, and homeowners need to know how to make household repairs. In a village, however, an individual needs to have a greater range of skills. Fewer services are available for hire, so

there are many things that people in villages must do for themselves that urban dwellers can pay someone else to do for them. The smaller population of a village often means that each resident must wear more than one hat – the same person may be the school district bookkeeper, the organizer of the local state fair, a member of the city council, and the owner of a bed and breakfast.

Skills needed for productive everyday life can be listed in the following categories:

Governance	(city council, tribal governments, non-profit and for-profit boards of directors) – planning, budgeting and financial management, grant writing, effective meeting skills, ordinances, elections.
Workplace	employer expectations, computer skills, job-specific skills such as health care or mechanics.
Business	planning, budgeting, pricing, marketing, customer service.
Life	household budgeting, traditional knowledge, home maintenance.

Economic diversification requires that local residents are skilled in these different areas:

Governance skills are needed so that local governments can properly manage projects that support economic development.

Workplace skills are needed so that as jobs are created they can be filled by local residents.

Business skills are needed so that local residents can start businesses to serve their community's needs.

Life skills are needed so that residents have smooth-functioning personal lives that allow attention to be focused on economic development.

Access to capacity building is a challenge for village residents. Often the school is the only facility suited to instruction, and village schools may not have developed any programs for adult education. Building a relationship with the local principal and teachers may create opportunities for using the school after hours for adult education, including the use of the school's internet access for on-line instruction and research. Capacity building takes place in many informal settings as well – technical assistance from agency staff, information in libraries and local offices, and local networks for sharing knowledge.

Promote Appropriate High Yield Public Investment

Public investment, or capital improvements, includes state- or federally-funded facilities such as water/sewer systems, clinics, airports, and community buildings. The role of public investment in economic development is often indirect. A water/sewer system by itself is not economic development. It may support economic development, however, by providing the water supply needed for, say, a lodge.

Public investments are made through a process of application and approval that varies from one agency to another. Agencies are increasingly asking for evidence of community planning, to verify that the project has community support and is consistent with the community's future plans.

There is currently a large (\$1.45 billion) backlog of funded capital improvement projects in western Alaska. The short-term construction jobs provided by these projects are sometimes mistaken for economic development. Few of these facilities will create new, long-term, private sector jobs. Most of them, however, will require the community to provide for ongoing maintenance and operation costs.

Appropriate high yield public investment, with respect to economic development, is investment that enhances people's ability to participate in the economy. To support economic development, public investments should, first, be self-supporting, and, second, support the creation of new, long-term private sector jobs.

How to tell if an infrastructure project will be self-supporting? Public facilities have operating costs, such as heating, insurance, and janitorial service. Once the public investment is in place, it will be the community's responsibility to pay the operating costs of the facility. Prior to the construction of a facility, local residents may choose to prepare a business plan to satisfy themselves that the facility will be adequately maintained and self-supporting.

How to tell if an infrastructure project will create new, long-term, private sector jobs? One approach is to examine how well the project serves your community's goals in the areas of import substitution, enhancing the economic base, and capacity building.

Project Self-Sufficiency The cost of living is a major concern in villages. Where subsistence is the backbone of the household and cash income is limited, the high cost of living found in many villages is a threat to the sustainability of the community. For example, power costs are very high in rural areas – electricity costs 25.4 cents per kWh in Sleetmute compared to 8.9 cents per kWh in Homer. At the same time, household income – cash to pay that monthly electric bill – is lower: Sleetmute's median household income (per 2000 Census data) is \$15,000 compared to \$42,821 in Homer. The ability of a household to generate enough income to meet the cash requirements of village life is a key issue for the household's continued ability to enjoy life in a village.

Utility costs in villages are often high because the fixed costs of maintenance and operations are divided among a small group of utility customers. For example, the routine maintenance for a water/waste water system may be about the same whether the system serves 25 customers or 250 customers. Each customer of the smaller system is therefore paying a much larger share of the operating cost of the utility. For very small communities, the operating cost per household may be more than families can pay.

For a village to be economically self-sufficient, the cash requirements of daily life must be balanced with the local opportunities to earn cash income. The planning process for any new infrastructure projects should include a thorough examination of operating and maintenance costs, and a calculation of costs per household. If these costs exceed the residents' ability to pay, alternatives include requesting that the project engineer design an alternative system, seeking other remedies to the problem being addressed, or searching for additional sources of operating funds. Some facilities may be designed to serve more than one community.

Creation of Jobs Public investments may be designed to support economic activities. Subsistence activities may be supported by a boat launch and maintenance facility, a community garden or root cellar, or a public workshop. Capacity building may be supported by a central location for holding workshops, internet access for distance education and a resource library. In some cases, such facilities may create jobs for support personnel.

Other types of facilities may support the creation of income-producing activities. Business incubators may support start-up businesses. Community halls may include space for rent for businesses. Facilities may be provided to support the production of crafts and locally-made goods. All such facilities, however, must meet the same tests for self-sufficiency through user fees.

Economic Opportunity for a Hub Economy

Import Substitution in a Hub Economy

In addition to the opportunities just described for village economies, hub economies present opportunities to reach a larger population and a more diverse commercial base. Import substitution can move beyond transactions internal to the household, and into opportunities for home-based businesses. By having a larger market to trade with, people in the hub communities can start to see economies of scale in production.

For example, for a person to buy a minimum purchase of seed potatoes and soil amendments to prepare a bed for growing potatoes, they may spend as much as they would to buy a year's supply of potatoes for their family. However, that same minimum purchase may produce more potatoes than they need. So, if the family has a way to sell their excess potatoes and recover some of the cost of growing them, it may then make economic sense to grow potatoes rather than buy them. This is an example of economies of scale.

In a village economy, someone may bake cinnamon rolls for their own family as a substitute for store-bought pastries. In a hub economy, that person may have an opportunity to bake cinnamon rolls for a school board meeting. With the larger market provided in a hub economy, someone may decide to invest in gaining DEC approval for their kitchen in order to sell homemade food items – cinnamon rolls, other homemade snacks, take-out lunches, birthday cakes.

The greater level of commercial activity (private businesses) in a hub community creates some new opportunities. For example, the school district may have an employee who maintains the district's computers. The district could hire out that person to also fix computers at the village corporation office, so that the corporation does not have to fly someone in from Anchorage. Or that person could start a weekend business selling their computer skills by the hour to small businesses and individuals using computers.

Hub communities may also have higher levels of household income than villages, as more people have jobs. This creates more opportunities to provide services for a fee that people in villages would do themselves. Someone who works at a job all day may be

willing and able to pay someone else to repair their Toyo stove, or decorate a birthday cake, or build a deck on their house.

The benefits of import substitution in services are:

- Keep service/repair dollars in the community.
- Provide faster/more convenient service.
- Expand a job and make it worthwhile for the person to improve their skills.

Tips on evaluating a new opportunity can be found in Appendix A.

Enhancing the Economic Base of a Service Hub

A service/commercial hub generally does not have much of an economic base, either. A service/commercial hub is often a centrally-located village that has grown to include support services for surrounding villages. Its economy is primarily based on being the site of a subregional clinic or hospital, non-profit organization, or school district. The visitors from surrounding villages then create demand for additional goods and services.

Tourism The visitor industry includes two types of visitors – business travelers and vacationers. A hub, by definition, has business travelers – residents of nearby villages coming to the hub to use the services of the clinic or the Native non-profit. Smaller hubs also have business travelers who are traveling service providers, such as the dentist who comes to work in the clinic one week each month. These business travelers create opportunities – while they are visiting the hub, they need food, lodging, local transportation, entertainment, and shopping. Visitors from nearby villages may increase the demand for existing local businesses, such as the grocery store that carries more products than the village store. They may also create demand for new businesses, such as a clinic-airport shuttle.

The same businesses that support the business travelers – bed & breakfasts, snack bars or restaurants, taxis – can also provide a basis for a tourism industry. New business opportunities may take the form of providing excursions or entertainment for visitors, such as sport fishing, guided hikes, dance performances, boat tours, or tours of historic or cultural sites. In many villages, a local tourism industry has already been developed by people from outside the community or even outside the state.

Cottage Industry The improved air transportation system available in a service hub improves the cost and reliability of shipping out goods for export. In addition to arts and crafts produced in villages, service hubs may find opportunities in the production and export of other items. Personal care products (soaps, lotions) based on natural plant extracts have increased in popularity. Specialty food items are also a growing industry.

There are examples of cottage industries working in small, remote communities: candle-making in Angoon, dog sled gear in Nenana, and wildflower products in Lake Minchumina, population 32. (Source: Made in Alaska database).

Capacity Building in Hub Economies

Residents of commercial/service hubs need all the same capacities as residents of villages, although any one individual may not need to develop as wide a variety of skills. The additional challenge in hub economies is the greater level of skill required by many of the available jobs. A hub community has a greater number of jobs in professional fields such as health care, natural resource management, and education. Local residents will need a higher level of education in order to qualify for such jobs. Some positions require a college degree, others may require vocational training.

Even for similar jobs, the qualifications and job skills required are often greater in a hub than in a village. For example, a job opening for a tribal clerk in a village is described as "performs clerical duties in support of the village council's operations," and the following qualifications are requested: "Files, answers phone, performs general office work, basic knowledge of computers, previous office experience preferable but not required." A similar job in Dillingham, described as "assist in administration of tribal government," requested the following qualifications: "experience operating office equipment and computer literate with MS Word & Excel, good verbal, phone technique and written communication and organizational skills, close attention to details, minimum of two years comparable office experience." Similar jobs, similar pay, but the position description for the Dillingham job describes a higher level of professional skills.

Many rural residents value the ability to qualify for jobs in urban areas. An individual has a greater range of options in life if he or she can find employment not only in their home community, but also in Fairbanks or Anchorage or out of state. Workplace skills that are "portable," that is, skills that are valued in many different places, can be more valuable over a person's lifetime. Individuals can also prepare for different circumstances in life by considering industry-wide conditions and opportunities. For example, someone with an interest in learning to repair cars and trucks might want to find out what auto mechanics are paid in different places, and what qualifications are needed to get the best jobs.

The greater needs for post-secondary education and training may be addressed through such means as distance education, a local coordinator for workshops and speakers, or a training center with labs and classrooms. Advances in telecommunications technology improve the feasibility of access to university-level programs, as well as to a wide variety of on-line courses.

Public Investment in Hubs

Infrastructure projects in hubs may contribute to a lower cost of living in villages. Drawing on economies of scale, a hub community may install a project such as a tank farm that serves several surrounding villages more efficiently than each village having its own tank farm. A number of villages share airports with other villages, leading to a higher level of transportation service than each village would have by itself.

Public investments in hubs may also support the local economic base. For example, a visitor center may contribute to the local tourism industry. A business incubator may support the development of cottage industries. A training center may improve the ability of local residents to secure employment. Such projects also carry operating costs, however, so facilities must be designed to complement local activities.

Economic Opportunity for a Cash Economy

Without long-term public subsidies, maintaining and expanding the economic base is required to sustain cash economies. The economic base is defined as businesses that generate new wealth or reduce the region's dependence on imports. Examples are commercial fisheries, mining, non-resident tourism, arts & crafts, and the federal government. The best opportunities in the cash economy are expanding the ground fisheries, restoring salmon markets, expanding non-resident tourism, and gaining more local hires in federal agencies. While new mining, oil, and gas development has a large economic potential, its future depends on global prices and factors beyond the control of the region.

In the private support sector, there are opportunities for job substitution in the medical services, transportation, education, construction, and local law enforcement. These opportunities do not create new wealth, but retain more money in the local economy through re-spending. One example would be construction jobs through force accounting or hiring agreements with labor unions. Given that there is over \$1.45 billion in funded and planned capital improvement projects, there is at least 10 years of potential construction employment. In addition, there are other jobs in facility operation and maintenance. These skills may be readily transferable to other regions for those who later decide to migrate outside the area.

Community Development Quota Groups

The Community Development Quota (CDQ) program is one of the best opportunities for diversifying the commercial fisheries. The CDQ program began in 1992 to promote fisheries development in western Alaska. The program is a federal fisheries program that involves coalitions of communities who have formed six regional organizations, referred to as CDQ groups. There are 65 communities within a fifty-nautical mile radius of the Bering Sea coastline who participate in the program. All but seven communities are in the Western Alaska Disaster Area.

Since 1992, approximately 9,000 jobs have been created for western Alaska residents with wages totaling more than \$60 million. The CDQ program has also contributed to fisheries infrastructure development in western Alaska, as well as providing vessel loan programs, education, training and other CDQ related benefits. Pending regulations would allow the CDQ groups to use up to 20 percent of the income from the Pollock fisheries for non-fish related economic development. For the larger CDQ groups, this could amount to \$3 to \$4 million each year, while the cap for the smaller groups would be about \$500,000. New CDQ investments would be limited to their CDQ regions.

The Salmon Industry

Salmon has supported many of the small and scattered cash economies in Western Alaska. However, since 1996, salmon runs are well below seven-year averages, and the rapid increase in farmed salmon is depressing prices for Alaska's wild salmon. Solutions to this problem require two concurrent approaches: (1) to restore salmon runs through

management and enhancement, and (2) to restructure the industry to better compete with farmed salmon.

State and federal research is underway to determine why salmon runs are decreasing in Western Alaska. Evidence suggests salmon destined for western Alaska are being stressed in the marine environment. Recent warming in the climate and ocean are documented and appear linked to poor salmon growth and survival. Other potential causes include interception of salmon in other fisheries and competition from hatchery stocks. Little is known of the magnitude and interactions among these and other possible causes.

Short and long-term fisheries research is being accomplished by a collaborative effort between government agencies and rural organizations in Western Alaska. The research extends from Norton Sound to Upper Cook Inlet. Over \$40.0 million is slated for marine and fisheries research and will enable a five-year cooperative research program. Research will be conducted on the distribution of sockeye, chum and chinook salmon and an investigation into the early life history and migration of salmon in the eastern Bering Sea and Pacific Ocean. In addition, support will be given to improve stock assessments and fishery monitoring programs in the Yukon-Koyukuk and Norton Sound areas. Once a determination is made on causes for the declining salmon runs, changes in fisheries management and investments in habitat enhancement and/or hatcheries can mitigate losses.

Alaska's Competitive Position in Salmon Even if salmon runs are restored, continued competition with farmed salmon could bring about the demise of the salmon industry. Many barriers currently prevent Alaska's salmon industry from becoming more competitive. The makeup of the industry, with 9,000 individual harvesters and 50 or more processing companies, leads to tremendous fragmentation. Not only is the industry highly competitive in nature, but it occurs along a coastline in excess of 1,500 miles. This tremendous expanse of land and water, in one of the most remote locations on earth, leads to higher costs for labor, energy and freight. Quality has been a long-standing problem experienced across all phases of Alaska's salmon industry, yet producing quality products in new export and domestic markets are a large part of the solution.

Restructuring the Salmon Industry

There is a growing recognition by Alaska communities, government, and the seafood industry that widespread structural changes are needed if the state is to compete with farmed salmon and other protein sources. This will be a difficult, complex, and long-term process for all stakeholders. It will also require an industry-government partnership. Planning efforts towards restructuring are already underway by state and local groups, including United Fishermen of Alaska, Bristol Bay Native Association, and Bristol Bay Economic Development Corporation. The glut of farmed salmon on world markets has lowered salmon prices, which in turn has brought a significant amount of attention to the inherent inefficiencies in the state's salmon industry. Several strategies to address these inefficiencies are under review. The following summary provides a general breakout of problem areas and possible solutions.

Harvesting Inefficiencies in the harvesting of salmon may be addressed by reviewing the following areas:

- Equipment/technological savings. Various technologies and equipment that have not been used by the salmon industry or in certain regions could be utilized. These might include devices to increase catch efforts, as well as equipment to enhance on-board processing and quality practices.
- Operational improvements. Reviews of fishing vessel operations may help weed out inefficient systems and practices.
- Fleet consolidation. Several schemes that would reduce the number of vessels on harvest grounds are under review. These include buy-back options and permit stacking.
- Vessel size and gear type. Salmon vessels are limited in length depending on the fishery. It may be advisable to consider eliminating or changing vessel size restrictions. Further, other methods of harvesting salmon besides those currently allowed in specific regions may be considered.

Processing Many processing facilities in Alaska are old — some have been around for more than 100 years — and have expanded without adequate reviews of their functional efficiencies. Likewise, the processing technology is often antiquated and may not be producing the types of products that will boost sales to new consumers. Work may be initiated to analyze areas such as:

- Utilize value-added and more efficient production equipment in conjunction with marketing efforts. Production equipment may be readily available that will increase yields, support new products and lower associated costs. Existing technology could be explored to determine whether it would be applicable to the Alaska salmon industry.
- Expand the use of resources. Issues surrounding fish waste and poor utilization of product may be addressed in an effort to develop new products and maximize profits. Identification of technologies to create new products may include fish meal, oils, and fuel.
- Lower costs and increase productivity. Production equipment is one way to lower costs and increase profits for processors. Reduced costs may come with changes in labor requirements. Increased profits may result from extracting greater yields or producing higher value products.
- Provide incentives for change. There are certain incentives that might promote increased efficiencies. Tax incentives for new capital equipment that produces a high-end product is an example.

Quality Alaska salmon is known in the marketplace as having inconsistent quality. Test programs are underway to develop a process that would establish quality standards that begin on the fishing grounds and reach all the way to the grocery store or food service provider. While these factors may be outside the control of local fishermen and processors, improved product handling will help maximize the value of the salmon and could result in

better ex-vessel prices. Improved handling begins by rapidly chilling the fish in order to lock in the natural high quality. A number of quality enhancement efforts may be effective, including:

- Positive harvest incentives. Fishermen may see higher prices for iced and bled fish.
- Quality control program. Establish quality control programs that monitor the quality of fish from the time of catch through to the point of sale.
- Positive processing incentives. Plant managers earn greater commissions for producing higher-grade species.
- Incentive for cooling equipment. Propose tax incentive programs and other low-interest outlets to increase refrigeration equipment on commercial vessels.
- Mandatory ice provisions. Create a program to ensure that fishermen delivering in a day have ice on board before heading out to the fishing grounds.
- Quality training. Processors and harvesters participate in seafood handling training programs.
- Inspecting. Hire neutral, third party quality inspectors.

Market Strategy Not only does the Alaska salmon industry need more marketing funds, but as innovative marketing programs come on line, it will be important to develop a statewide salmon marketing plan. This plan should consider the following points:

- Product forms and branding attributes. In conjunction with a quality seal program, Alaska could shift its focus to developing products that earn the greatest return. Marketing efforts could support this new production focus. Further, branding efforts should be relatively consistent in order to avoid sending conflicting messages to consumers that may ultimately damage the greater marketing effort.
- Untapped markets. Exploration of untapped or under-utilized markets may lead to an increase in Alaska salmon's presence.
- Target under-utilized species and harvests. Targeted marketing efforts may increase the success and maturation of under-utilized species and harvests.
- Capital infusion. A marketing plan must identify adequate funding sources.
- Incentives to make changes. Marketing programs could be established that provide public funds to salmon industry participants who increase product quality, develop new products and conform to overall marketing plans.

Regulatory Review Changes to regulations affecting the salmon industry may deserve consideration. The industry may operate more efficiently if modifications are made to various management structures without negatively impacting areas such as resource sustainability and food safety. Issues for review may include:

- Taxation practices. There may be inconsistent and confusing taxation practices among industry participants. If warranted, some changes to the tax structure could increase industry incentives for development.
 - Gear restrictions. Harvest gear is highly regulated. A review of harvest regulations may consider whether changes are warranted.
 - Exclusive fishery restrictions. Existing regulations prohibit salmon vessels from harvesting in more than one area per season. Consideration could be given to changing this and other such restrictions.
-

- Area management practices. Creating a more flexible local management structure may lead to greater efficiencies through timely in-season management. There may be specific changes to allow for liberalizing local management.
- Harvest to market issues. Regulations may need to consider how harvest management affects the salmon products in the marketplace. Consideration of how harvest management may improve the marketability of the product and promote the highest and best use of salmon is important.

Freight High freight costs are one of the greatest impediments to maximizing the value of seafood in Alaska. The cost of shipping product to global markets is prohibitive due to the lack of infrastructure to service larger cargo planes. The following might help lower the cost of freight:

- Enhance key transportation nodes. Government agencies and local communities should work to lengthen runways in key communities to allow for direct flights of large aircraft to and from Anchorage.
- Regional coordination. Spreading processing activities throughout the region is not cost effective, given the lack of resource and volume and the freight costs. Instead, the region could consider aggregating production capacity to a few central areas. Communities could develop some form of profit-sharing system to ensure that all communities benefit from economic opportunities. This may include a sharing of employment opportunities, lodging and other services that facilitate processing operations.
- Employment of technology. Processors may explore the latest technologies to increase yields on their products. Removal of skin and bone may reduce the freight costs considerably.

Other Input Costs Energy, labor and other inputs are costly for the Alaska salmon industry. Fuel efficiencies and experimental projects may lead to cheaper forms of energy. While untenable to employment efforts, production facilities may need to introduce technological improvements to processing equipment that minimize labor costs. There are a number of other inputs to the fishing industry. If some of these could be competitively provided in-state, as opposed to being imported from outside Alaska, the industry may witness additional cost savings.

Capital Recruitment At a time when the salmon industry cannot afford significant reinvestment, there is a tremendous need for capital. Public and private funding sources should be explored in conjunction with each of the above areas as they relate to a common revitalization plan. Creative financing techniques, such as tax incentives, will be important to review.

Diversifying into the Halibut, Groundfish, and other Fisheries

Given the diminished value of the regional salmon industry, residents will need to look to the groundfish fishery for future income opportunities. Residents can work with their local Community Development Quota groups, to facilitate their entry into groundfish and other fisheries. Western Alaska residents are increasingly becoming involved in the halibut fisheries. Residents have developed the necessary skills to long-line halibut, making this the next large-

scale industry to pursue. However, residents must accumulate sufficient Individual Fishing Quotas (IFQ) to support locally controlled operations. Efforts to help residents secure loans for the IFQs or to use other sources of capital would expand the economic base. Partnership programs with Native Corporations may provide alternative sources of capital.

Alaska herring is a prized commercial seafood product. Traditional industry practices dictate that fish tenders buy herring directly from fishermen on the fishing grounds. A majority of the catch is frozen and shipped overseas, where it is further processed and sold. A tremendous value-added opportunity appears to be lost under this scenario. The value of herring could be increased through a number of strategies, including industry tax incentives to attract shoreside processing infrastructure, and an examination of export trade laws, tariffs and non-tariff trade barriers affecting the sale of secondary processed herring from Alaska. Research into this issue could begin with an examination of the commercial herring fishery in British Columbia, where exporting unprocessed herring is limited to 25% of the total harvest.

The groundfish fishery includes species such as pollock, sablefish, Pacific cod, king crab and tanner crab. The Bering Sea groundfish fishery represents a promising new opportunity for the region's residents. Although the industry occurs just off the coast, residents have had little involvement in this fishery. Large groundfish vessels do not come near to the shores of western Alaska because there are no deep-water ports. If region residents want to work in this fishery, they generally have to make their way to Dutch Harbor in the Aleutian Islands. Nonetheless, there are good opportunities with the CDQ groups since they have direct control of their CDQ allocations and have invested their profits in partnerships with private ventures that have additional Individual Fishing Quotas. The CDQ groups are buying IFQs on the open market. Other non-profits can do the same.

Expanding Tourism

Western Alaska is a large, culturally and geographically diverse region of the state. Though it is rich in intrinsic tourism attractions, it currently has little tourism "infrastructure" and few visitors (about 7% of all out-of-state travelers to Alaska) relative to other regions of Alaska. For many visitors, the region is not well known, and access to and within the region is costly. Since the region is not visited by any of the large tour companies that dominate Alaska travel, it misses the opportunities that come with such widespread exposure. Also, the existing tourism has brought only limited benefits to local residents. For example, only 10% of 300 plus businesses authorized to operate in the Bristol Bay region's three national parks are based in Bristol Bay. Hunting and fishing lodges in particular tend to be owned and operated by people from outside the region. This means that local residents often believe they are stuck with the problems tourism brings – such as competition for fish and game – while receiving few of the benefits. Local opportunities to benefit from the sport fishing and sport hunting sector include the provision of transporter services, and lodging and food service for independent travelers. Native corporations may offer land use permits, and services such as equipment storage.

A 1996 survey of community leaders in the Bristol Bay Area measured attitudes about the future growth of different segments of the tourism industry. The table below indicates that most community leaders favor tourism related to culture or ecotourism activities and are less supportive of tourism that involves unguided sport fishing or sport hunting.

Bristol Bay Future Tourism - How Much In The Future, Compared To Today?

	A lot more	A bit more	Same as today	A little less	A lot less
Guided sport fishing?	17%	28%	28%	13%	14%
Unguided sport fishing?	11%	14%	21%	26%	28%
Sport hunting?	11%	12%	23%	19%	35%
“Ecotourism” (adventure tourism, hiking, wildlife viewing)?	58%	34%	4%	3%	1%
Culture-Based Tourism (museums, tours)?	68%	29%	4%	0	0

Non-consumptive tourism, such as viewing wildlife, offers a number of benefits. One is that these activities are less likely to harm the natural environment, or create conflicts with subsistence or commercial fishing. Another is that activities like wildlife viewing and learning about history appeal to a much larger market than hunting and fishing (9 out of 10 visitors vs. 2-3 out of 10 visitors). An additional motivation is the region is blessed with great potential for adventure and cultural tourism, but currently has almost no infrastructure to support this activity. The region’s best known destination, Brooks Camp in Katmai National Park, is an overcrowded facility that squeezes upwards of 15,000 visitors a year onto a couple of crowded platforms to see 100 or so bears. Meanwhile Bristol Bay’s other 9,900 bears, plus 50,000 caribou, dozens of volcanoes, fresh water seals, walrus, 10,000 years of cultural history, and other wonders are scarcely visible to most travelers.

Native corporations, particularly village corporations, hold most of the more accessible and valuable land, particularly land along waterways. While these corporations are relatively land rich, they can be cash poor. New strategies can assist the corporations to create more local economic opportunities without resorting to development that will reduce the quality of the area and create conflicts with subsistence. A pioneer in this effort is the Nushagak Land Trust. This organization, based in Dillingham, is working to preserve the quality of the experience of the Nushagak watershed for subsistence, sportfishing and commercial fishing. Work has focused on education and purchase of in-holdings. Local village corporations, under the leadership of Choggiung, Ltd., are working on river user guidelines and user management.

One reason the region has so few visitors is the lack of package travel, particularly links to cruise travelers. Both day and overnight tours and excursions are needed. One opportunity would be to offer guided tours of smaller villages, linked to wildlife viewing and soft adventure such as river floating.

In terms of infrastructure, more and better quality lodging is needed in select villages outside of the regional hubs, where residents want to develop tourism, and where

attractions like wildlife viewing are high. Also needed are wildlife viewing programs and facilities, community/visitor centers, space for meetings and training, cultural activities, and artifact display and storage. Examples of new multi-purpose facilities are underway in Dillingham and Iliamna, working in part with EDA grants. The goal is to create anchor attractions that will give visitors new reasons to spend time and money in the community.

The demand for tourism will substantially grow and offer new opportunities. However, local tourism operators will have to compete with outside firms with more capital and a history of hiring almost exclusively non-residents. Moreover, there will be resource use and cultural conflicts with existing subsistence users and commercial users. Elsewhere in Alaska, Native corporations are developing cultural and adventure tourism that is consistent with traditional village lifestyles. These ventures can be a model for Western Alaska communities.

Energy

Electric energy has been heavily subsidized in both urban and rural Alaska. The State of Alaska has invested somewhere between \$1.4 billion and \$2.0 billion over the last 20 years. Even with these investments and the additional Power Cost Equalization subsidy for operations, rural energy costs are about double the urban costs. More importantly, a reduction in future subsidies is anticipated with the long-term downward trend in oil revenues. Higher energy costs are a fact of life and inhibit economic diversification.

Operation and maintenance costs for electrical facilities are already difficult to sustain for most small utilities. One option has been to fold the smaller utilities into the larger electric cooperatives, such as Alaska Village Electric Cooperative. To accomplish this requires large capital investments to upgrade the smaller utilities to REA standards. Consequently, the debate continues on who will pay for the upgrades: the State of Alaska, users of the small systems, or the larger electric cooperatives. Until these smaller systems are brought together under professional management, there will not be the access to capital to finance future upgrades and system replacements. Consequently, the State of Alaska will continue be the "insurer" of the smaller systems when they fail.

Many smaller electric utilities are just covering operating costs and are deferring routine maintenance. As a result, the life of the facilities is shortened and total costs are increasing. There may be limited opportunities to train more plant operators and to tie this training to a required maintenance schedule. As an added incentive, any cost savings should be retained by the utility, and the savings should not reduce the Power Cost Equalization (PCE) subsidy.

Other opportunities to reduce energy costs are the formation of bulk fuel cooperatives and the consolidation of facilities either within or between communities. These cooperatives would manage the fuel requirements for two or more communities. Consolidated facilities increase the economy of scale and spread the fixed costs for construction over a larger customer base. With consolidation, there are also administration cost savings, but this may mean fewer local jobs.

The oil and gas industry, the State of Alaska, and the federal government are vigorously trying to develop the natural gas on the North Slope. The economic feasibility of a natural

gas pipeline is still marginal, but is becoming closer to being viable. Communities are interested in tapping into the natural gas development for local consumption. Because of the high infrastructure cost to access, distribute and change over to natural gas, only the projects around Fairbanks and in Southcentral Alaska appear feasible at this time. Other prospects to develop shallow natural gas from coalfields may be more feasible. However, the high development and distribution system costs will limit the economic feasibility to gas sources that are within a few miles of a community. As described in the Oil and Gas section below, natural gas for communities may not become economic until they are developed to support new mining ventures, such as the Donlin Creek Mine.

Transportation Infrastructure

Due to the remoteness of western Alaska, transportation costs are high. Most of the capital improvement projects for transportation have been upgrading airports. While water transportation is the cheapest mode to move cargo, it is limited by seasonal weather and is served by only a few regional ports. Past port and harbor development has been a close partnership between local government, the state, and the federal government. The federal government has always limited investment and interest in navigation improvements to projects that satisfy national economic development criteria. This threshold is very high and the geography, climate, and low population density weigh in heavily against western Alaska in this test. State assistance has ranged from complete financial support to little or no financial support. The State assistance expanded during the lucrative days of high oil production, but now State assistance is only available if there is substantial local funding for projects. Efforts to improve transportation infrastructure should give priority to improving docking and mooring facilities, navigation aids, and delivery systems between vessels and tank farms for coastal and river communities.

Wade Hampton Census Area Inadequate docking and mooring facilities, navigation aids and delivery systems between vessels and tank farms are hampering bulk fuel delivery to communities along the Yukon River system. Planned improvements include new fuel delivery pipelines and storage tanks to accommodate larger but fewer fuel deliveries to service the region.

Goodnews Bay to Saint Michael The only regional ports are found in Bethel, serving Kuskokwim River communities, and Nenana, serving Yukon River communities. There is insufficient volume of waterborne general cargo and fuel to justify the cost of developing other regional ports. In fact, the use of a new regional port to transfer general cargo and fuel from ocean barges to coastal villages would increase the cost of these deliveries, resulting from increased handling and moorage fees at the port. The lack of sufficient cargo is partly due to the U.S. Postal Service bypass mail program, which diverts almost half of all general cargo to airplanes. While new regional ports are not feasible, there is a need to improve mooring and unloading facilities for river barges at all coastal and river villages.

Nome Absent a system of highways or railroads, the regional economy of the Nome Census Area relies on ocean barges to deliver its freight and bulk-fuel needs. The only alternative is expensive airfreight. The Port of Nome, located in the City of Nome,

provides the only regional facility for boat moorage and service to outlying communities. In recent years, the Port has experienced unprecedented growth. Following the creation of a Community Development Quota (CDQ) system in 1992, allocations of seafood harvest quotas to Nome-area coastal communities resulted in the rapid growth of a commercial fishing fleet based at Nome. When the program first started, there were no locally based commercial fishing boats. By 1995, 45 vessels had permits. In addition, a commercial transportation fleet of more than 40 vessels regularly use the harbor and causeway structure. Port traffic is expected to further increase thanks to Nome's \$25.6 million Port Navigation Improvement Project, scheduled for completion in 2003. Improvements include a new breakwater, navigation channel, extended causeway, sand-bypassing plan, and a deeper operational area for the causeway. There is a need to improve the docking and mooring facilities, navigation aids, and delivery systems between vessels and tank farms for coastal communities.

Expanding the Oil & Gas and Mining Industries

With the exception of the Bristol Bay Borough, all census areas in the Disaster Area have had mining operations. The remoteness of the region increases mining costs. Consequently, known reserves have to be very rich and concentrated, or world prices have to increase on a sustained basis, before most mines become feasible. In general, existing low metal prices, market demand or the lack of power supply and other infrastructure, make most mining opportunities infeasible. However, some mining has resumed, such as the small-scale platinum mining at Goodnews Bay. In the Nome Census Area, some of the numerous placer deposits are still economic, but only support small operations. There are numerous rich gold placer mines in the Yukon-Koyukuk Census Area, but the hardrock sources of these placers remain largely undiscovered. The Nixon Fork Mine near McGrath operated from 1995 to 1999, when it closed.

One of the most interesting mining prospects is the Donlin Creek gold deposit in the Bethel Census Area. This deposit is being explored by NovaGold under a lease from the Calista Corporation. The size of the gold resource (11.5 million ounces) suggests that this will probably become a mine. Road access to the Kuskokwim River and significant new sources of power would be needed for economical mining and processing. The establishment of a major mine in the region would provide significant leverage for the development of other prospects in the area. It is expected that the Donlin Creek operation would be in the range of 50,000 to 100,000 tons per day, perhaps employing 300 to 400 people.

Prospects that may become viable in the near future include:

- Pebble Copper deposit (copper and gold ores) on the north shore of Lake Illiamna.
- The Donlin Creek prospect on the mid-Kuskokwim River.
- Apollo-Sitka prospect (a former gold and silver mine) on the Alaska Peninsula.
- Shumagin prospect (gold and silver) on Unga Island.

There are a few undeveloped placer sites in the Marshall placer district and under the right circumstances, three mineral prospects in the Dillingham Census Area could be

commercially viable: the Kemuk Mountain iron prospect, the Shotgun gold prospect, and the Sleitat tin-silver prospect.

In the Lake and Peninsula Borough there are two coalfields: a higher-grade (12,000 Btu) Chignik Coalfield at the head of Chignik Bay and the lower-grade Ugashik field. These coal beds, like the extensive coalbeds in the Yukon-Koyukuk Census Area, may ultimately provide sources of power, including coalbed methane. There is a multi-year study to determine whether coalbed methane can serve as a local energy source for the communities of Alatna, Allakaket, Bettles, Evansville, Galena, Kaltag, Koyukuk, Loudon, Nulato, Beaver, Birch Creek, Chalkyitsik, Fort Yukon, McGrath and Nikolai.

Perhaps one of the best opportunities near Nome is to sell sand and gravel from old placer operations. As sand and gravel become scarce in the Lower 48, Alaska may indeed be able to export this material.

Not much can be done locally to bring mines or gas and oil fields into production. The decisions to open a mine or to actively explore for oil and/or gas are largely made by outside decision makers and are based on factors beyond the control of local residents. Nonetheless, there should be an effort to develop workforce skills so they can assess and monitor environmental impacts, as well as gain the skills for mine construction and operation.

Expanding Agriculture

Agriculture is practiced on a local scale throughout the region. In general, the large-scale development of commercial agriculture is highly unlikely, and domestic gardening and vegetable growing for local sale offers limited opportunities for import substitution. Kuskokwim Native Association operates a small farm in Aniak and provides potatoes and other vegetables to the local villages. Also, reindeer herding occurs over an area that lies partially in the Yukon Delta National Wildlife Refuge. Likewise, the reindeer industry has been important to the Nome Census Area regional economy for over one hundred years. Commercial reindeer herding is active on the Seward Peninsula, with fifteen herds comprising approximately 10,000 animals. Reindeer herds graze near Shaktoolik, Stebbins, Teller, Nome, on St. Lawrence Island, and Nunivak Island. The domestic reindeer herd on the Seward Peninsula is decreasing due to assimilation into the Western Arctic caribou herd. Small-scale, agricultural production for local consumption will most likely continue – including pilot projects for green houses. The marketing of reindeer meat may be a means to create an export market or to increase local meat sales, especially to tourism related businesses.

Expanding Wood Products

Most of the Disaster Area contains no commercially significant timber resource. Small scale harvesting and processing of timber for fuelwood, houselogs, and roughcut lumber occurs. Because stud-grade lumber is relatively easy to produce, it is a commodity that is bought and sold on large world markets. Consequently, the price remains relatively low and

lumber produced outside the Alaska region remains cheaper than local supplies. However, there are still some opportunities for import substitution in the Yukon-Koyukuk, Bethel and Dillingham census areas.

Any significant increase in the manufacturing of local wood products will most likely center on the primary products already produced in the region. In addition, new opportunities stand out. The rising costs of heating oil and lower rural utility subsidies may lead to a greater reliance on wood as a source of heat and electricity generation. Also, the Tanana Chiefs Conference (TCC) is building a network of training and technical assistance to increase production of lumber and houselogs for housing and general construction. The communities of Arctic Village and Circle illustrate different approaches to this question. Despite owning a small sawmill, the village council in Arctic Village has built approximately ten houses in the past four years with lumber purchased in Fairbanks. On the other hand, the village council in Circle has improved their sawmill capabilities through a series of small grants. They are currently building about two houses per year from local materials and are setting their sights on commercial sales of lumber and houselogs in the Fairbanks area.

Appendix A

Evaluating Your Business Idea

So you want to start a business! How do you know if your idea is any good? How do you know if you're going to make any money?

Quick and Dirty Calculation

If your proposed business has a low start-up cost, and does not require any special permits or legal considerations, you might choose not to write a business plan. However, you might want to think it through a little before you get started.

Examples of this sort of business would include making crafts for sale from locally-available natural materials, using extra money from your next paycheck to start a video rental business in your spare bedroom, or sewing a few kuspuks from leftover fabric to sell at the local store.

What's the minimum you need to do to get started? Here are a few steps to take to test your business idea:

Identify your product or service A business is really a way to solve a problem or fill a need for your customer. Your business may be meeting the need for the convenience of a place to buy snacks late in the evening, or solving the problem of the high shipping cost for individual orders of dog food. Clearly define what benefits you will offer. Then,

Identify your customers Who exactly will your business serve? Some people in your community may not need your product or service. Define exactly who your business will serve, how much they will pay for your product or service, and how many potential customers you have. Are there enough potential customers for your business to be profitable? Why will they buy from you? How are they currently filling the need for what your business will offer?

Identify your competition Every business has competition. You may have the only video rental business in your village, but once you think in terms of what need your business fills you will realize that your competition includes basketball games, bingo, and other forms of entertainment. How will your product or service fill your customer's needs or solve a problem better than the competition will? Are you offering better quality, lower prices, better service, a larger selection?

Once you have a clear idea of your product or service, your customer, and your competition, step back and ask yourself if the business idea makes sense:

What do I have to offer that is not already available?

Why will people buy from me?

How will customers know about my business?

Am I willing to do the work necessary to run this business?

Another important question is whether the business will make money. A good way to find out is to do a break-even analysis:

Add up your fixed costs:

Rent	_____
Utilities	_____
Insurance	_____
Advertising	_____
Loan payment	_____
_____	_____
_____	_____
Total fixed costs	=====

Add up your variable costs for a unit of product:

Materials	_____	_____
	_____	_____
Labor	_____	_____
	_____	_____
Total variable cost per unit		=====

Selling price per unit: _____

Calculate "contribution" -

Selling price per unit	_____
- Variable cost per unit	_____
= Contribution per unit	=====

Calculate "contribution margin" -

Contribution per unit	_____
/ Selling price per unit	_____
= Contribution margin	=====

Sales required to break even -

Total fixed costs	_____
/ Contribution margin	_____
= Sales required to break even	=====

Unit sales required to break even -

$$\begin{array}{r} \text{Sales required to break even} \\ / \text{ Selling price per unit} \\ \hline \hline = \text{Unit sales required to break even} \\ \hline \hline \end{array}$$

If the “Unit sales required to break even” is more than you believe you can sell, then you probably will not make a profit. If you can reduce your costs or increase your selling price, try the calculation again and see if the “Unit sales required to break even” is a target you think you can reach. If you think you can sell more than that, then your business is likely to be profitable.

Now let’s cover the “mechanics” of starting a business:

- ✓ The minimum requirement for starting any sort of business is to get a business license. State of Alaska business licenses are available from the Division of Occupational Licensing (907-269-8160 in Anchorage) and cost \$50 for two years. Also, be sure to check if your local city or borough government requires a business license or sales tax registration.
- ✓ To find out if you need an occupational license, check with the Division of Occupational Licensing. A few of the occupations that require additional licensing are:
 - Charter boat operators (check with the U.S. Coast Guard at 907-271-6736)
 - Child care providers (check with the Child Care Office of the Department of Education and Early Development at 907-269-4671)
 - Hunting guides (check with Division of Occupational Licensing at 907-465-2543)
- ✓ Some types of businesses will require a permit from the Department of Environmental Conservation. These include bed & breakfasts and lodges, day care centers, restaurants, and any other type of business that prepares food or provides restrooms for the public. For permit information, contact the Department of Environmental Conservation at 1-800-510-2332.
- ✓ Any business that has employees must meet requirements for withholding and paying taxes, providing workers’ compensation insurance, meeting standards for health and safety, and other protections for workers. If you will have employees, you may want to talk to a business counselor to be sure that you have met all the requirements.
- ✓ The simplest form of business ownership is the sole proprietorship – a business owned by one person, where the business is not a corporation or other separate legal entity. A business owned by two or more people, where a separate legal entity such as a corporation has not been set up, is a partnership. Attorneys and tax accountants can provide more information on the specifics of setting up different forms of business entities.

Getting Fancy

For a more thorough examination of your business idea, or if you plan to apply for financing, the next step is to prepare a business plan. A business plan is a roadmap to help you figure out how to get to where you want to be, and to measure your progress toward that goal. And if you've gotten this far, most of the work is done!

There are many sample business plans available, and the information needed will depend on the nature of your business. The basic elements, however, are the same:

Executive Summary – One page that includes a summary of the major points of the business plan, and a funding request, if applicable.

Description of the business – What goods or services will you offer? Where will the business be located?

Market analysis or marketing plan – Who are your customers? How will you make them aware of your business? How will you compare to your competition? What future events might affect your business?

Management – Will you be the sole owner or form a corporation? Which responsibilities will you hire staff to do? What are the job qualifications needed?

Financial – Projections of cash flow, profit and loss statements, and balance sheet. Also, an estimate of start-up costs, and loan request, if any.

Assistance with business plans is available from the Small Business Development Center (1-800-478-7232), or contact your local ARDOR program:

Bering Strait Development Council in Nome at 443-9005

Interior Rivers R C & D Council in Aniak at 675-4578

Lower Kuskokwim Economic Development Council in Bethel at 543-5967

Southwest Alaska Municipal Conference in Anchorage at 562-7380

Appendix B

Census Area Economic Snapshots

Dillingham Census Area The private support sector exceeds the economic base. The economy is evolving from just commercial fishing to commercial fishing and a regional service center. Transfer payments are becoming more important.

- The population increased from 4,012 in 1990 to 4,922 in 2000.
- The economic base was 17% of the entire economy in 2001, declining from 39% in 1995.
- Salmon fishing and processing is 86% of the economic base and is up from 75% in 1995.
- Fish harvested totaled about 17 million, down 43% from the ten-year average.
- Gross earnings from commercial salmon are down 52% from a seven-year moving average.
- Annual jobs in the economic base are down 42% from 1995.
- Annual personal income in the economic base is down 62% from 1995.
- Per capita wealth, 1995-1999: 63% cash, 14% transfer payments and 23% subsistence food.
- The adults completing high school, 70% in 1990 to 77% in 2000.
- Most power facilities are generally in good shape, with the notable exception of Manokotak and Twin Hills. Manokotak is slated to upgrade its power system in 2002.

Lake and Peninsula Census Area A mixed cash/subsistence economy based on commercial fishing, seafood processing, tourism, and traditional subsistence uses. There is a relatively small private support sector in comparison to the economic base, but the private support sector is growing despite a large decrease in the economic base. Transfer payments are becoming more important.

- The population increased from 1,668 in 1990 to 1,823 in 2000.
- The economic base was 58% of the entire economy in 2001, declining from 73% in 1995.
- Salmon fishing and processing is 68% of economic base and is down from 70% in 1995.
- Gross earnings from commercial salmon are down 52% from a seven-year moving average.
- Annual jobs in the economic base are down 37% from 1995.
- Annual personal income in the economic base is down 38% from 1995.
- Per capita wealth, 1995-1999: 52% cash, 17% transfer payments and 31% subsistence food.
- The adults completing high school, 61% in 1990 to 72% in 2000.
- Due to improvements made over the last decade, most of the power systems are rated moderate to good condition.

Bethel Census Area A mixed economy built on regional services and subsistence uses.

Like Wade Hampton and Yukon-Koyukuk census areas, the economic base is small (less than 10 percent of the total economy). The private support sector is growing, especially in transportation and medical services. Transfer payments are becoming more important.

- The population increased from 13,656 in 1990 to 16,006 in 2000.
- The economic base was 5% of the total economy in 2001, declining from 14% in 1995.
- Salmon fishing and processing is 16% of the economic base and is down from 24% in 1995.
- Gross earnings from commercial salmon are down 52% from the seven-year moving average.
- Annual jobs in the economic base are down 65% from 1995.
- Annual personal income in the economic base is down 67% from 1995.
- Per capita wealth, 1995-1999: 45% cash, 19% transfer payments and 36% subsistence food.
- The adults completing high school, 62% in 1990 to 71% in 2000.
- With the exception of the well-maintained power systems in Bethel, Kasigluk, Aniak, Lime Village and Tuntutuliak, the electrical facilities in remaining communities are in poor to moderate condition.

Bristol Bay Census Area Like the Dillingham census area, the Bristol Bay economy is based almost entirely on catching and processing Bristol Bay sockeye salmon. Unlike many other census areas, the private support sector is decreasing in response to decreases in the economic base.

- The population decreased from 1,410 in 1990 to 1,258 in 2000.
- The economic base was 29% of the entire economy in 2001, declining from 44% in 1995.
- Salmon fishing/processing makes up 69% of economic base and is down from 73% in 1995.
- Fish harvested totaled about 17 million, down 43% from the ten-year average.
- Gross earnings from commercial salmon are down 67% from a seven-year moving average.
- Annual jobs in the economic base are down 36% from 1995, due to poor salmon fishing.
- Personal income in the economic base is down 50% from 1995, due to lost salmon earnings.
- Per capita wealth, 1995-1999: 83% cash, 10% transfer payments and 7% subsistence food.
- The adults completing high school remained constant from 1990 to 2000, at 89%.
- The Naknek-King Salmon electrical system is ranked near the top of the statewide power system condition survey.

Wade Hampton Census Area The economy is clearly dominated by subsistence use. State and local government are the largest employers in the cash economy. The private support sector is growing rapidly in response to government spending and increasing transfer payments, especially the Alaska Permanent Fund Dividend.

- The population increased from 5,791 in 1990 to 7,028 in 2000.
- The economic base was 1% of the entire economy in 2001, declining from 14% in 1995.
- The salmon industry is non-existent — commercial fishing was closed in 2001.
- Annual jobs in the economic base are down 96% from 1995.
- Annual personal income in the economic base is down 91% from 1995.
- Per capita wealth, 1995-1999: 31% cash, 26% transfer payments and 43% subsistence food.
- The adults completing high school, 58% in 1990 to 66% in 2000.
- Due to improvements made over the last decade, most of the power systems are rated moderate to good condition.

Yukon Koyukuk Census Area Only the western portion of the Yukon Koyukuk Census Area is in the Western Alaska Disaster Area. The economy of this western sub-region is very similar to Wade Hampton and Bethel census areas. The economy is dominated by subsistence uses.

- The population decreased from 8,478 in 1990 to 6,551 in 2000.
- The economic base was 7% of the entire economy in 2001, down slightly from 8% in 1995.
- Salmon fishing/processing is essentially non-existent; commercial fisheries closed in 2001.
- Gross earnings from salmon fishing are 87% below the seven-year moving average.
- Annual jobs in the economic base are down 36% from 1995.
- Annual personal income in the economic base is down 32% from 1995.
- Per capita wealth, 1995-1999: 52% cash, 17% transfer payments and 31% subsistence food.
- The adults completing high school remained constant at 73 – 74% from 1990 to 2000.
- The condition of power facilities varies greatly. In general, smaller systems in remote areas are in need of repair. The Alaska Energy Authority and the Denali Commission plan to assist with power upgrades in Arctic Village, Hughes, Koyukuk and Stevens Village.

Aleutians East Census Area The Aleutians East Borough economy is dominated by the cash economy and has a relatively lower dependence on subsistence foods.

- The population increased from 2,464 in 1990 to 2,697 in 2000.
- The economic base is 71% of the economy in 2001 – declining from 82 percent in 1995.
- Salmon fishing and processing is 22% of economic base and is down from 64% in 1995.
- Fish harvests are well below five year averages due to strikes and smaller salmon runs.
- Ex-vessel salmon prices are down 41% from last year.
- Salmon permits fished are down 5-10% from last year.
- Gross earnings from salmon fishing are down 71% from a seven-year moving average.

- Annual jobs in economic base are down 37% from 1995.
- Annual personal income in economic base is down 34% from 1995.
- Per capita income, 1995-1999: 81% cash, 7% transfer payments and 12% subsistence.
- With the exception of False Pass, the power facilities in all communities are ranked high in a statewide power system condition survey. False Pass is making an effort to obtain financing for needed improvements.

Nome Census Area The economic base of the Nome Census Area is made up of tourism, the federal government, mining, and a very small commercial fishing/seafood-processing sector.

- The population increased from 8,288 in 1990 to 9,196 in 2000.
- The economic base is 11% of the entire economy in 2001 – decreasing from 19% in 1995.
- Salmon fishing and processing is 0-2% of economic base from 1995 to 2001.
- Fish harvests started to deteriorate in 1988.
- Average salmon prices are about the same as last year but from a very different mix of species.
- Salmon permits fished are down by 89%.
- Gross earnings from commercial salmon are down 83% from a seven-year moving average.
- Annual jobs in the economic base are down 38% from 1995 from a concurrent decrease in mining, tourism, the federal government, and the seafood industry.
- Annual personal income in the economic base is down 36% from 1995.
- Per capita wealth, 1995-1999: 51% cash, 20% transfer payments and 29% subsistence food.
- The power facilities in Koyukuk, St. Michael and Elim have high ranking in the statewide power survey, but the remaining facilities have poor to moderate ratings. A small amount of energy has recently begun to be produced from wind in the village of Wales.

Job Training Attitude Survey

Western Alaska Fisheries Disaster Region

October 5, 2001



State of Alaska

Tony Knowles, Governor



Department of Community and
Economic Development

Deborah Sedwick, Commissioner



Job Training Attitude Survey

Western Alaska Fisheries Disaster Region

October 5, 2001

Department of Community and Economic Development
Deborah Sedwick, Commissioner

Division of Community and Business Development
Pat Poland, Director
Ginny Fay, Deputy Director

Research & Analysis Section
Michael Cushing
Laura Walters
Kevin O'Sullivan

With assistance from the Alaska Department of Labor and Workforce Development, Division of Employment Security; the Alaska Human Resources Investment Council; and, job training professionals associated with organizations throughout Western Alaska.



DCBD Research & Analysis
P.O. Box 110809
Juneau, AK 99811-0809
(907) 465-4750

This survey was produced through a grant from the U.S. Economic Development Administration to develop a Western Alaska Economic Diversification Strategy.



**U.S. Department of Commerce
Economic Development Administration**

Introduction

Background

Beginning in 1997, salmon fisheries in Western Alaska experienced a series of years of substantially reduced runs. To make matters worse, the prices paid for these salmon are declining in world markets as a result of increased production of farmed salmon. Consequently, the State of Alaska declared the Western Alaska region to be an economic disaster area. As part of the response to this situation, the federal Economic Development Administration awarded a grant to the Alaska Department of Community and Economic Development to develop a Western Alaska economic diversification strategy. The goal of the strategy is to promote diversification in the region's base economy, which to a large extent is narrowly focused on the salmon fisheries industry. A component of the grant agreement for this project is to survey resident fishers in the declared disaster area to determine their attitudes regarding job training for employment opportunities that could either supplement or replace their current fisheries employment.

Survey Process and Methodology

For purposes of this study, the declared Western Alaska region was divided into eight areas, comprised of U.S. Census Areas:

- Aleutians (Aleutians East Borough and Aleutians West Census Area)
- Bethel Census Area
- Bristol Bay Borough
- Dillingham Census Area
- Lake and Peninsula Borough
- Nome Census Area
- Wade Hampton Census Area
- Yukon-Koyukuk Census Area

The names and addresses of resident fisher persons living in these areas were determined using 1999 permit holder and crew license information collected annually by the Alaska Department of Fish and Game. Based on this information, there were 2,942 permit holders, and 4,238 licensed crew living in these eight areas. For this survey, individuals who held both a permit and a crew license were included only in the permit holder group to avoid duplicate mailings.

The goal of the survey methodology was to obtain a set of responses that could serve as a reliable representation of the attitudes and opinions of all fisher persons in the disaster region. Based on the lack of personal telephones in many rural Alaska communities, and the high costs and time considerations associated with a face-to face survey, it was decided to undertake a mail survey approach. The survey instrument was designed in cooperation with state and local job training professionals who work on job training and employment efforts in the fisheries disaster area, and who will be key users of the survey results. The survey instrument was field tested with several fisher persons to obtain their feedback.

Surveys were mailed to about half of permit holders (1,500) and crew persons (2,000) who were randomly selected from the complete lists. To ensure that each of the eight areas within the region was fairly represented, surveys were mailed to each area in proportion to the number of permit holders and crew persons living in the respective areas.

Based on previous experience with low survey response rates in rural Alaska, three cash rewards (\$1,000, \$500, and \$250) were offered to randomly selected respondents who completed and returned the survey.

A first mailing of the survey was mailed in mid-April, 2001. This was followed by a "reminder" post card ten days later. Those people who did not respond to the first mailing were sent a second mailing of the survey in mid-May. 32% of permit holders and 28% of crew persons responded to the first mailing. An additional 12% of permit holders (total of 44%) and 9% of crew persons (total of 37%) responded to the second mailing. As a result of this exceptionally high response rate, the prospect of diminishing returns per effort, and, the fact that the fishing season was beginning, it was decided to forego a third follow-up survey mailing. The table at right presents the number of survey responses by area and type.

Area	Permit Holder	Crew	Total
Combined Aleutians	20	67	87
Bethel	192	206	398
Bristol Bay	46	51	97
Dillingham	134	150	284
Lake and Peninsula	42	68	110
Nome	47	51	98
Wade Hampton	141	141	282
Yukon Koyukuk	45	9	54
Total	667	743	1,410

While the number of surveys mailed to each of the eight areas, and to each type of respondent in those areas, were by design proportional to the overall populations being measured, the responses that came back were in somewhat different proportions. Crew persons responded less readily than permit holders, and some areas responded less readily than others. Consequently, to provide a more representative picture of the total disaster area response, adjustment weights were developed, for each area and type of respondent, and incorporated into the analysis where total disaster area characteristics were to be represented. Because no reliable information is available concerning the gender, ethnicity and education level of the overall fishing population in the disaster area, no weighting factors were developed for those characteristics.

A relational database was developed to contain the survey responses and facilitate analysis. The survey responses were keyed into the database and then crosschecked by other individuals for accuracy. A number of reports were generated from the database to provide basic tabulations of the survey responses by region, type of respondent (permit holder or crew), gender, age, ethnicity, and education level, as well as cross-tabulations examining possible correlations of respondent answers to the various survey questions. The data from these reports was exported to spreadsheets for charting purposes and analysis.

Non-Respondents

The information contained in this report reflects the attitudes and opinions of those people who made the effort to respond. But what about the attitudes of those people who did not respond? It is possible to speculate somewhat about this group's thinking by examining trends in the responses to the first survey mailing compared to the responses for the second mailing. The assumption is that the direction of such trends would tend to indicate the kind of responses that could have been expected from non-respondents if they had responded.

In general, the responses to the second mailing were more "negative" than responses to the first mailing. For example, when asked if they were interested in training in the area of fisheries, 46% of respondents to the first mailing answered "no," while on the second mailing 51% of respondents answered "no." On five of the six questions in the survey regarding choices such as

this, respondents to the second mailing answered more negatively, though not substantially so. Based on this assessment, the presumption is that the responses of those people who did not respond to the survey would probably be somewhat more negative than the sample of people who did respond. This implies that the overall findings presented in this report are probably somewhat more positive than would be expected if the entire fishing population had completed and returned the survey. However, even if this were the case, the survey revealed a very high level of interest in job training for this population, much higher than had been expected based on anecdotal information available before the survey.

General Conclusion

Because of the large response, the results of this job training attitude survey represent a fairly good picture of the thinking of the fishing population in the fisheries disaster region. This survey can serve as a reasonable basis for planning and development of job training programs to meet the needs of the people in the region. There was an unexpectedly high level of interest in job training, and a large number of respondents indicated they were interested in new kinds of employment, either to replace or supplement their current employment in commercial fishing. This clearly points to the need for expanded job training services and facilities in the region. A summary of major findings of the survey are presented on the following two pages.

Major Findings

Characteristics of the Respondents:

- ♦ **Age:** There appears to be somewhat of a “baby boom” effect in the resident fishing population with a substantially greater number of fishers in the 36-45 age group compared to those who are coming behind – there are about 43% fewer fishers in the 26-35 age group.
- ♦ **Ethnicity:** Most survey respondents indicated they were Alaska Native (91.5%) compared to 64% in the general population of the region.
- ♦ **Gender:** About 79% of all respondents were males and 21% were females. The percentage of females varied from 12% in the Bethel Census Area to 40% in the Bristol Bay Borough.
- ♦ **Education:** Overall, 40% of respondents had at least a high school degree, about 20% had some college education, and about 5% had a college degree.
- ♦ **Years Fishing:** Permit holders owned their permits for 17.5 years on average. Crew persons worked as crew for an average of 11.5 years.
- ♦ **Paid Employment:** 36% of respondents had no paid employment besides fishing in 2000. 21% worked at a full-time job other than fishing.
- ♦ **What Kind of Other Paid Employment:** When respondents were asked to describe what other paid employment they had besides commercial fishing, the most common response was laborer (15% of those who described their other work), closely followed by carpenter (13%). Other common responses were utility operators and maintenance (8%), store clerk (7%), equipment operator (6%), social services

(5%) and custodian (5%). About 3% reported they were teachers, and another 3% indicated they worked as teacher’s aides.

- ♦ **Income:** 24% said commercial fishing represented “almost all” of their income from paid employment. 66% said that commercial fishing represented “not much” of their total paid employment income.
- ♦ **Dependency on Fishing:** Crew persons were slightly more dependent on commercial fishing for their paid income than were permit holders.
- ♦ **View of the Future:** About one-third of respondents believed that fish runs and prices would not be returning to earlier levels. Only half as many (16%) thought things would improve. About half of the respondents said they didn’t know what was going to happen.

Respondents Attitudes and Opinions:

- ♦ **Job Training:** About 70% of respondents said they were interested in some kind of job training.
- ♦ **Fisheries Training:** Respondents were about evenly divided regarding their interest in training for new opportunities in fishing. The fact that about half the fishers were not interested in training within the fishing business may signal a wariness of respondents regarding the future of fishing as a profession.
- ♦ **Preferred Fisheries Training Choices:** When asked to identify what specific training respondents were most interested in, leading interests included new fisheries technology,

improving quality, fish processing, marketing, and the proper maintenance of nets and fisheries equipment. Thirty people indicated they would like to pursue a career in fisheries biology.

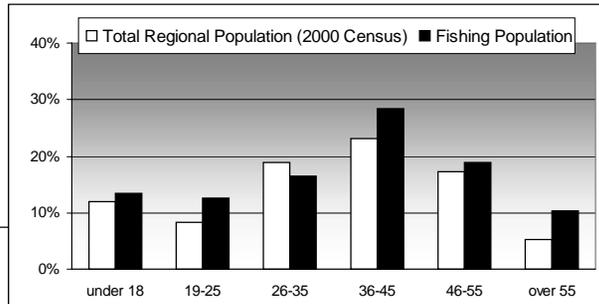
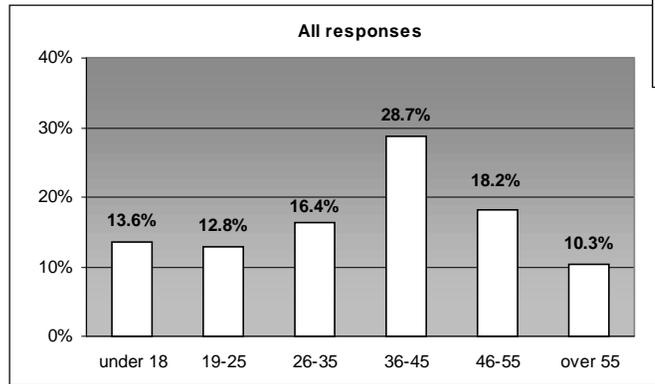
- ♦ **Low Interest in Fisheries Training:** The respondents least interested in fisheries business training were those aged 19 to 25 (41%).
- ♦ **Seafood Processing and Marketing:** The highest level of interest in training in the areas of seafood processing and marketing was the Lake and Peninsula area (41% very interested). Least interested were the Bethel area (33% not interested) and Bristol Bay (38% not interested).
- ♦ **Get Out of Fishing:** Overall, almost 40% of respondents said they were ready to get out of fishing and do something different. Only 11% of respondents said they were not interested in working at a job other than fishing. This is a very surprising result based on prior anecdotal information from the field and is another indication that the string of poor fishing years in Western Alaska is weighing heavily on people’s attitudes about commercial fishing.
- ♦ **Region Least Interest in Fishing:** In contrast to their high level of interest in seafood processing and marketing, respondents in the Lake and Peninsula Borough region indicated the lowest percentage of interest in continuing only to fish (4%), and the highest number of people who said they were ready to do something different for a living (51%).

- ♦ **Crew Less Interested in Fishing:** Crew persons were somewhat more inclined to do something different than fishing (46%) than were permit holders (32%). This result was expected based on the larger investment that permit holders have in the fisheries.
- ♦ **Fishing and View of the Future:** People who were of the opinion that fish runs and prices would not be returning to previous high levels were much less likely to be interested in training for new fisheries opportunities or training in seafood processing and marketing. These same people were also much more likely to indicate that they were ready to get into some employment other than fishing.
- ♦ **Popular Training Choices:** The most popular training choices by far were in the fields of construction work and mechanics. These were followed in order of interest by training in computers, electrical skills, transportation, building maintenance, office administration, metal work and accounting.
- ♦ **Least Popular Training:** The least selected choices were training in clerical work, food services, health services, graphic arts, sales, arts and entertainment and personal care.
- ♦ **Regional Training Choices:** Respondents from the different regions generally responded about the same regarding interest in job types. Notable exceptions were a significantly greater interest in the Alaska Peninsula and Aleutians areas for training related to oil and gas and transportation employment; and a relatively smaller degree of interest in the Bethel, Wade Hampton and Nome areas regarding computer training compared to other regions.
- ♦ **Native Training Choices:** Native respondents indicated somewhat more interest than non-Natives in the job training options of construction, accounting, clerical, food services, personal care and social services – options that generally reflect current employment opportunities in rural Alaska.
- ♦ **Non-Native training choices:** Non-Natives indicated significantly greater interest than Natives in the training areas of administration, arts and entertainment, graphic arts, oil and mining, sales, science and lab work, and wood products.
- ♦ **Previous Job Training:** 44% of respondents indicated they had experienced some job training. Most regions were similar in the pattern of their response, with between 40% and 50% of respondents reporting they had previous job training. Exceptions were the Aleutians area where only 30% had previous training, and the Nome area where 60% indicated previous training experience.
- ♦ **Job Training Led to Job:** 73% of respondents who had taken job training indicated that the training had led to a job. Success in job training leading to a job appeared to be the case across all regions.
- ♦ **Travel for Training:** 70% of respondents said they would be willing to travel to undertake job training. An additional 17.7% indicated they could do so if the training location were in their region. Generally, responses were very positive (between 60% and 80%) across all regions, age groups, education levels, gender and ethnicity.
- ♦ **Move for Employment:** 49% indicated they would be willing to move to another town to get a job and an additional 17% (for a total of 66%) would be willing to do so if it was a location in the same region of Alaska.
- ♦ **Commute to Employment:** Over three-quarters of all respondents said they would be interested in commuting to their place of employment. Respondents indicated generally high interest across all regions in commuting, age groups, and education levels, and regardless of differences in gender, ethnicity or whether they were permit holders or crew persons.
- ♦ **Commuting Decision:** Overwhelmingly, the primary factor in decisions about commuting was “job pay.” This was followed at a great distance by consideration of the kind of job. Job location was the least important factor.
- ♦ **Willingness to Travel:** Alaska Natives generally expressed somewhat more willingness than non-Natives to travel for training, move to another community for a job, and commute.

Characteristics of the Survey Respondents

Age

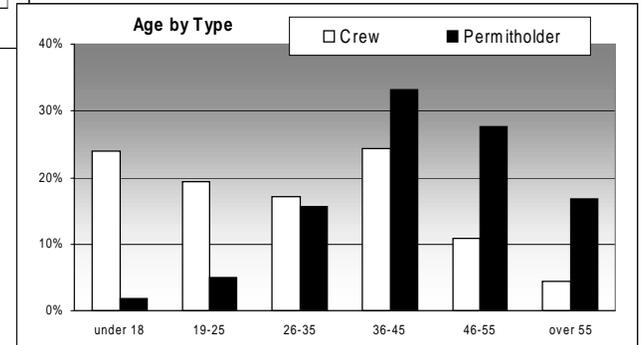
The largest group of fishers by age is the 36-45 age group. There appears to be somewhat of a “baby boom” effect in the fisher population with a substantially greater number of fishers in this 36-45



As would be expected, there is a clear pattern regarding age and whether a person is a permit holder or a crew person. There are few young permit holders, and people who are still fishing into their 40s are more likely to be permit holders rather than crew persons.

age group compared to those who are coming behind – there are about 43% fewer respondents in the 26-35 age group.

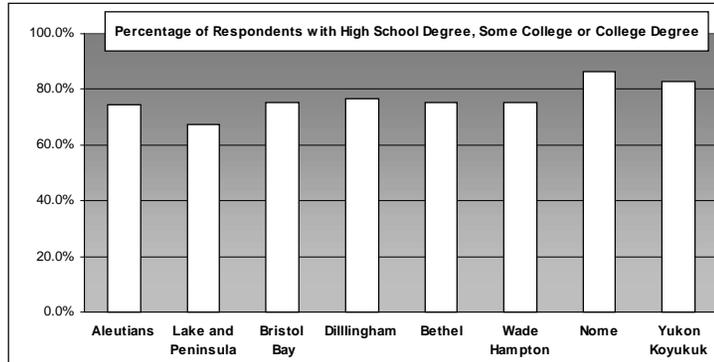
This somewhat mirrors, but is more accentuated than, the population as a whole for this region as determined by the 2000 U.S. Census.



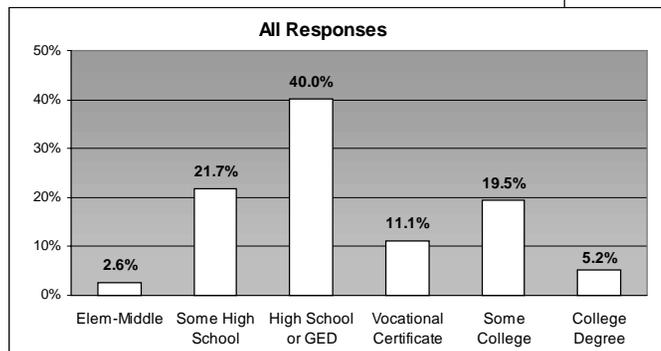
Education

Overall, 40% of respondents had at least a high school degree, about 20% had some college education, and about 5% had a college degree. About 10% of both crew and permit holders indicated they had received a vocational certificate.

Respondents were well educated across all regions. Between 67.6% and 87.5% of them had

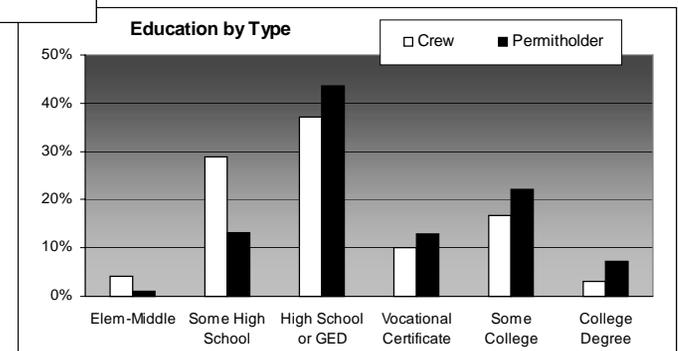


The education levels of crew and permit holders were similar, although permit holders were somewhat more likely to have a high school or college education. Respondents who said they had only an elementary school education or some high school were more likely to be crew, which is to be expected given that crew make up the largest part of the lower age groups.



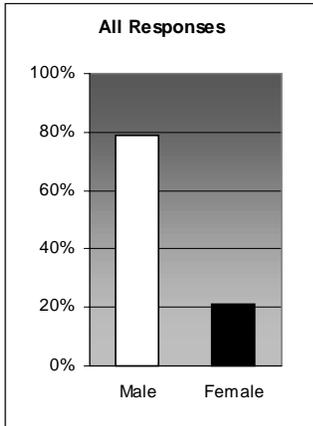
a high school degree or more. Nome region respondents reported the highest level of education.

Non-Native respondents tended to have more college-level education than Native respondents. About 60% of Natives had a high school degree or college education compared to about 85% for non-Native respondents.

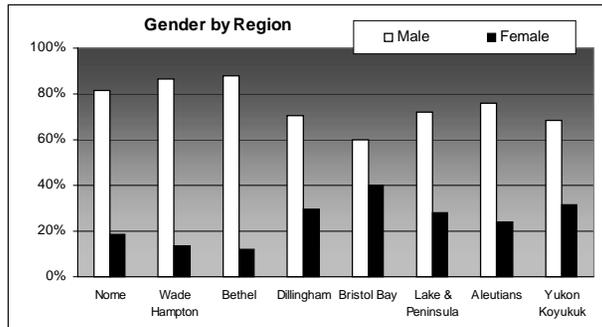


Gender

About 79% of all respondents were males and 21% were females. The percentage of females varied from 12% in the Bethel Census Area to 40% in the Bristol Bay Borough.

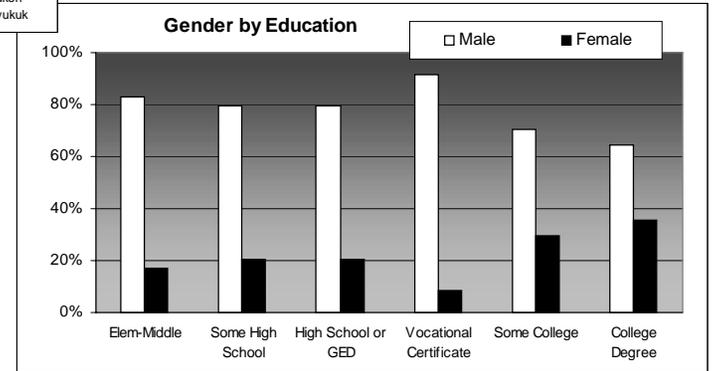


Looking at permit holders and crew persons separately, the ratio of male to female was similar – about 80% of all crew persons were male, and the same was true for permit holders. However, taken on a regional basis, there was



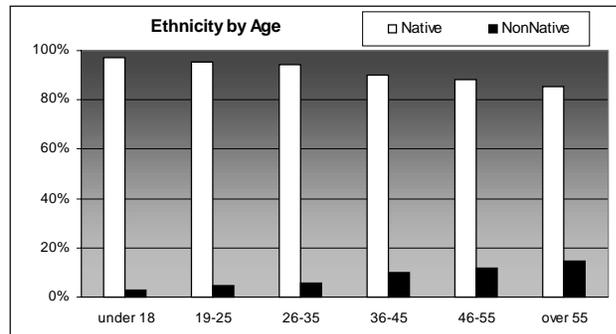
significant variation. Among females, the split between permit holders and crew varied significantly by region. The Yukon Koyukuk had the highest percentage of women permit holders with almost 88% of female respondents indicating that they were permit holders. In the Bethel Census Area, 25% of the female respondents indicated they were permit holders.

Women respondents as a group tended to have a higher levels of education than did male respondents. Male respondents were about three times more likely to have a vocational certificate than were females.

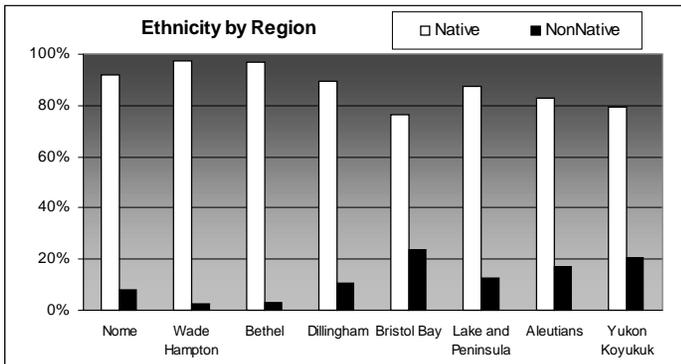


Ethnicity

Overwhelmingly, survey respondents indicated that they were Alaska Native (91.5%). The 2000 U.S. Census indicated that Alaska Natives account for about 64% of the total population in this region. This is an indication of the relative importance of fishing to the Native population in western Alaska. Bristol Bay

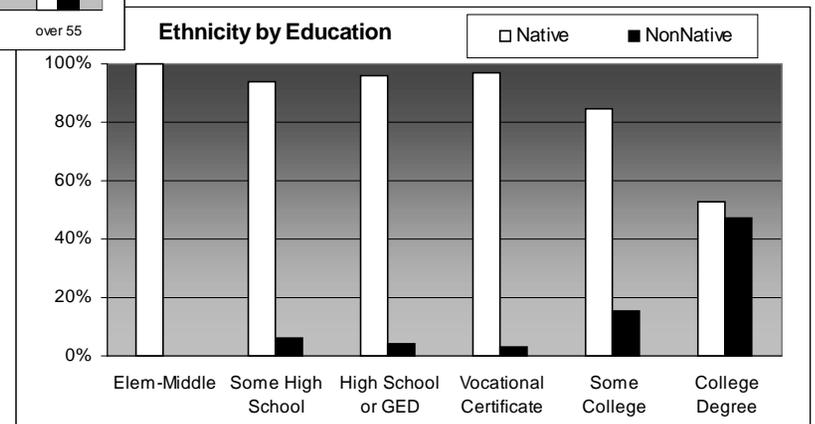


Respondents who reported having a college degree were evenly split between Native and non-Native. There was little to differentiate crew and permit holders and crew, or males and females, based on ethnicity.



Borough residents had the highest percentage of non-Native respondents (22%).

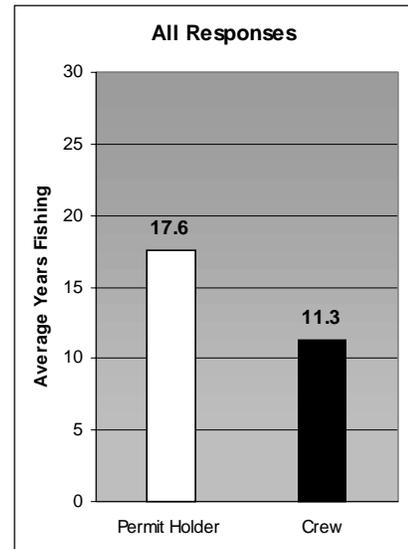
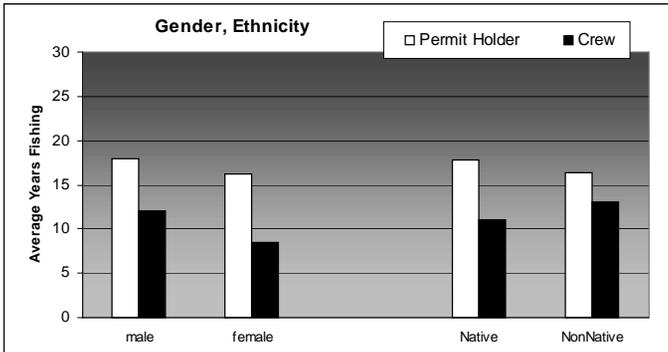
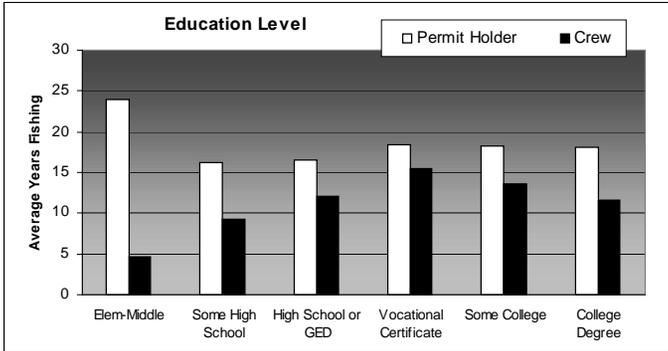
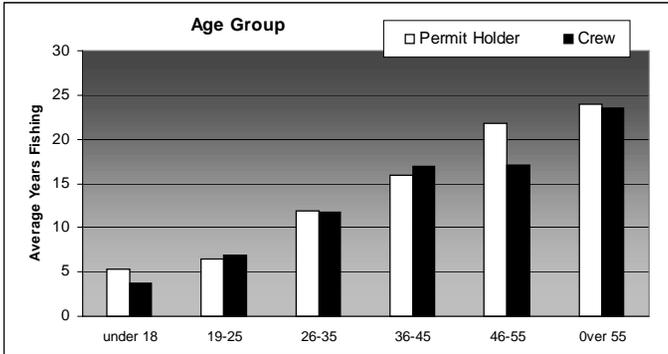
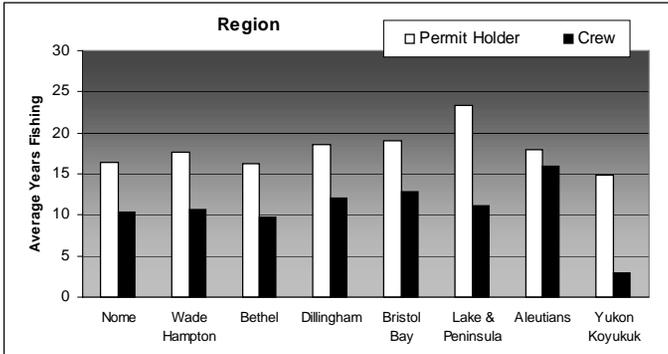
There was a consistent, but slight, trend towards increasing percentages of non-Natives in older age groups.



Years as a Permit Holder or Crew Person

Respondents who were permit holders indicated that on average they had owned their permits for 17.5 years. Respondents who were crew persons indicated they had worked as crew for an average of 11.5 years. Across all regions, the average length of time that permit holders had held their permits was similar, generally between 15 and 19 years, with the exception of Lake and Peninsula Borough where respondents have had their permits for an average of 23 years. In most regions, the average number of years of working as a crew person was reported to be between 10 and 13 years. The exceptions were the Aleutians where the average was 16 years and the Yukon Koyukuk where the average was 3 years.

Male permit holders and crew on average have worked more years in the fisheries than their female counterparts.



Paid Employment Besides Commercial Fishing (2000)

Overall, 36% of respondents indicated they had no other paid employment besides fishing in 2000. 20.6% responded that they worked full time at a job other than fishing. 31.5% reported working at part-time work and about one-third of that number (11.8%) reported working a seasonal job besides fishing. The Aleutians region reported the highest percentage of fishers with no other paid employment (51.7%) while the Yukon-Koyukuk region reported the lowest percentage (23.1%).

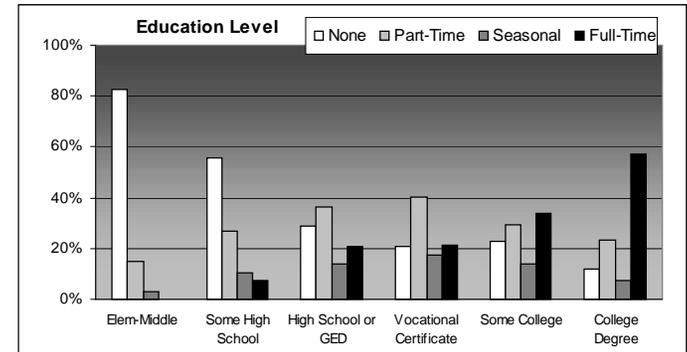
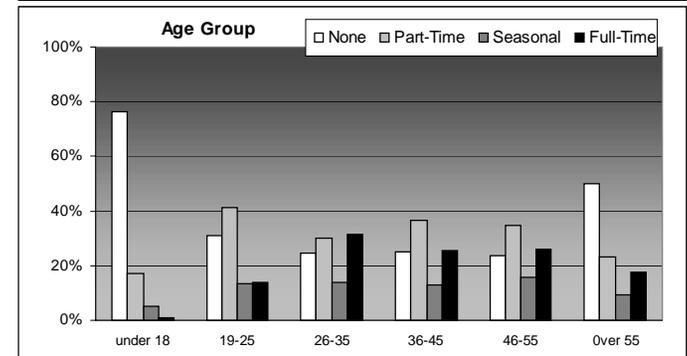
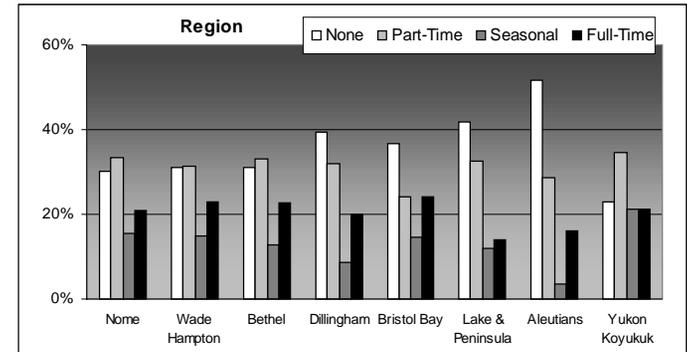
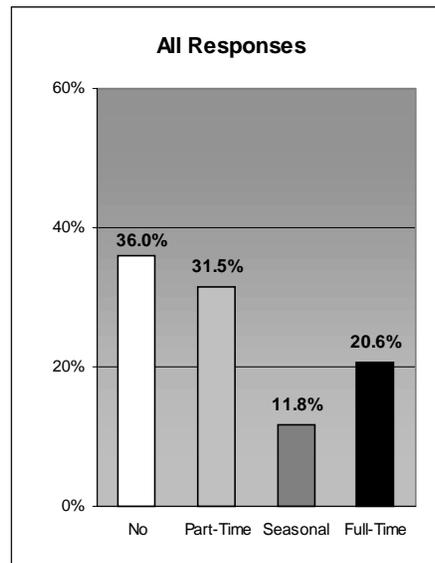
There was a clear correlation between the education level of the respondents and whether or not they reported having other employment besides commercial fishing. With increasing education levels, respondents were less likely to report “no other employment” and more likely to report “full-time” employment in addition to their commercial fishing.

Regarding age groups, as expected, the very young mostly reported “no other employment” (76.6%), and those over 55 also largely responded with this answer (50%). The 19 to 25 age group appeared to be growing into the world of full-time jobs. The remaining age groups, across the middle years of life (26 to 55), shared a consistent pattern with respect to employment other than fishing.

Crew persons were substantially more likely (40.4%) than permit holders (28.7%) to have no

other employment, and less likely to have a full-time paid employment besides fishing. Females were more likely to have a full-time job than were males, and indicated they worked at far fewer seasonal jobs. Non-Natives respondents were about twice as likely (37.9%) to have other full-time paid employment compared to Native respondents (19.5%).

When respondents were asked to describe what other paid employment they had besides commercial fishing, the most common response was laborer (15% of those who described their other work), closely followed by carpenter (13%). Other common responses were utility operators and maintenance (8%), store clerk (7%), equipment operator (6%), social services (5%) and custodian (5%). About 3% reported they were teachers, and another 3% indicated they worked as teacher’s aides.

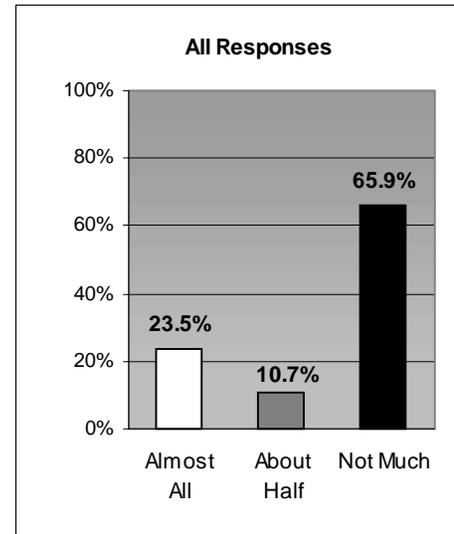
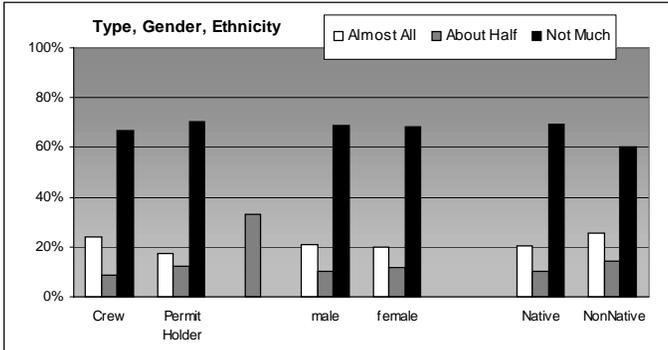
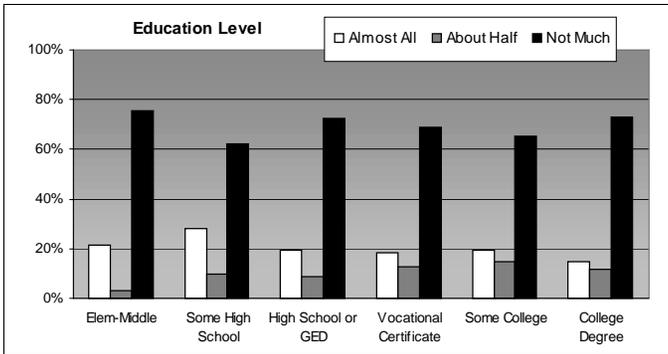
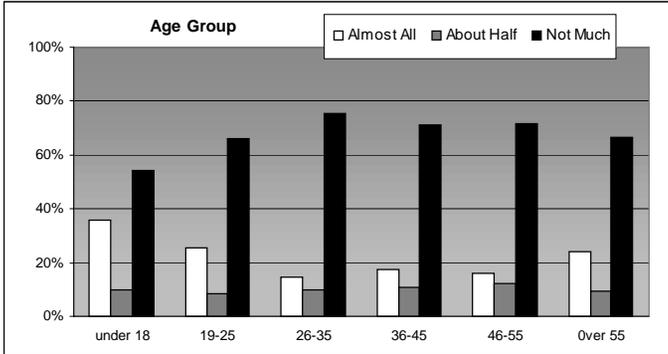
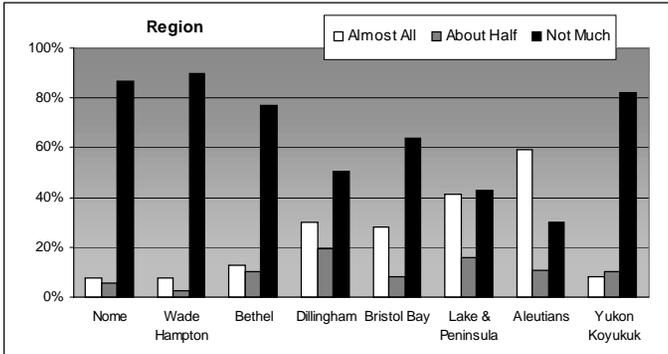


How Much of Paid Income Was Commercial Fishing (in year 2000)

Overall, 23.5% of respondents indicated that commercial fishing represented “almost all” of their income from paid employment. 65.9% said that commercial fishing represented “not much” of their total paid employment income. Respondents in the Bristol Bay area regions (Dillingham and Aleutians Census Areas, and Bristol Bay and Lake and Peninsula Boroughs) were clearly the most reliant on commercial fishing with between 30% and 60% of respondents indicating they received almost all their paid income from commercial fishing.

Among respondents, younger people and people over 55 indicated they were somewhat more reliant on commercial fishing as their main source of paid income. There appeared to be little correspondence between a respondent’s education level and what portion of their paid income was derived from commercial fishing.

Crew persons who responded indicated they were slightly more dependent on commercial fishing for their paid income than were permit holders. Male and female respondents were essentially identical in this regard. Non-Natives indicated they were somewhat more reliant on commercial fishing for paid income (39.8% either half or almost all) compared to Native respondents (30.6%).



Will Fish Runs and Prices Return to Previous Levels

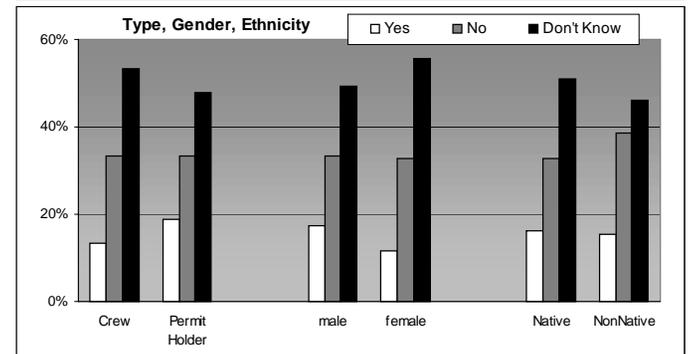
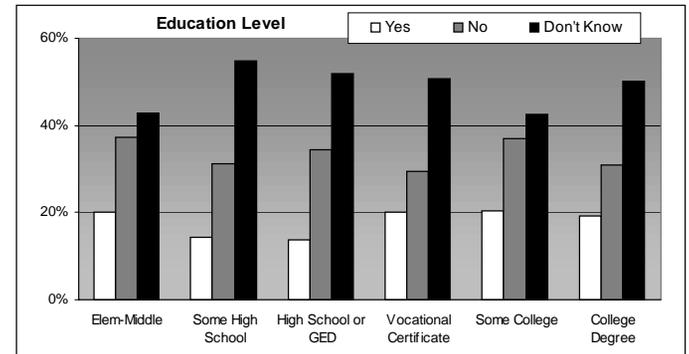
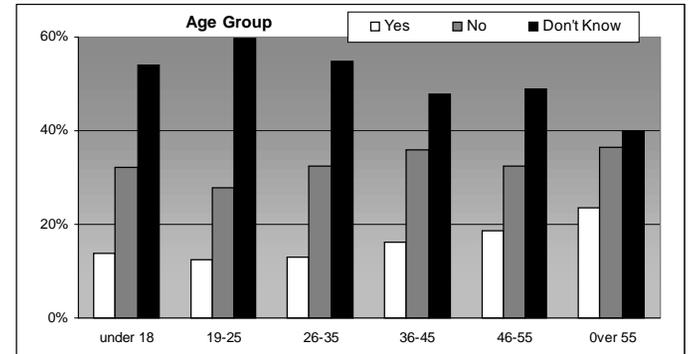
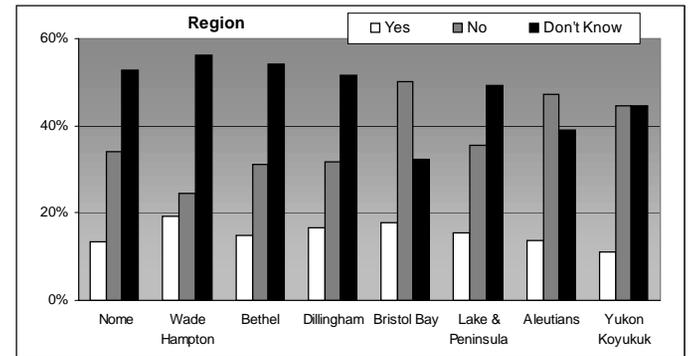
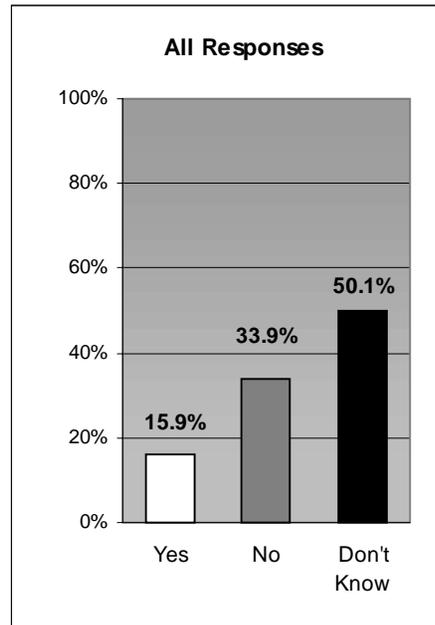
Overall, the response to this question was generally pessimistic. About twice as many people (33.9%) believed that fish runs and prices would not be returning to earlier levels, compared to those (15.9%) who thought things would improve. Half of respondents reported they didn't know what would be happening. Regions that stood out were the Bristol Bay Borough and the Aleutians and Yukon-Koyukuk areas, where about half of all respondents thought that fish runs and prices would not be returning to previous levels.

There was a tendency to be more optimistic with increasing age. People with some college education or a college degree were somewhat more optimistic than were those people who indicated their education level as some high school, or a high school degree.

Permit holders were slightly more optimistic about things improving (19%) compared to crew persons (13.4%); and male respondents tended to be more optimistic (17.3%) than female respondents (11.6%). Non-Natives were slightly more pessimistic about the return of fish runs and prices than Native respondents.

There was a strong correspondence between responses to this question and how people responded to the other survey questions regarding their interest in training and other employment. People who were of the opinion that fish runs and prices would not be returning to previous high levels were much less likely to be interested in training for new fisheries opportunities or training in seafood processing and marketing. These same people were also much more likely to indicate that they were ready to get into some employment other than fishing.

On the other hand, based on the responses to this survey, there appeared to be little correlation between a respondent's opinion about future fish runs and fish prices, and their attitudes about moving or commuting to another location for work.



Respondent Comments

At the end of the survey, respondents were offered the opportunity to provide comments or suggestions regarding job training opportunities for Western Alaskans. Over 550 people did so. Following is a small sample of their comments.

- ✓ I believe the risk management and business skills inherent in the fishing industry translate well into white and blue collar trades, with the proper training. — Nome, permit holder
- ✓ I need job training because our fishing is what we live off of and when there is no fishing there is no us. We will all have to move. — Sand Point, crew
- ✓ The state needs to expand transportation infrastructure to be successful in the future. Otherwise everyone will have to move out. — Saint Mary's, permit holder
- ✓ I know my brother in law, sister and her fiance would all like training. They are all in Anchorage because there were no jobs in the village. We need financial help- not minimum wage jobs. — Shaktoolik, crew
- ✓ At my age training is not interesting to me, but if I was younger it would be. — Kipnuk, crew
- ✓ In the beginning there was not much job training around here. Only after they started having fishing disasters in the area and now it is in training in fishing field areas. It should expanded to different jobs that are needed in the area that people live in, or jobs that might be needed in the future like high tech jobs. — Bethel, permit holder
- ✓ I think that with all the fish and game resources in rural Alaska, helping western Alaska people develop into the tourist industry would be a natural business opportunity. — Dillingham, permit holder
- ✓ We need more computer and Internet jobs out in the bush. — Mountain Village, permit holder

- ✓ People should get training, but be prepared to leave Western AK because there are no jobs. — South Naknek, crew
- ✓ We need computer technology that will allow jobs in the home, and need to convince someone we need better Internet access to rural Alaska to get jobs going. — Nome, permit holder
- ✓ Finding a job in the village has been so hard for me that I have moved to Anchorage to find a job, but the job I am currently taking isn't paying me enough. — Napakiak, crew
- ✓ In the Chignik area we have access to many kinds of seafood besides salmon, but no markets or high transport cost limits the fisheries. We need people to learn the path to markets we all know are there. — Chignik Lagoon, permit holder
- ✓ They should have more than one person from each community go to training so they will feel more comfortable. — Chignik Lagoon, crew
- ✓ Encourage small business like a bakery, part sales, and maintenance to make communities more self-sufficient. — Emmonak, permit holder
- ✓ There are a lot of unemployed people in my region that want training. I, for one, need and want training but think that I (and a lot of others who want training) don't know how to find it for different jobs. If the opportunity existed, there would be some interest.. — Elim, crew
- ✓ Need more skilled local people to work in their community rather than people coming in from outside of our region and take over the local jobs. — Kongiganak, permit holder
- ✓ I think training should be OUT of the region to show village people that there are other places to work and live. — Kotlik, crew

- ✓ We need someone working in the community to promote training, and help fill out forms. — New Stuyahok, permit holder
- ✓ Due to poor prospects I acquired a job in the early spring of 2000 at the local utility company. However, if the fishing industry picks back and it again becomes possible to sustain a comfortable lifestyle I would rather be fishing for a living. — Sand Point, crew
- ✓ Western Alaskans need to learn and determine their own fate. Regional control of our resources is imperative to our survival. Change may be constant, but we can be a big part of the decision. — King Salmon, crew
- ✓ I believe any job training and employment would be better than disaster relief programs. — Naknek, permit holder
- ✓ Would like to be able to take my kids with me to training in another location as I am a single parent. — Nunam Iqua, permit holder
- ✓ More undergraduate students with some college background who are in poor economic areas should be given the opportunity to complete their studies via the internet at below normal communication charges and good incentives for completion. Most of us are in debt due to the fact that we do not have rich family members to pay our way. — Akiachak, crew
- ✓ There is a need for more refresher courses. — Unalakleet, permit holder
- ✓ Along with job training there needs to be more education against drugs and alcohol and more emphasis on responsibility to employers. Employees need to be more dependable. — Marshall, permit holder
- ✓ I would like to attend a voc. training program in AK, but I need help finding different types of funding that might be able to help me pay for classes, housing, transportation, etc. — Kipnuk, crew

Interest in Training for New Opportunities in Fishing

Overall, respondents were about evenly divided regarding their interest in training for new opportunities in fishing. This response, that half the fishers were not interested in training within the fishing business, may signal a wariness of respondents regarding the future of fishing as a profession. When asked to identify what specific training they were interested in, 524 individuals responded. Leading areas of interest included new fisheries technology (20%), improving fish quality (20%), and marketing (8%). Thirty people (6%) indicated they would like to study fisheries biology.

On a regional basis, the Nome region was most interested in fisheries business training with almost 70% responding “yes.” The Lake and Peninsula, Dillingham, and Aleutians areas were next with just less than 60% indicating an interest. Respondents in the Yukon-Koyukuk and Bethel regions expressed the least interest in fisheries business training (40%). When we looked at the age groups in these respective regions we found these leanings in these regions generally across all age groups. That is, within regions, people at all age groups were generally consistent in their response to this question.

By age, the respondents most interested in fisheries business training were those under 18 (60%). The respondents least interested in this type of training were those aged 19 to 25 (41%). Based on responses to another question later in the survey, this age group

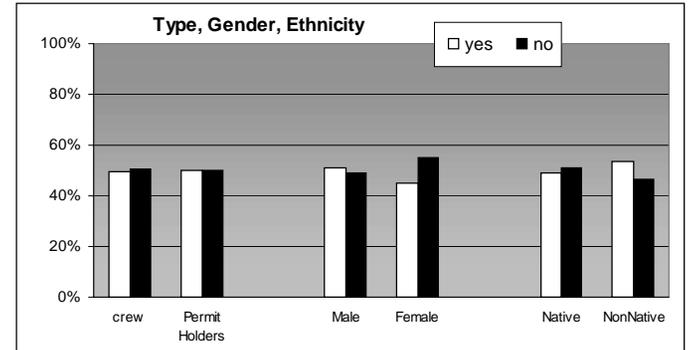
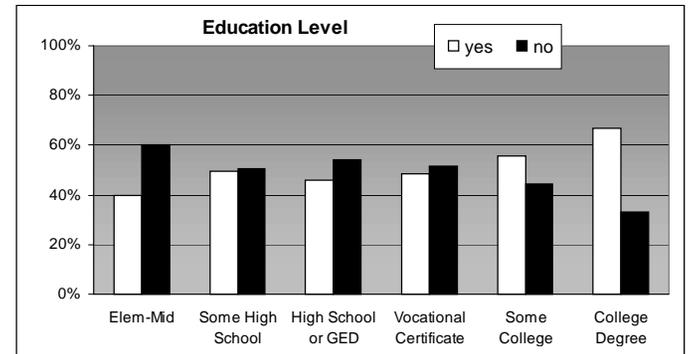
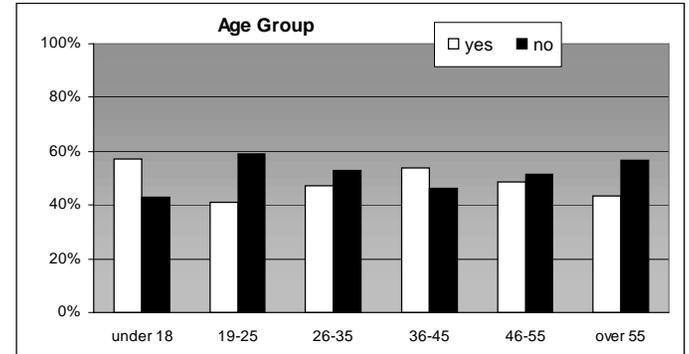
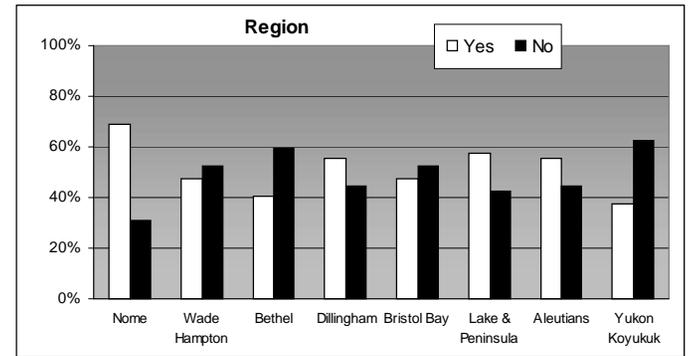
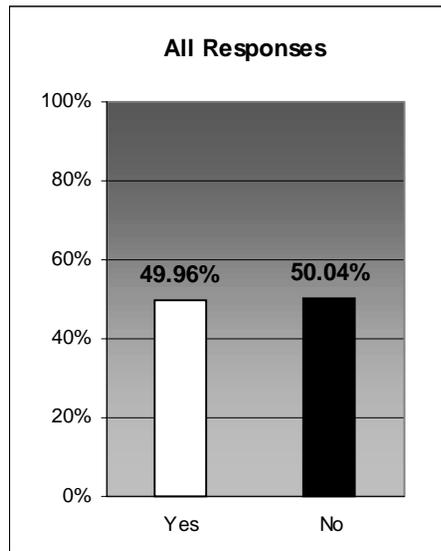
was the most pessimistic about fish runs and prices returning to levels experienced before the current string of poor fishing years. Those over 55 were also generally less interested in training for new fishing business opportunities.

By education level, there was a correlation between education and interest in fisheries training. Respondents with a high school degree or vocational certificate were somewhat less than 50% interested in this kind of training, while 57% of those with some college were interested, and 64% of respondents with a college degree were interested. College graduates, as a group, were also the most optimistic about the return of fish runs and prices to previous levels.

On the whole, the interest in fisheries training indicated by both permit holders and crew was essentially identical at about 50%.

Female respondents expressed slightly more interest than males did, and non-Natives expressed slightly more interest than did Native respondents.

Elsewhere in the survey, respondents were asked if they thought fish runs and prices would return to levels experienced prior to the disaster. Overall, those who answered “no” to that question indicated far less interest in training for new opportunities in fishing – 43.8% compared to 63.6% of those who thought fish runs and prices would return to previous levels.



Interest in Training to Prepare and Market Seafood

Overall, over 71% said they were either very (28%) or somewhat (43.3%) interested in training in the areas of seafood processing and marketing. This response was counter to a popular notion that fishers are generally not interested in this aspect of the fisheries business.

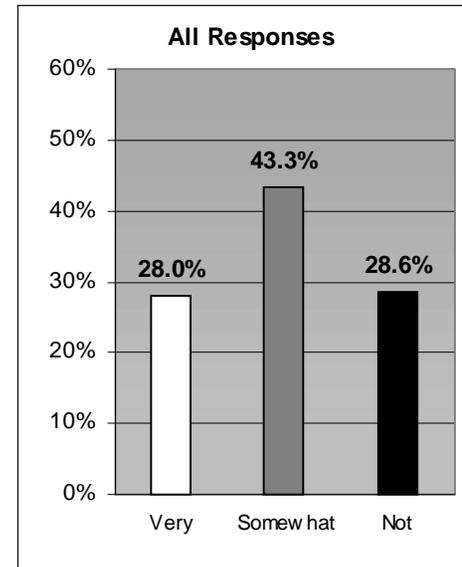
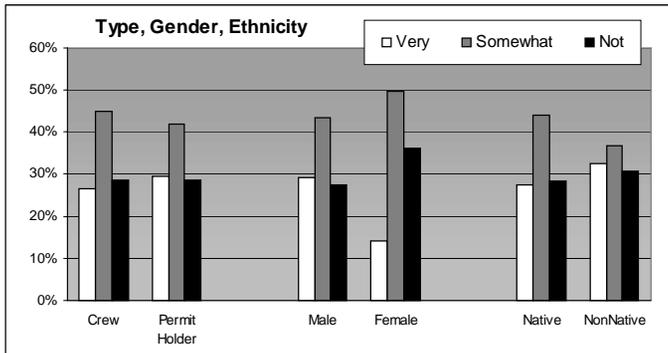
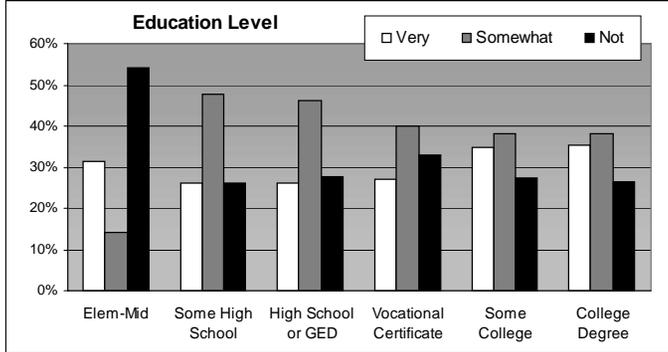
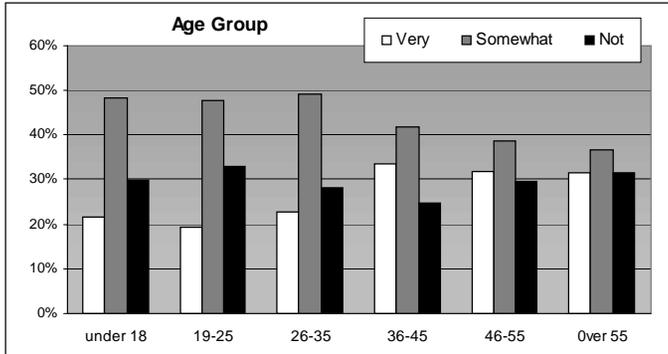
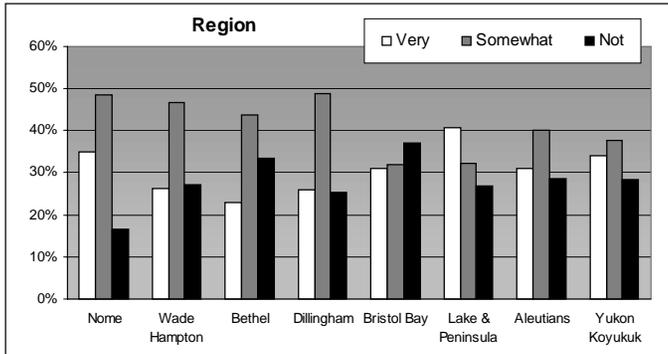
Male respondents were more than twice as likely as female respondents to say they were “very interested” in this training.

Elsewhere in the survey, respondent’s were asked if they thought fish runs and prices would return to levels experienced prior to the disaster. Those who answered “no” to that question indicated much less interest in training to prepare and market seafood – 14.8% compared to 35.9% of those who thought fish runs and prices would return to previous levels.

On a regional basis, Nome area respondents indicated the most interest in this kind of training with only 17% of respondents saying they were not interested in this kind of training. (The Nome region also indicated the highest interest in fisheries training in the previous survey question.) The highest level of “very interested” was expressed by respondents in the Lake and Peninsula area (41% very interested). Least interested were the Bethel area (33% not interested) and Bristol Bay (38% not interested).

By education level, those with only elementary or middle school education indicated the least interest (54.3% not interested). However all age groups expressed similar levels of “very interested,” ranging from 26% to 35%.

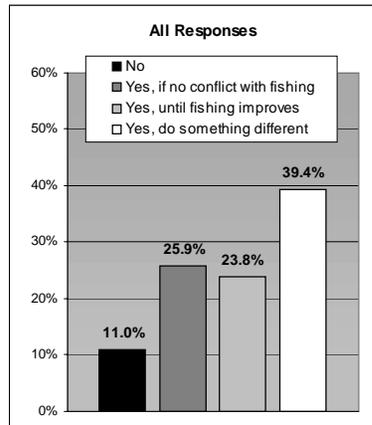
About 30% of respondents over the age of 35 indicated they were “very interested” in this kind of training, while only about 20% of those under 35 indicated they were “very interested.” There was essentially no difference in the interest expressed by permit holders and crew persons.



Interest in Working at a Job Other Than Fishing

Overall, only 11% of respondents said they were not interested in working at a job other than fishing. Almost 40% said they were ready to get out of fishing and do something different. This is a very surprising result based on prior anecdotal information from the field and is another indication that the string of poor fishing years in western Alaska is weighing heavily on people's attitudes about commercial fishing. 27% indicated they would be interested in doing other work if it did not interfere with fishing, and 23% said they would be interested in other work, but just until fishing improved.

In a previous question almost half of respondents said they were not interested in training for new fisheries opportunities. By cross tabulating the results of these two questions it was found that respondents who indicated they were not interested in fisheries training were 50% more likely to also indicate they were ready to work at something other than fishing.



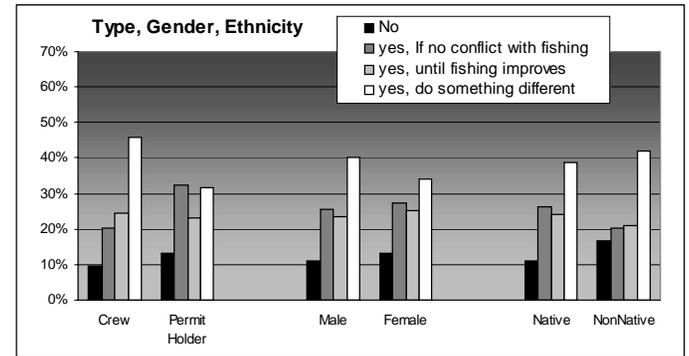
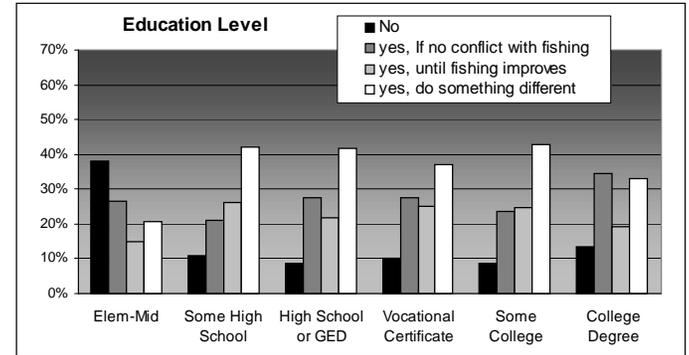
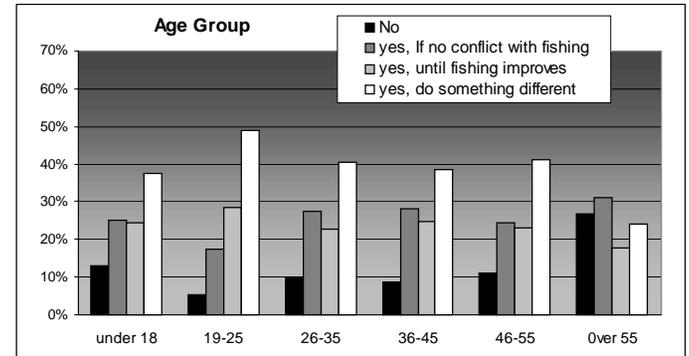
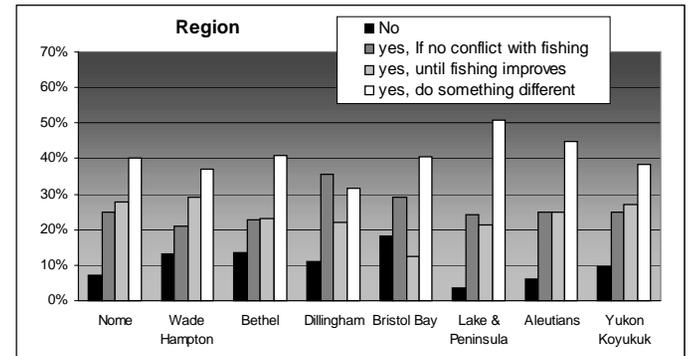
With regard to regions, the Bristol Bay Borough region indicated the highest percentage of respondents who did not want to do work other than fishing (18%). The Lake and Peninsula Borough region had the lowest percentage of respondents who wanted to continue fishing (4%) and the highest number of people who said they were ready to doing something else for a living (51%). This may reflect regional concerns about resource availability related to recent federal management decisions associated with steller sealion protection.

As might be expected, respondents over 55 of age expressed markedly less interest in doing something other than fishing. The very youngest age group also indicated somewhat less interest in doing work other than fishing when compared to respondents with ages between 19 and 55, who expressed fairly similar patterns of interest in work other than fishing.

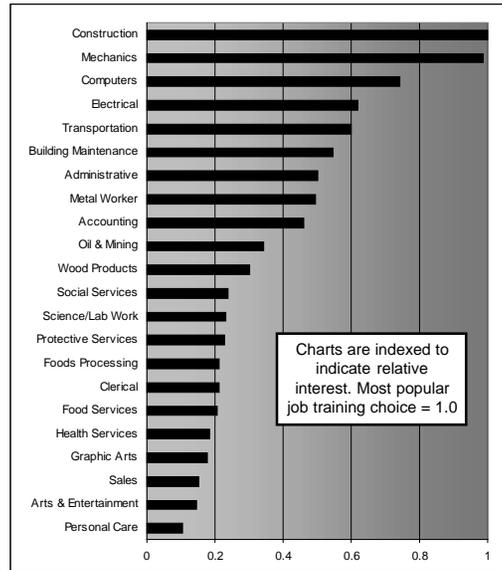
With the exception of those respondents with only an elementary or middle school education, all education level groups demonstrated similar patterns of responses to this question, although those with college degrees indicated slightly less interest in doing other work. In contrast, those with the least education were almost four times as likely to indicate that they had no interest in doing some other kind of work than commercial fishing.

Crew persons were somewhat more inclined to do something different than fishing (45.7%) than were permit holders (31.5%). This result was expected based on the greater investment that permit holders have in the fisheries. Female respondents indicated they were somewhat more interested than their male counterparts in doing other work.

Elsewhere in the survey, respondents were asked if they thought fish runs and prices would return to levels experienced prior to the disaster. Those who answered "no" to that question indicated much greater readiness to do something different than fishing – 49.9% compared to 30.5% of those who thought fish runs and prices would return to previous levels.



Interested in What Kinds of Job Training



Overall, the most popular training choices by far were in the fields of construction work and mechanics. These were followed in order of interest by training in computers, electrical skills, transportation, building maintenance, office administration, metal work and accounting. Compared to training in construction, only about one-third as many people indicated an interest in training in the oil and mining industry or the wood products industry. The least selected choices were training in clerical work, food services, health services, graphic arts, sales, arts and entertainment and personal care. These

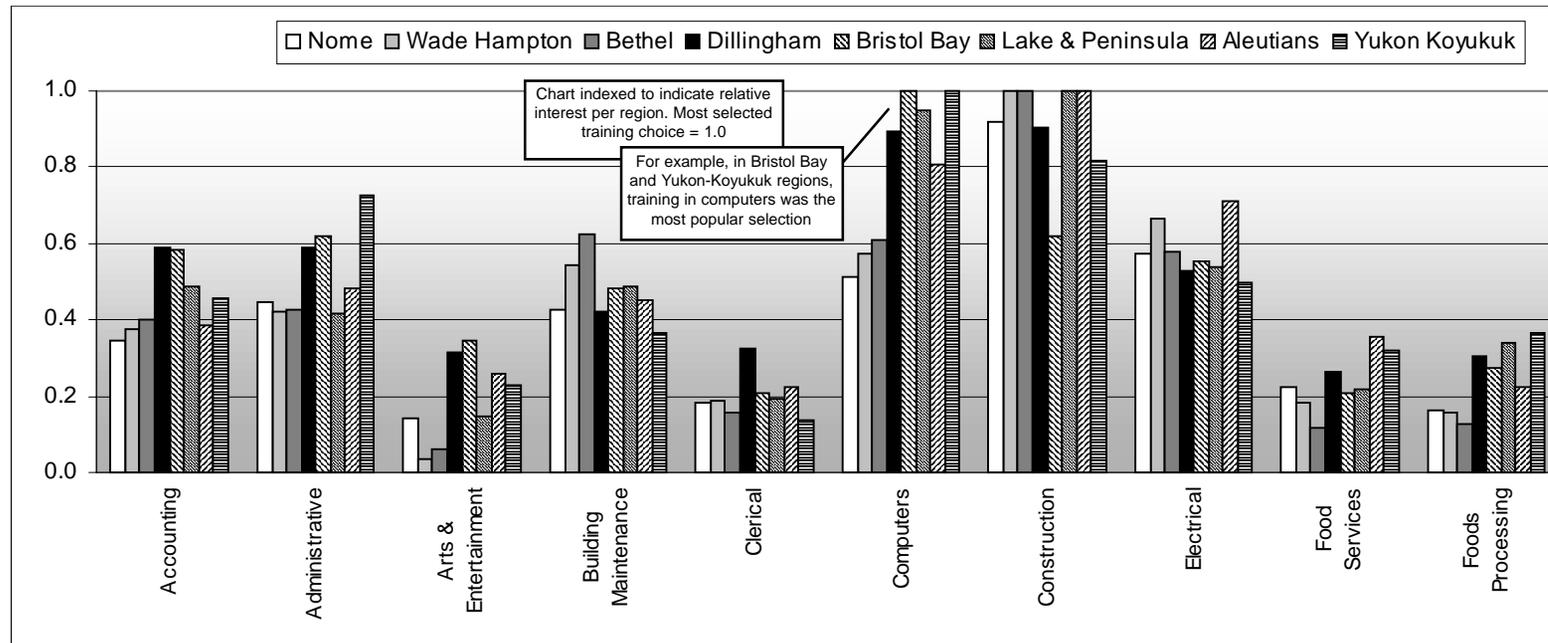
related to Oil and Gas and transportation employment; and a relatively smaller degree of interest in the Bethel, Wade Hampton and Nome areas regarding computer training compared to other regions.

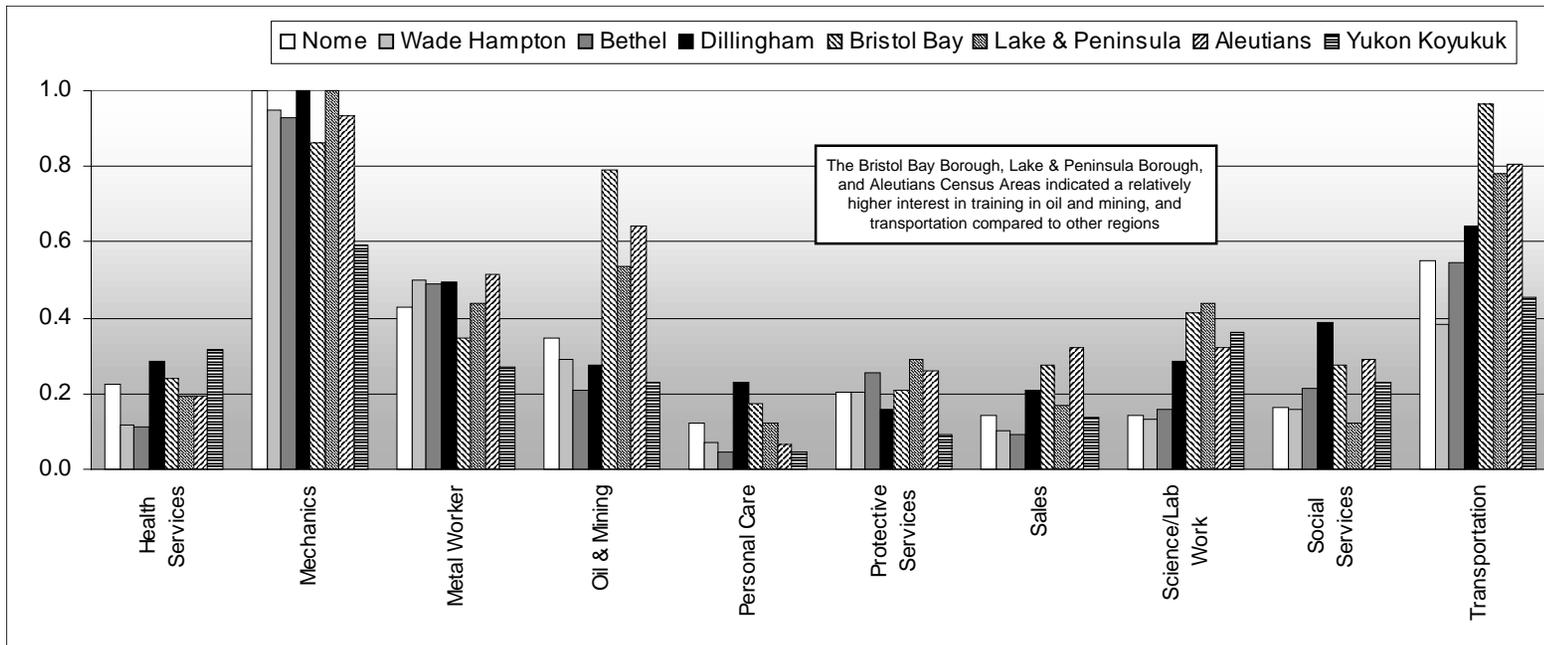
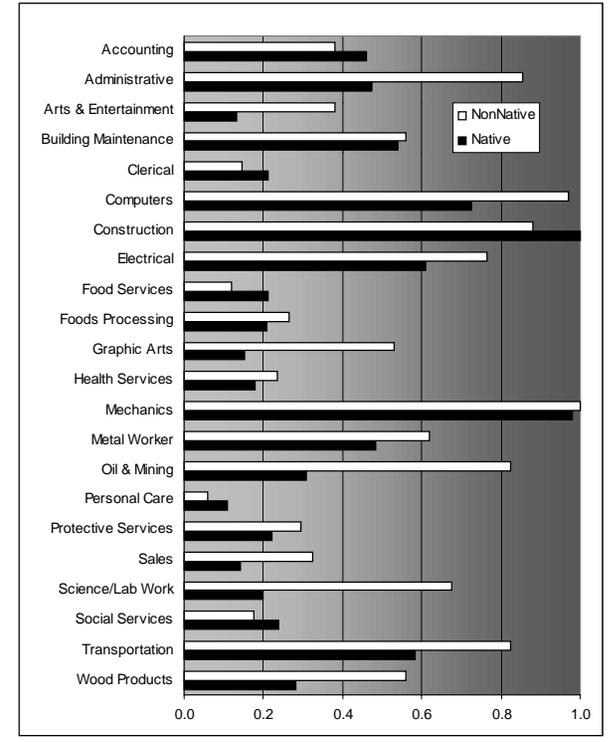
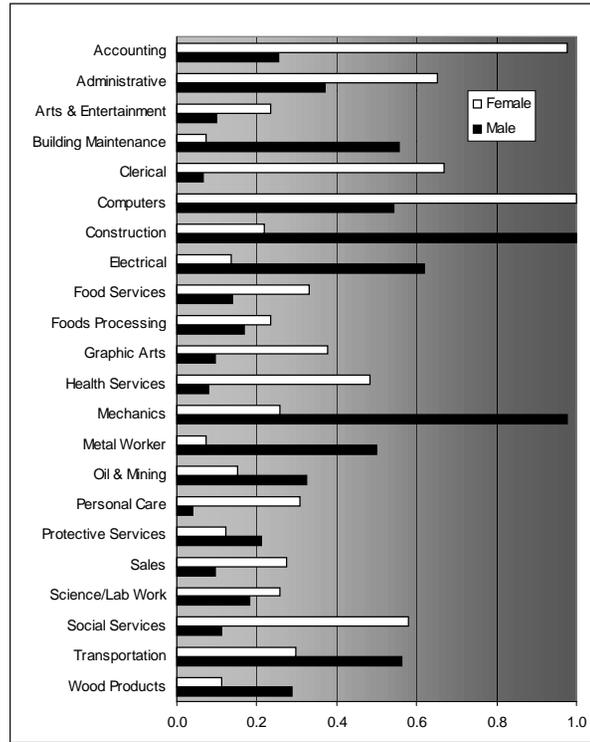
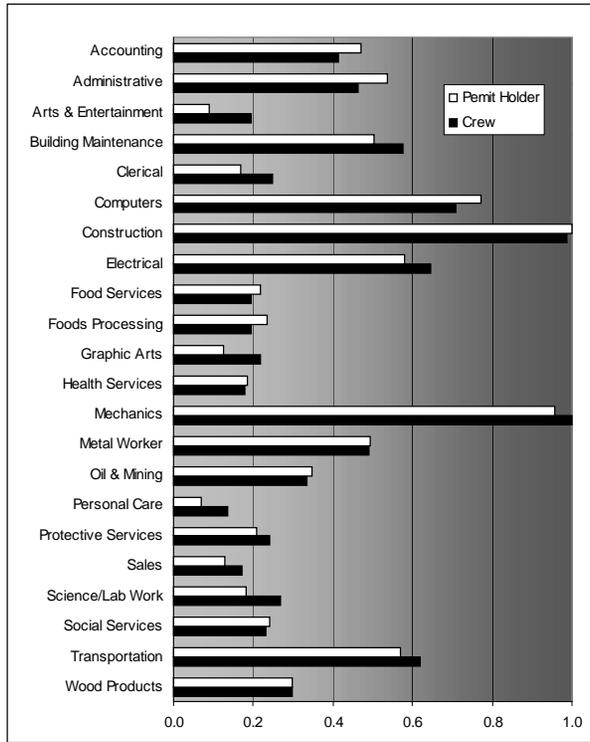
There were substantial differences between male and female respondents, generally following traditional gender-oriented patterns of employment. Females showed much greater interest in various office-skills training areas such as clerical, accounting administrative and computers. Females also showed significantly greater interest in care and service training such as social services, health services, food services, personal care, sales and graphic arts. Males expressed much greater interest in training in the construction trades, transportation and building maintenance.

There was generally little difference between permit holders and crew regarding preferences for any of the options for job training. Comparing the training preferences of Native and non-Native respondents, non-Natives indicated significantly greater interest in the training areas of administration, arts and entertainment, graphic arts, oil and mining, sales, science and lab work, and wood products. Non-Natives also indicated somewhat more interest in training with computers, electrical work, metal work and transportation than Native respondents did. Native respondents indicated somewhat more interest than non-Natives in the job training options of construction, accounting, clerical, food services, personal care and social services – options that generally reflect current employment opportunities in rural Alaska.

overall results largely reflect the preferences of the male respondents who represented almost 80% of all respondents.

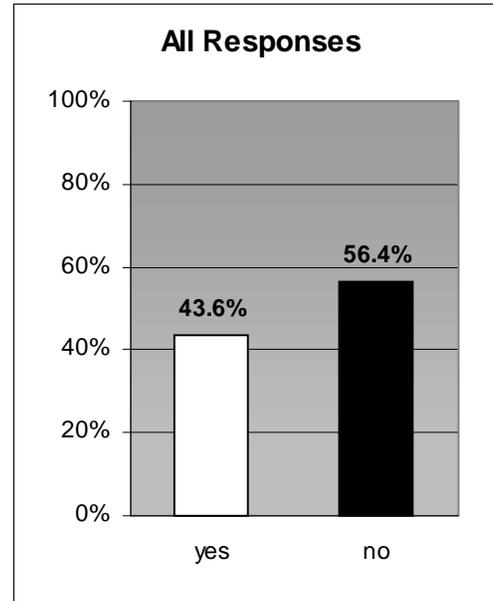
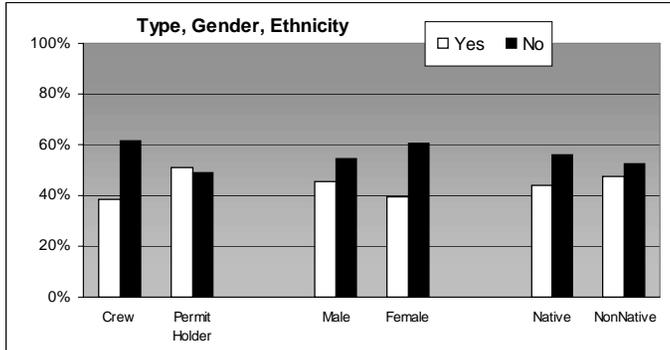
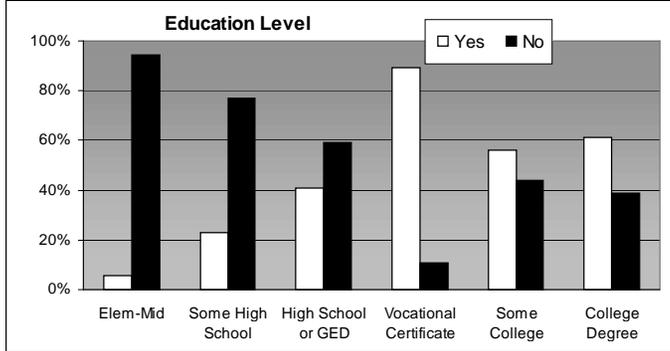
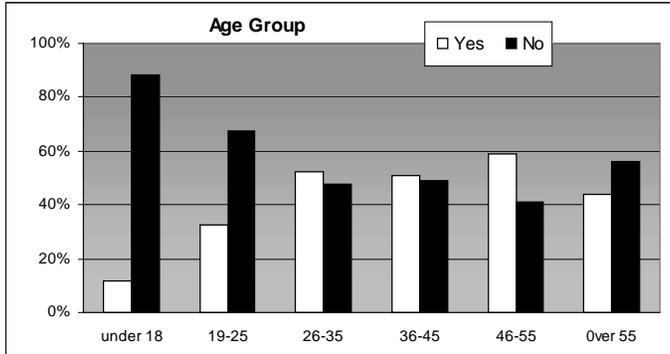
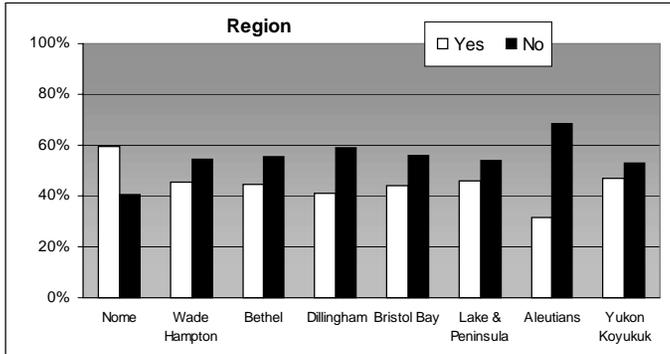
Respondents from the different regions generally responded about the same regarding interest in job types. Notable exceptions were a significantly greater interest in the Bristol Bay and Lake and Peninsula Boroughs, and Aleutians Census Area for training





Previous Experience with Job Training

Overall, 43.6% of respondents indicated they had experienced some job training. Most regions were similar in the pattern of their response, with between 40% and 50% of respondents reporting they had previous job training. Exceptions were the Aleutians area where only 30% had previous training, and the Nome area where 60% indicated previous training experience.



As would be expected, increased experience with training was generally correlated to age of the respondents with the exception of respondents aged over 55 who, as a group, had less job training experience than people between the ages of 26 and 55. Education level of the respondents also correlated with job training, with the greatest experience being reported by people with a vocational certificate – almost 90% of which indicated having experienced some job training.

Permit holders reported somewhat more job training experience than crew. Female respondents indicated they had slightly less job training experience than male respondents did. Native and non-Native respondents indicated about the same level of experience (40%).

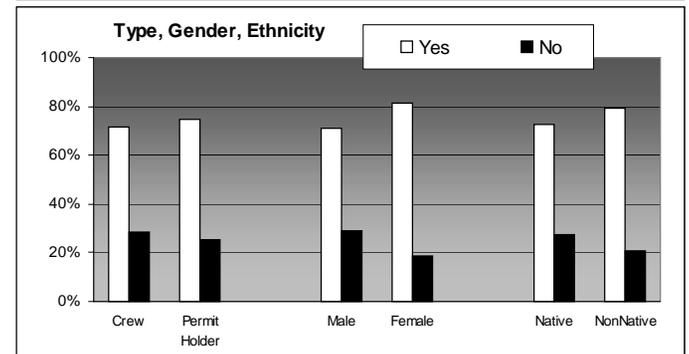
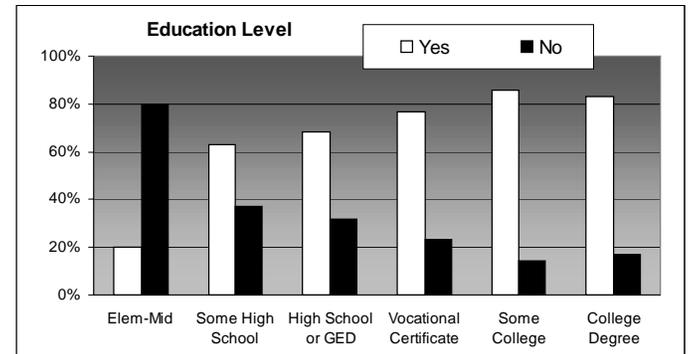
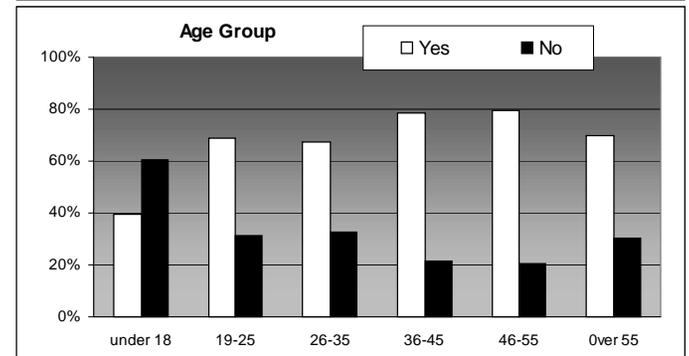
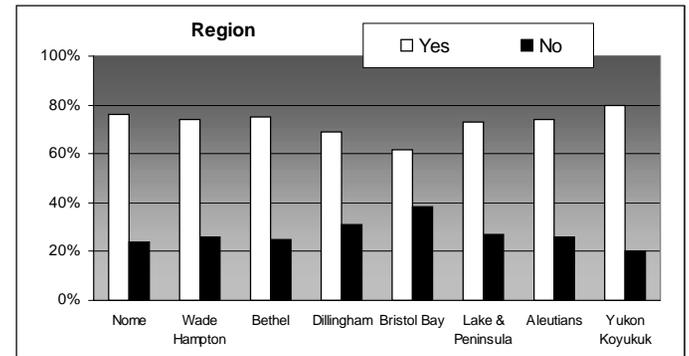
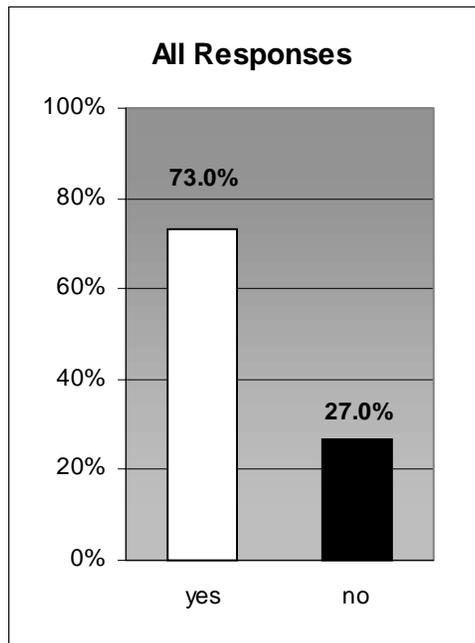
Did Previous Job Training Lead to a Job

Overall, 73% of respondents who had taken job training indicated that the training had led to a job. Success in job training leading to a job appeared to be the case across all regions, with success rates ranging from 60% in the Bristol Bay Borough to 80% in the Yukon-Koyukuk region.

This was also true for all age groups over 18. It is likely that many of the under-18 age group would be returning to school rather than seeking a job. Education level generally correlated with success in training leading to a job. People with only an elementary or middle school education had the least success in finding a job after training, reporting only a 20% success rate for this group.

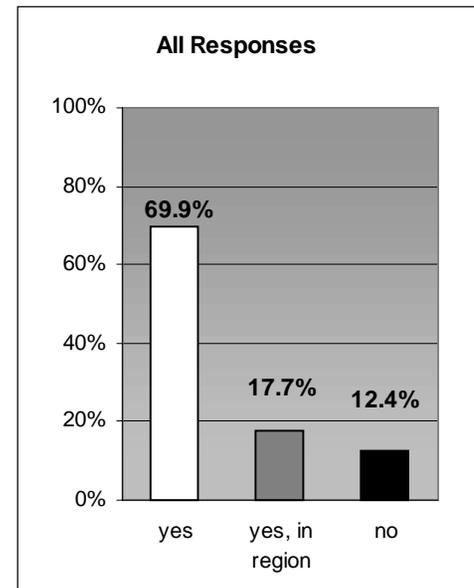
According to the survey responses, there was little difference in success in finding a job after training based on whether the respondent was a permit holder or crew person.

Male respondents were less successful (71.1%) than females (81.4%) and Native respondents were slightly less successful as a group (72.6%) than non-Natives (79.3%) in job training leading to a job.



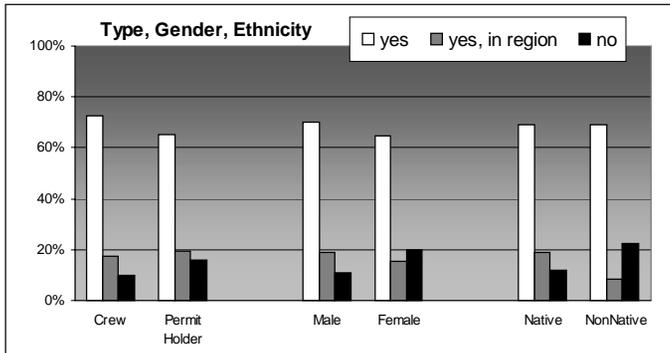
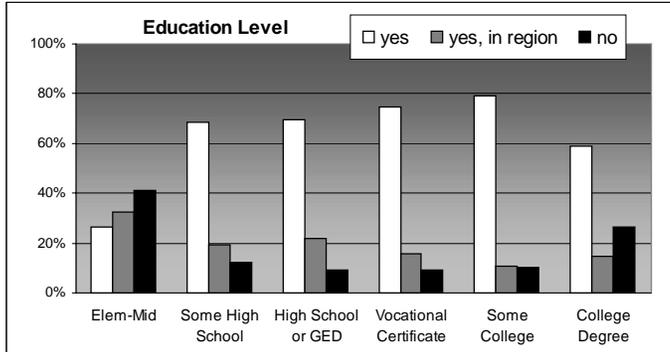
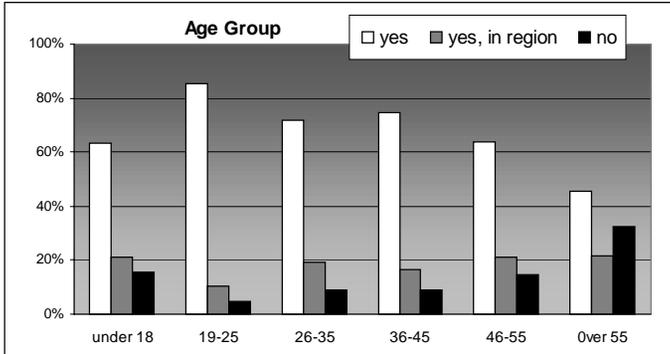
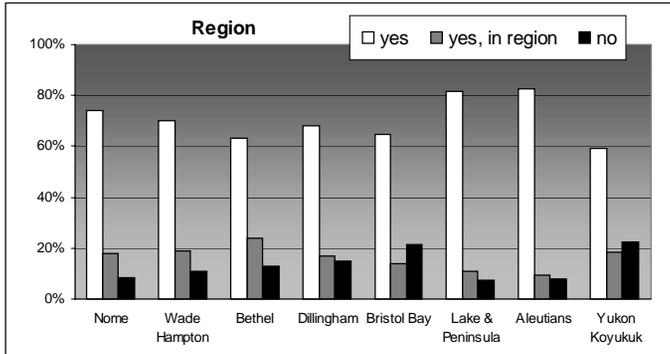
Willing to Spend Time Away From Community for Job Training

Overall, 69.9% of respondents said they would be willing to travel to undertake job training. An additional 17.7% indicated they could do so if the training location were in their region. Generally, responses were very positive (between 60% and 80%) across all regions, age groups, education levels, gender and ethnicity. Notable exceptions were people with only an elementary or middle school education, and people over 55 years of age, who are more inclined to stay close to home. Respondents from the Yukon-Koyukuk were the most likely to indicate they would not travel for training (22.2%).



Interestingly, for whatever reason, people with college degrees, who expressed the greatest interest in training in earlier survey questions, indicated substantially less willingness to travel for training than did those with less education (except for those with only elementary or middle school education).

Crew persons were slightly more flexible in their attitude towards travelling for training. Female respondents were slightly less inclined to travel for training than were males. Native respondents were slightly more inclined to travel (88.1%) than were non-Natives (77.8%), if the training were limited to being “in the region.”



Willing to Move to Another Community for Employment

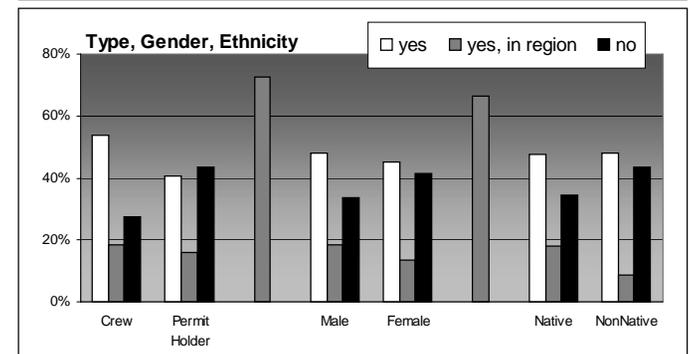
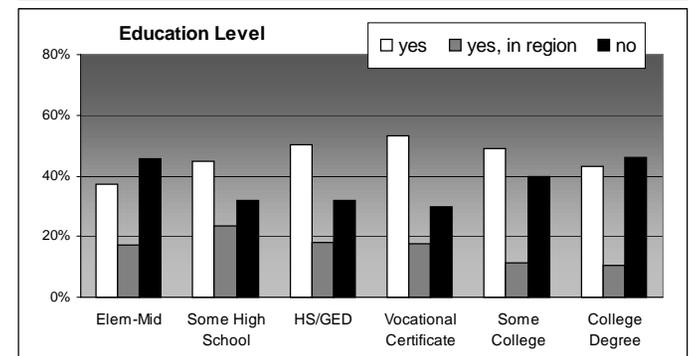
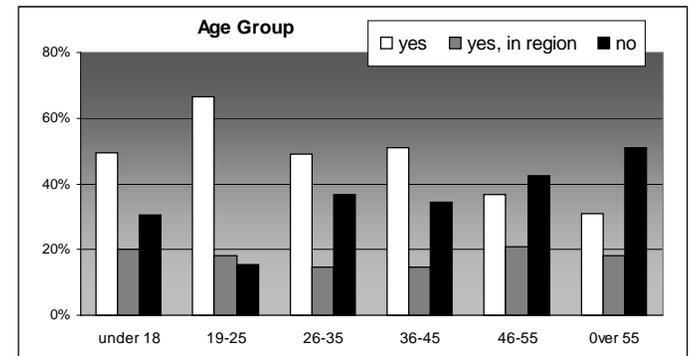
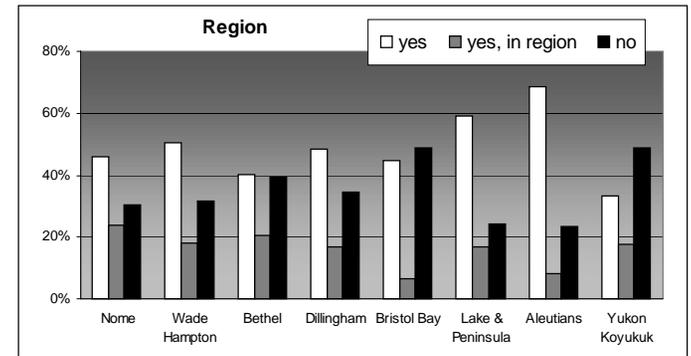
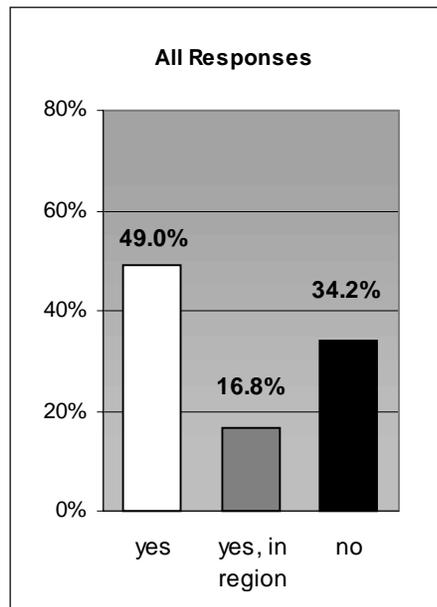
Overall, 49% indicated they would be willing to move to another town to get a job and an additional 16.8% (for a total of 65.8%) would be willing to do so if it was a location in the same region of Alaska. This is a surprisingly high figure considering the widely held “conventional wisdom” that rural Alaskans have very strong ties to the land. This could be another indication of the substantial effect that the fisheries disaster years have had on the attitudes of residents of western Alaska. Only 34.2% of respondents said they would not be willing to move to another town for purposes of employment.

Respondents in the Lake and Peninsula Borough and the Aleutians region indicated the highest level of mobility (about 75% if the move were within the region). Respondents in the Bristol Bay Borough and the Yukon-Koyukuk region indicated the most resistance to moving, with almost 50% of respondents reporting they would not move for a job.

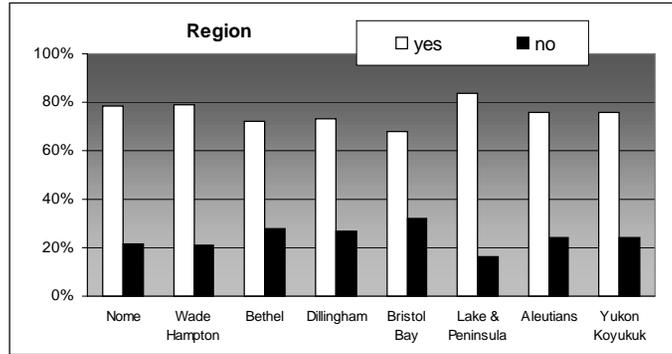
Younger people tended to express more willingness to move for a job, with the 19-25 age group reporting the greatest willingness (84%, if within region) and those over 55, the least willing (though even in this age group, half indicated a willingness to move to a job within the region.)

As was the case in the previous question about traveling for training, the least willing to move for a job were those with a college degree.

Crew persons indicated they were more willing to move for work (72.5%) than permit holders (56.5%). This may be because permit holders have permits for a geographic fishery. Males were slightly more mobile (66.5%) than females (58.6%). Natives indicated they were somewhat more mobile (65.7%) than non-Natives (56.5%).

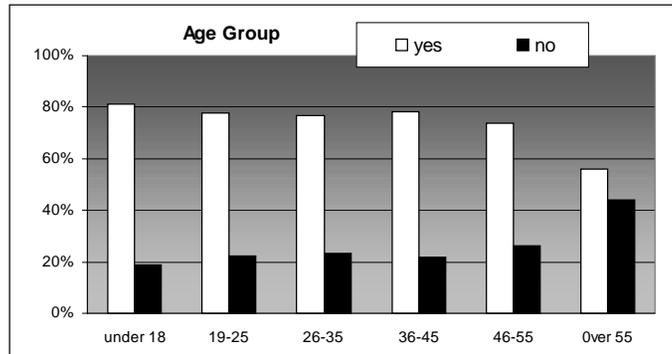


Interest in Commuting to Place of Employment

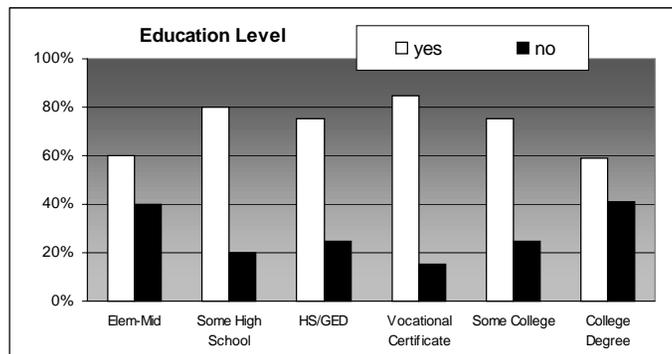


Over three-quarters of all respondents said they would be interested in commuting to their place of employment (for example with a schedule such as two weeks away and two weeks at home). Respondents indicated generally high interest across all regions, age groups, and education levels, and regardless of differences in gender, ethnicity or whether they were permit holders or crew persons.

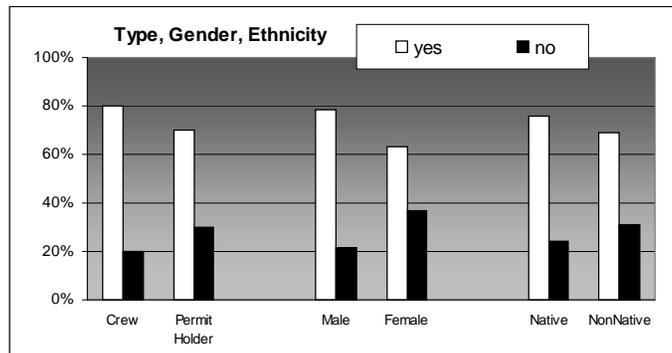
Native respondents indicated consistently more willingness to travel than non-Natives as reflected by responses to this question and the previous two questions. 75.9% of Native respondents indicated they were interested in commuting compared to 68.9% of non-Native respondents.



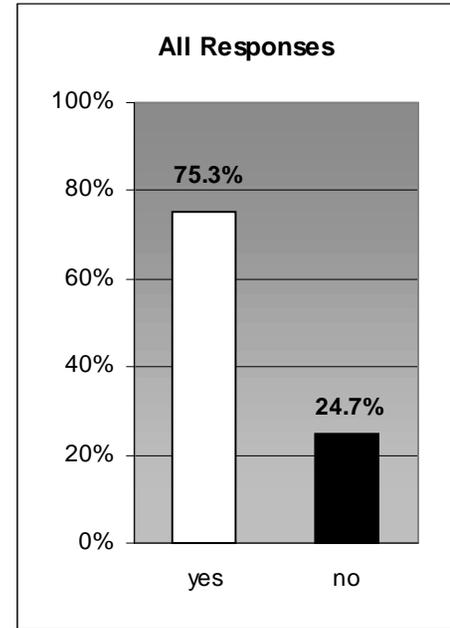
People over 55 years of age were about twice as reluctant to commute as all other age groups. Still, a majority of those over 55 (55%) indicated an interest in commuting.



As was the case with the previous two questions, regarding travel for training and moving for employment, respondents with a college degree and people with only an elementary or middle school education indicated that they were clearly less inclined to travel than were all other education-level groups.



Crew persons were somewhat more interested (79.8%) than permit holders (70.2%), and male respondents were more interested (78.4%) than females (63.4%).



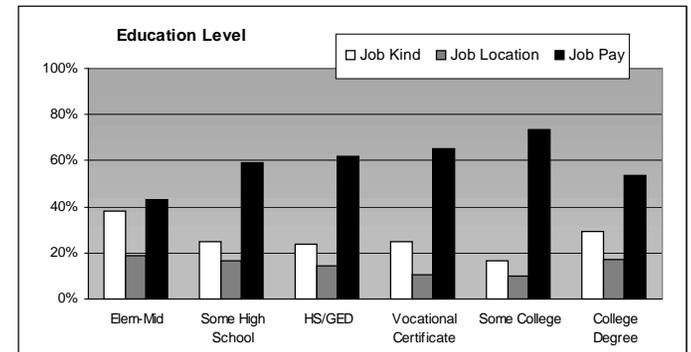
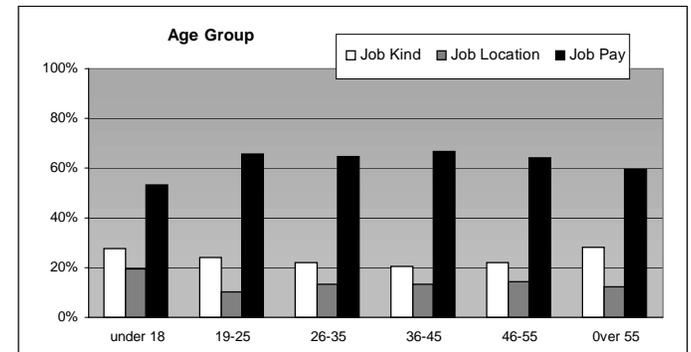
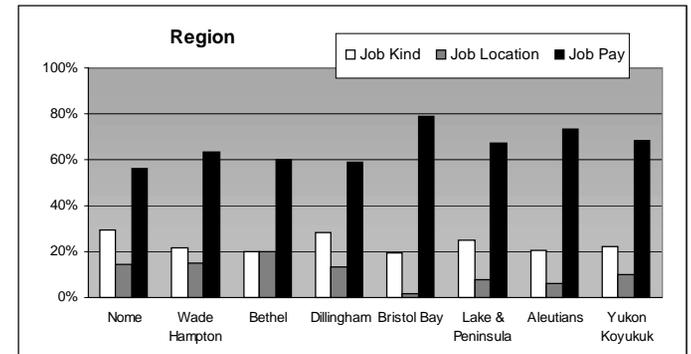
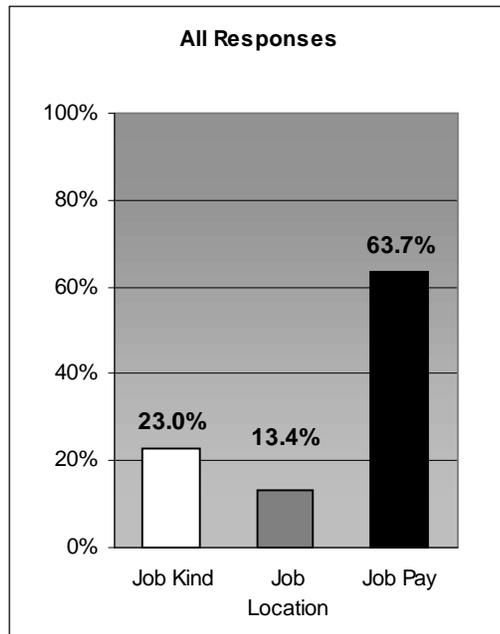
What Most Influences Decision to Commute

The pattern of choice was generally similar for all respondents regardless of region, age, education level, gender or ethnicity. Overwhelmingly, the primary factor was “job pay.” Respondents indicated far less concern about the kind of job that would be involved. Job location was the least important factor. Apparently, as long as those who choose to commute can spend a substantial time at home, they are willing to focus their job goals on pay, with much less regard for the kind of work they do, or where they have to do it.

Respondents from the Bristol Bay Borough indicated the least concern about the location of commuting employment (1.5%). Interest in job pay was also highest for Bristol Bay Borough respondents. Concern about commuting job location was generally less in the Alaska Peninsula and Aleutians areas compared to other regions. Respondents in the Nome region had the highest interest in what kind of job they would be commuting to (29.3%).

Among age groups, the youngest (under 18) expressed the greatest concern (19.3%) about the location of the commuting job. Both the youngest and the oldest age group (over 55) expressed more concern about the kind of job they were commuting to (about 28%) than did those age groups in between.

Respondents who said they had only an elementary or middle school education were more concerned about the kind of commuting job (38.1%) and less concerned about job pay (42.9%) than all other education-level groups. People with college degrees also indicated somewhat less interest in job pay than other education-level groups.



Appendix D

Narrative Summary

Western Alaska Fisheries Disaster Area Plans and Studies

Numerous organizations in the Western Alaska Fisheries Disaster area have prepared economic development or equivalent plans since 1997. This paper capsulizes the plans and presents them in four parts: barriers, themes, projects and plan summaries. A fifth part, the conclusion, attempts to identify broad approaches to rural development based on plan contents. This summary is not exhaustive and does not represent all of the conditions and issues that characterize rural development.

The challenge of economic development in rural Alaska is well-known. Yet the common themes that characterize regional plans, and the projects and opportunities they identify, support the development of an organized, long-term approach to investment and development.

Consistent Barriers to development were identified throughout all of the plans. These barriers included:

- high fuel and power production costs limit commercial and manufacturing opportunities
- underdeveloped transportation infrastructure and associated high transportation costs limits, and adds cost to, the movement of goods.
- cultural patterns based on subsistence limit participation in the cash economy
- under-developed community infrastructure constrains other development opportunities
- workforce development is needed to prepare residents for jobs already available in the region
- the private sector job base/economy is considerably underdeveloped; small business opportunities are limited
- the high cost of living absorbs a significant percent of already-low household incomes.

Consistent Themes related to development appeared in most or all of the plans. These included:

- the critical importance of the fishing industry as the foundation of the private sector economy.
- the cultural and economic importance of subsistence.
- the critical need for value-added fish production and market expansion/development
- development of community infrastructure, particularly water and wastewater and affordable energy
- development of regional transportation infrastructure linking regional air and sea ports, roads and communities (inter-modal development)

- workforce training and skills development that prepares locals for in-region jobs
- opportunity for small business development, including incubators, technical assistance and access to capital
- capitalizing on the huge potential of tourism to provide local business and employment opportunities
- exploring the opportunity, by location and preference, for arts and crafts marketing (delta); fur and leather work (delta); small-scale agriculture (kuskokwim; interior); and wood products (kuskokwim)

Specific Projects Identified in Plan Documents

1. Provide funding and technical assistance for the development of value-added fish production in Emmonak, Sheldon Point and Mountain Village.
 2. Use the Champion Community Program to promote the development of an arts and crafts cottage industry in Marshall.
 3. Provide small business assistance to interested entrepreneurs. Specific enterprises mentioned include: Scammon Bay Leather Works; boat building and repair in Alakanuk, Emmonak and Sheldon Point; tourism in Emmonak
(Lower Yukon Economic Development council)
-
1. Possible construction of a road link between Aniak and Chuathbaluk*
 2. Low-bush cranberry processing facility in Aniak.
 3. Potential development of Cominco's Copper Pebble prospect near Iliamna**
(The Kuskokwim Corporation)
-
1. Help the Levelock Tribal Council open a commercial salmon smokery, and develop a marketing and management plan.
 2. Potential development of Novagold's Shotgun Hills gold discovery north of Koliganek.
 3. Study the feasibility of cultural centers and museums in 'hub' communities of Dillingham, Newhalen/Iliamna and King Salmon/Naknek.
(Bristol Bay Native Association)
-
1. If feasible, assist the community of Nunam Iqua in the development of a salmon saltery, with a 2002 start-up date.
 2. Provide financial assistance to the Kotlik Fisheries Cooperative for the development of a small plant to head, gut, ice and ship fresh salmon.

*DOT Planner for the YK Delta, Mike McKinnon, states that this road connection was not mentioned by local residents during the 1999 preparation of the YK Delta transportation plan.

**DCED minerals specialist Dick Swainbank states that current commodity prices and the lack of road access and power will remain a major obstacles to development of Pebble.

3. Build a skiff and sled production facility (community not specified) to provide small boat and other repair and fabrication services, with the goal of the facility being privatized by 2003.
 4. Work with YRDFA and other local organizations to research and expand markets for smoked and fresh Yukon river salmon.
(Yukon Delta Fisheries Development Association)
1. Develop markets/opportunities for the Nelson Island halibut fishery and the coastal herring fishery
(Association of Village Council Presidents)
1. Plan for the development of a halibut buying/processing operation in Hooper Bay.
 2. Work with the city of Mekoryuk and the Army corps of Engineers for the development of a regional port facility in Mekoryuk.
 3. Provide for salmon processing at Goodnews Bay and Quinhagak (increase during 2000); begin halibut processing operations at Toksook Bay, Tununak and Mekoryuk and add halibut processing at Chefornak.
 4. With Copper River Seafoods, begin producing salmon fillets and halibut fletches at Mekoryuk and Quinhagak.
 5. Develop a multi-purpose training and aluminum welding facility at Scammon Bay.
(Coastal Villages Region Fund)
1. Construct airport extensions in Egegik, Pilot Point and Chignik (regional airport?) to permit direct flights of fish/fish products to outside markets.
 2. Connect the communities of Chignik, Chignik Lake, Chignik Lagoon and Port Heiden(?) by road.
 3. Construct a regional deepwater public dock in Chignik.
 4. Complete construction of the Iliamna-Nondalton road.
 5. Complete re-construction/upgrade of the Williamsport-Pile Bay road.
 6. Develop a regional vocational/technical training center at the former US Air Force base at King Salmon.
(1999 Lake and Peninsula Borough Overall Economic Development Plan)
1. Development of a round log mill in Fort Yukon
 2. Agricultural demonstration projects in Galena (indoor mushroom growing), Koyukuk (pig raising), Fort Yukon (4-H Fair) and Beaver and Grayling (construction of greenhouses).
 3. Develop an Interior region arts and crafts marketing cooperative.
 4. Recover waste heat from village generators for re-use for commercial or economic ventures.
(Tanana Chiefs Conference 1996 OEDP; 1998-1999 and 1999-2000 CEDS Reports)
1. Expand the Shishmaref tannery
 2. Establish value-added products for the Reindeer Herders Association
 3. Develop value-added fisheries products
 4. Provide training to individuals who wish to start home-based child care facilities
 5. Assist tribes in repatriation efforts
 6. Provide internet access to all local schools

7. Develop a market for native berries
(Bering Strait Overall Economic Development Plan, 1999)

Plan Summaries

Lower Yukon Economic Development Council (ARDOR) 1998 Two Year Regional Development Strategy

The 1998 strategy establishes reasonably specific objectives under the broader headings of value-added fish processing, business opportunity and organizational development.

1. Assist residents in securing funding to acquire fisheries limited entry permits.
2. Secure a federal employee (Resource Conservation and Development-USDA) to work with communities on resource development projects.
3. Seek Enterprise Zone status for the ARDOR area.
4. Provide administrative support to, and develop a five-year economic strategy for, Chuloonawick.

Interior Rivers Resource Conservation and Development District (ARDOR). 1997 Area Plan and 2000 Village Needs Assessments.

The 1997 plan establishes broad goals in five areas:

1. Effective administration of projects to improve village living standards
2. Achieve common goals through cooperation, coordination and local control
3. Improve transportation infrastructure, health facilities, housing, water/wastewater systems, landfills, and other utilities and services.
4. Support business development and/or expansion and local job opportunities.
5. Promote effective education, outreach and training programs for workforce development.
6. The village needs assessments are basically 'wish lists'; and while some projects may clearly be worthwhile, there is no prioritization or indication of funding-readiness.

Lower Kuskokwim Economic Development Council (ARDOR) 1998 Two Year Strategic Plan

These goals are listed in priority order.

1. Develop, expand, diversify and improve the Lower Kuskokwim and Bering Coast fisheries.
 - Ensure that fisheries laws and policies are favorable to regional fisheries interests.
 - Work with the Coastal Villages CDQ group in providing fisheries development assistance to members (handling techniques/ice machines/value-added processing and product marketing).

2. Develop a regional tourism industry
 - Secure resident involvement and support
 - Acquire tourism technical assistance
 - Publish and distribute maps and other marketing materials
 - Develop visitor accommodations
 - Improve transportation facilities and services
 - Promote locally owned tourism, hunting, guiding, businesses

3. Develop and expand the regional fur industry.
 - Transfer 'field' knowledge to younger generation
 - Improve handling/tanning techniques
 - Promote cottage industry manufacturing
 - Promote cold-weather utility garment manufacturing

4. Develop and expand the retail and service industries.
 - Annually prepare a regional business directory
 - Enroll regional artists and craftsmen in the Silver Hand program.
 - Seek Bethel retail outlets for regional artists and craftsmen.

5. Promote local businesses as sub-contractors in the planning, design, engineering and construction of water and wastewater systems.

Southwest Alaska Municipal Conference (ARDOR)
 1998 Overall Economic Development Report

1. Maintain an updated OEDP for the SWAMC region.
2. Maintain an active SWAMC transportation committee; participate in Marine Highway and DOT planning.
3. Foster communication, trade and information exchange between communities.
4. Support the development of a regional visitor industry.
5. Support scientific fisheries research to ensure future viability of the industry.
6. Explore value-added fisheries products and the development of new markets.
7. Provide for training and technical assistance to small businesses, and to promote small business development.
8. Assist small communities with strategic planning, goal setting, needs assessments, identification of funding sources and grant writing.
9. Identify community infrastructure needs and assist communities in with funding.

Kawerak/Bering Straits (Regional native Non-Profit/ARDOR)
 2000 Bering Strait Overall Economic Development Plan
 Regional Goals and Objectives

1. Promote healthy family lifestyles to contribute to the achievement of future

community goals.

2. Assure access to adequate housing, water/sewer/power utilities, landfills and roads.
3. Maintain traditional lifestyles to foster community wellness.
4. Promote tourism development.
5. Promote small business start-up and expansion.
6. Provide for job skills training and educational attainment to improve economic production and income.
7. Manage natural resources to sustain the traditional subsistence lifestyle.

Association of Village Council Presidents (Regional Native non-Profit)

1996 Update: Overall Economic Development Plan

1998 Regional Strategic Plan Draft

1. Maximize fisheries development opportunities
 - a revolving loan fund comprised of CDQ groups funds and USDA-RD funds is in place to lend to commercial fishermen and fisheries businesses
 - support the Kuskokwim Fisherman's Cooperative's efforts to improve handling and marketing
2. Prepare a regional tourism development plan (am seeking a copy of this plan, evidently prepared in 1999)
3. Establish a regional arts and crafts marketing program.
4. Improve production and marketing of value-added fur products
5. Implement a strategy for the installation of water and wastewater utilities in AVCP villages.
6. Promote small business development through financing, technical assistance and incubation.
7. Provide workforce training for jobs that exist in the region (government, utility operator, construction)

Bristol Bay Native Association (Regional Native Non-Profit)

1998 Overall Economic Development Plan Update

2000 Comprehensive Economic Development Strategy

1. Prepare for visitor growth through the preparation of a regional Native Cultural and Eco-tourism Development Plan.
2. Provide technical assistance and referrals to small business clients.
3. Strengthen the regional fishing economy.
 - Convene the Bristol Bay Fish Conference each Spring
 - Coordinate fisheries-related community development with other entities
 - Develop alternative commercial fisheries for the region.
 - Establish a revolving loan fund to stem the sale of limited entry permits outside the region.
4. Monitor work, if any, on the Cominco Mining Company's Copper Pebble deposit near Iliamna and Novagold's gold deposit north of Koliganek.

5. Investigate the feasibility of alternative, less costly, sources of power production.
6. With BBNA's workforce development program and the region's tribal councils, work to create jobs for the region's welfare recipients.
7. Compile a regional listing of the top capital projects for tribal councils, cities and Boroughs.

Tanana Chiefs Conference (Regional Native Non-Profit)

1996 Overall Economic Development Plan

1998-1999 and 1999-2000 Comprehensive Economic Development Strategy Reports

The Tanana Chiefs Conference is currently updating their 1996 Overall Economic Development Plan to conform to the revised Economic Development Administration format for Comprehensive Economic Development Strategies (commonly called CEDS). The Conference has prepared CEDS reports for the 1998-1999 and 1999-2000 years. The combined documents contain several major areas of potential economic activity.

- **Agriculture**, with an emphasis on subsistence agriculture such as vegetable gardening, home-raised livestock, beekeeping and food preservation.
- **Arts and Crafts Development**, with an emphasis on coordinated, region-wide marketing **Biotic Production**, with an emphasis on activities like natural dye production, natural foods, and plants used for healing. This is a new area, not fully explored or developed. **Federal Contracting**, to 'push' employment down to the villages for services currently provided from Fairbanks.
- **Fish Marketing and Processing**, which shows little promise at the present time with successive years of poor to disastrous salmon runs on the Yukon River.
- **Fur Development**, like fisheries development, is 'on hold' with the decline in world demand for furs.
- **Infrastructure Development**, with an emphasis on basic facilities and local employment.
- **Energy Development**, with an emphasis on recapture of waste heat and development of alternative energy sources, such as coalbed methane gas near Fort Yukon.
- **Timber and Wood Products Manufacturing**, with an emphasis on local production of rough-cut lumber and round logs for local use. Round logs and pulp wood have been sold to outside markets when prices allow.
- **Tourism Development** offers opportunities, but is proceeding slowly, and will rely on individual initiative at the village level.
- **Business Development** is being promoted through the Alaska Minority Business Development Center, which has offered small business conferences and workshops in the region.

The Kuskokwim Corporation (Consortium of 10 Mid-Kuskokwim River Village Corporations)

1991 Economic Profile of the Middle Kuskokwim Region

1. Work to develop tourism, guiding and sport fishing.
2. Support continued commercial fishing as an economic mainstay
3. Promote regional arts and crafts marketing
4. Support development of locally-available resources, particularly timber and rock quarrying.
5. Support the development of small-scale agriculture.

Bristol Bay Economic Development Corporation (CDQ Group)
2000 Community Development Plan Application

1. Through outreach, improve and strengthen lines of communication between the BBEDC and the 17 member-communities of the CDQ.
2. Through public school curricula, prepare young people for employment and careers in the fishing industry.
3. Retain local ownership of limited entry permits through operation of the Bristol Bay Permit Brokerage.
4. Identify potential new seafood development opportunities within Bristol Bay including:
 - new salmon/herring products/markets
 - review underutilized Bering Sea species
 - explore development possibilities with domestic and foreign processing/marketing companies
5. Provide technical assistance to help organize and develop seafood-related businesses and infrastructure in Bristol Bay.
6. Maintain a \$500,000 regional business development fund for investing in new, evolving or expanding seafood-related businesses.*
6. Promote the development of 'ready-to-go' industry-related infrastructure through the provision of a match for outside funding.*
7. Provide training that leads to industry employment through internships, classroom training and post-secondary scholarships.
8. Create the Bristol Bay Science and Research Institute to seek grants for scientific, research and educational programs that lead to a greater understanding of the marine environment and seafood resources of Bristol Bay.

Yukon Delta Fisheries Development Association (CDQ Group)
2000 – 2001 Community Development Plan Application

1. Provide comprehensive vocational and educational training program opportunities for CDQ area residents.
2. Provide for comprehensive job placement for community residents in the CDQ area.
3. Operate programs for limited entry permit buy-backs; loans for fishing vessels and outboards; and IFQ purchases.
4. Provide financial support for private and company vessels to fish for Norton Sound herring, crab, halibut and other species.

5. Develop shoreside processing operations/capacity.
6. Make joint venture investments in offshore catcher/processor vessels.
7. Provide financial support for the development of small business fisheries infrastructure.

Coastal Villages Region Fund (CDQ Group)
2001-2002 Community Development Plan and Application

1. Through the 4-SITE program, develop the workforce skills of local residents for participation in the CDQ fishery.
2. Evaluate the feasibility of additional investment in groundfish and crab vessel capacity.
3. Provide for additional shoreside processing capacity and the development of commercial fisheries support businesses.
4. Evaluate the best opportunities for investment in inshore harvesting and processing including sportfish guiding.
5. Establish a loan program to serve the needs of fishermen and fisheries-related businesses in the region.
6. Promote expanded local hire as additional investments are made or considered in the offshore fishery.
7. Undertake regional outreach through a variety of programs including newsletters, ARCS programming, potlatches and newspaper articles.

Lake and Peninsula Borough
1999 Overall Economic Development Plan

1. Provide educational and workforce training opportunities that will create a skilled, competitive workforce.
2. Devise strategies that will promote job retention and creation, and attract and develop diverse and sustainable businesses.

*Business and infrastructure funding must comply with BBEDC board-approved policies that essentially 'screen' for viability.

3. Build or improve infrastructure that lowers transportation costs, improves the marketability and delivery of products.
4. Promote the continuous development of the seafood industry through fish studies; identification of new markets, products and technologies; education; and marketing.
5. Promote *local* business and economic development.
6. Seek regional unity for overall economic development.

Summary

There are many opportunities for public investment in the fisheries disaster area that can contribute to the long-term development of the region. The following guidelines are derived from the plan documents, and can be viewed as ‘filters’ or ‘screens’ for future public investment in the region.

1. Focus on transportation projects that promote the development of inter-modal transportation linkages. For example, road links from Chignik to Chignik Lake and Chignik Lagoon (and other communities such as Port Heiden?) will connect residents to the Alaska Marine Highway and could spur the development of a regional airport, and a public, deepwater dock at Chignik.
2. Focus on the development of regional facilities, where the benefits of the project can be realized by multiple communities. Illustrative of this would be a regional harbor for Bering Sea fishing boats or a regional airport at Chignik.
3. Develop road connections to the ‘outside’ where they are locally supported, feasible and provide sensible inter-modal linkages and economic benefits. For example, upgrading the Williamsport-Pile Bay Road to state standards can provide a reliable, overland link from Cook Inlet to Lake Iliamna communities.
4. Develop road connections between communities where they are locally supported and feasible. For example, construction of the Iliamna-Nondalton road will link these two communities to Newhalen. Other inter-community road links, such as Aniak-Chuathbulak, have been referenced. All such locally-supported connections should be encouraged when the State Transportation Improvement Plan (STIP) is revised.
5. Major employers throughout the fisheries disaster area –school districts, regional health corporations, regional profit and not-for-profit corporations, regional health corporations, state and federal agencies, major retailers- hire scores, if not hundreds of employees annually. Job classes/skills sought by employers should be identified and used to design training curricula at proposed job training centers in King Salmon and Bethel. Existing training programs should also be identified (if they have not been already) and coordinated where necessary and possible.
6. Economies of scale in power production, schools, (air and sea) ports, landfills, bulk fuel storage and other basic infrastructure can be achieved where it is feasible to connect communities by road and avoid the construction or improvement of redundant facilities.
7. Commercial fishing, notwithstanding the downward effect of farmed fish on prices and poor returns of recent years, will remain the mainstay of the region’s private sector economy. The industry will still provide opportunity for in-region

‘manufacture’ of new products (employment) and development of new markets (opportunity). Opportunities for product and market development, however, should be pursued within the larger context of a re-positioning that includes higher quality and value-added products. Investment in new opportunities should be pursued with CDQ groups, processors, fisheries organizations, permit holders, community leaders and other stakeholders working toward common goals and purposes.

8. Borough, native non-profit and ARDOR plans all reference the potential for visitor industry growth. Where it is possible, specific opportunities for public investment need to be identified. For example, the Bristol Bay Native Association has contracted for a tourism development plan, to study the feasibility of cultural centers and museums in ‘hub’ communities of Dillingham, Newhalen/Iliamna and King Salmon/Naknek. Consistent with #5 above, local residents should be prepared for visitor industry jobs, especially where facilities are constructed with public funds.
9. An overall coordinating entity should act as a clearinghouse for rural development activities, providing a one-stop source of information on regional, state and federal activities. This could lead (potentially) to coordinating the activities of rural development agencies as necessary, creating a more strategic focus for rural development, and forming stronger partnerships among federal, state and regional provider agencies.

	Infrastructure				Business Development	Value-Added Fish Products/Markets	Tourism	Workforce Development	Arts and Crafts	Fisheries Development	Fleet Development	Wood Products	Agriculture	Value-Added Fur Processing	Agency Coordination	United Regional Organizations	Rock Quarry	Mining
	Industry	Community	Utility	Transportation														
Regional Entity																		
ARDORs																		
Lower Yukon Economic Development Corporation		X			X	X	X							X	X	X		
Interior Rivers RC&D		X		X	X			X							X			
Southwest Alaska Municipal Conference		X	X	X	X	X	X											
Bering Straits					X		X											
Lower Kuskokwim Economic Development Council					X	X	X		X					X				
NATIVE NON-PROFITS																		
Association of Village council Presidents			X		X	X	X	X	X									
Tanana Chiefs Conference						X	X		X			X	X					
Bristol Bay Native Association						X	X		X									X
FOR PROFITS																		
The Kuskokwim Corporation						X	X		X			X	X				X	
CDQ GROUPS																		
Bristol Bay CDQ	X				X	X		X		X								
Yukon Delta CDQ	X				X			X		X	X							
Central Bering Sea CDQ	X				X			X		X								
Coastal Villages CDQ	X	X			X			X		X	X							
Aleutians-Pribilof Islands CDQ	X							X		X	X							